YQQAP-I-A

Summary of Changes - Revisions 19A-20

Item No.	YQQAP Section	Change Description	Reason for Change
1 (19A)	I	Added 50.54(a)(3) evaluation to Paragraph I.D.1.d.9.	
2	I	Changed QA management responsibility to audit vice review of design changes (Paragraph I.D.1.f.2).	Redundant responsibility to independent design reviewer.
3	I	Added Director of Environmental Laboratory to the program (Paragraph I.D.1.j).	Organizational changes.
4	I	Added responsibility for plant training to Plant Superintendent (Paragraph I.D.2.a.9).	Organizational changes.
5	I	Added responsibility for maintenance and technical direction to Assistant Plant Superintendent (Paragraph I.D.2.b.5).	Organizational changes.
6	I	Changes reporting requirement for Technical Director (Paragraph I.D.2.c.1).	Organizational changes.
7	I	Added new position; Operations Director (Paragraph I.D.2.d).	Organizational changes.
8	I	Changed position title to Maintenance Director vice Plant Maintenance Manager, and reporting requirements (Paragraph I.D.2.e).	Organizational changes.
9	I	Added responsibility for plant security to Manager of Administrative Services (Paragraph I.D.2.f.4).	Organizational changes.
10	I	Changed reporting requirement for Training Manager (Paragraph I.D.2.g).	Organizational changes.
11	I	Changed reporting requirement for Plant Operations Manager (Paragraph I.D.2.i).	Organizational changes.

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Summary of Changes - Revisions 19A-20
(Continued)

Item No.	YOQAP Section	Change Description	Reason for Change
12	I	Added new position, Operations Support Manager (Paragraph I.D.2.n).	Organizational changes.
13(19A)	I	Added VY VP shall approve VY SARC members (Paragraph I.D.3.a.9).	Removed from Technical Specifications and added to YOQAP.
14(19A)	I	Clarification of Paragraph I.D.3.c.4.	Organizational changes.
15(19A)	I	Deleted Maintenance Superintendent (Paragraph I.D.4.b).	Organizational changes.
16(19A)	I	Clarification of Paragraph I.D.4.b, c, g, h, k, and l.	Changes in reporting lines.
17(19A)	I	Added VY NSARC shall evaluate changes to VY organizational chart (Paragraph I.E.b.2).	Removed from Technical Specification and added to YOQAP.
18	I	Revised organizational chart, Figure 1.	Organizational changes.
19(19A)	I	Revised organizational chart, Figure 2.	Organizational changes.
20	III	Changed NSD Quality Assurance Department responsibility to audit vice review of design documents and engineering specifications (Paragraph III.B.1)	Redundant responsibilities to independent design reviewer.

YANKEE ATOMIC ELECTRIC COMPANY

OPERATIONAL QUALITY ASSURANCE PROGRAM

YOQAP-I-A

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YANKEE ATOMIC ELECTRIC COMPANY

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YANKEE ATOMIC ELECTRIC COMPANY

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AMENDMENT/REVISION SHEET

Revision No.	Date	Reason
0 (Amendment 1)	12/10/76	To address questions submitted by letter from NRC (K. R. Goller) to L. H. Heider (11/1/76).
0 (Amendment 2)	1/13/77	To address questions submitted by letter from NRC (K. R. Goller) to L. H. Heider (12/28/76).
1	9/15/77	To address organizational, programmatic, and editorial changes.
2	11/1/77	To address organizational changes.
3	11/25/77	To address organizational changes at Vermont Yankee.
4	1/13/78	To address combined inspection numbers 50-29/77-20; 50-271/77-15; and 50-309/77-16 unresolved item 4.a.
5	1/30/78	To address change in exception for ANSI N45.2.3-1973.
6	10/19/78	To address exceptions to ANSI N45.2.2-1972.
6 (Amendment 1)	3/29/79	To resolve items submitted by letter from NRC (W. P. Haass) to L. H. Heider (3/6/79).
7	9/11/79	To address changes to Yankee Rowe (Appendix D) and Vermont Yankee (Appendix E) Safety Classifications.

YANKEE ATOMIC ELECTRIC COMPANY

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YANKEE ATOMIC ELECTRIC COMPANY

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AMENDMENT/REVISION SHEET

Revision No.	Date	Reason
8	4/4/80	To address organizational changes.
9	3/9/81	To address organizational changes.
10	4/3/81	To add "Packaging of Radioactive Materials" and "Fire Protection of Safety-Related Areas" to "Other Items Requiring Quality Assurance".
11	3/1/82	To resolve items submitted by letter from NRC (W. P. haass) to W. P. Johnson (6/10/81).
12	3/11/83	To address organizational changes.
13		To address organizational and programmatic changes.
14	10/12/83	To address organizational changes.
15	2/15/84	To address programmatic changes.
16	10/31/85	To address organizational and programmatic changes.
17	12/5/86	To address organizational and programmatic changes.
17A	8/14/87	To clarify surveillance activities and change VP-MOO responsibilities for the level of deficiencies requiring evaluation.
18	4/29/88	To address organizational and programmatic changes.

YANKEE ATOMIC ELECTRIC COMPANY

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AMENDMENT/REVISION SHEET

Revision No.	Date	Reason
19	10/2/89	To address organizational and responsibility changes and deletion of Appendix C.
19A	6/1/90	To update organizational chart (for VY) to be consistent with Proposed Change No. 157 and to address organizational changes at Vermont Yankee.
20	12/21/90	To update organizational changes at Yankee and change QAD's responsibility from reviewing design documents to auditing those documents for inclusion of quality requirements.

YANKEE ATOMIC ELECTRIC COMPANY

POLICY STATEMENT

OPERATIONAL QUALITY ASSURANCE PROGRAM

It is the policy of those organizations operating under this Quality Assurance Program to strive for excellence in all aspects of nuclear power plant operation. This goal can only be attained if each individual recognizes that Quality is everyone's responsibility. Each worker, supervisor, and manager has a role to play in achieving the goal of "doing it right the first time." Only if we recognize that Quality is of paramount importance can we continue to provide for the safe and reliable generation of power.

The function of the Quality Verification Program is to assess the adequacy, content, and appropriateness of the work being performed and to help implement needed enhancements. This function supports the line organizations and provides management with needed feedback. However, supervision and management should not rely solely upon the efforts of the Quality Assurance Groups for quality verification; they must also take an active role in monitoring those activities under their control to identify quality problems. As previously noted, the ultimate responsibility for quality lies with each individual.

Under the program, the Yankee Atomic Electric Company President is the final management authority responsible for assuring that this policy statement and the Quality Assurance Program are implemented within the Yankee Atomic Electric Company. The Vermont Yankee Vice President/Manager of Operations is the final management authority responsible for assuring that the Quality Assurance Program is implemented within the Vermont Yankee Nuclear Power Corporation.

The President or a Vice President is responsible for implementing the program for those departments under his (or her) direction. The Director of Quality Assurance is responsible for establishment, control, and distribution of the Quality Assurance Program and revisions thereto, and shall establish policies under which the Quality Assurance Department operates. The Quality Assurance staff shall have the authority and organizational freedom to meet the requirements of 10CFR50, Appendix B.

The Plant Superintendent/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 shall review the adequacy and effectiveness of this program. Any discrepancies and/or recommendations for corrections or enhancements shall be reported to the Cognizant Corporate Officer.

The safe and reliable generation of power can only be achieved with the cooperation and support of all personnel. We expect that every individual will perform his or her task with the skill, professionalism, and dedication necessary to achieve this goal.

Andrew C. Kadak

Andrew C. Kadak
President

YANKEE ATOMIC ELECTRIC COMPANY

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, redesign, evaluation and operation of the Plant rests with the Yankee Atomic Electric Company Nuclear Services Division and Vermont Yankee Nuclear Power Corporation. The responsibility for developing and implementing the Operational Quality Assurance Program within the Yankee Nuclear Services Division and the Yankee Plant is vested in the President of the Yankee Atomic Electric Company. The responsibility for implementing the Operational Quality Assurance Program within Vermont Yankee is vested in the Senior Vice President, Operations of Vermont Yankee Nuclear Power Corporation. He has delegated certain 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 Nuclear Services Division Quality Assurance Department, reporting to the President, has the organizational responsibility for the continuing review and audit of the implementation of the Operational Quality Assurance Program.

C. ORGANIZATIONAL RELATIONSHIPS

The lines of authority of all personnel involved in the implementation of the Operational Quality Assurance Program are shown in Figures 1 and 2. Interfacing between the Yankee Plant and the Yankee Nuclear Services Division is provided by the Yankee Vice President and Manager of Operations and his staff. Interfacing between the Vermont Yankee plant and the Yankee Nuclear Services Division is provided by the Vermont Yankee Vice President, Engineering, and his staff.

D. QUALITY ASSURANCE PROGRAM RESPONSIBILITIES

1. Yankee - Nuclear Services Division

a. President

1. Assumes and maintains overall responsibility for the Operational Quality Assurance Program.

2. Delegates to the Director of Quality Assurance the responsibility for establishment, control and distribution of the Operational Quality Assurance Program, and revisions thereto.

3. Establishes and enforces company policies in the area of Operational Quality Assurance.

4. Establishes and implements an organization capable of and directed toward a proper Operational Quality Assurance Program.

5. Resolves disputes between Quality Assurance/Quality Control personnel and other organizations, involving quality.

b. Vice Presidents

1. Report to the President.

2. Provide for implementation of the Program within their respective departments.

3. Review and approve all changes to the Operational Quality Assurance Program.

4. Provide for independent review and acceptance for selected plant repairs and engineering changes.

5. Ensure that applicable Program procedures are implemented.

6. The Vice President/Manager of Operations also:

a. Provides, through Operational Support, for independent operational review and/or approval for all changes.

b. Provides, through Operational Support, for review and approval of vendor-provided training programs for plant staff; plant procedures and purchase requests.

c. Provides, through Operational Support, for interfacing between Yankee and the Yankee Nuclear Services Division.

d. Evaluates plant's position of specified in-plant audit discrepancies and prepares "Implementation Directives" to the plant.

c. Assistant to the Vice President

1. Reports directly to the Vice President.

2. Provides the preparation and training of engineering procedures.

d. Director of Quality Assurance

1. Reports directly to the President.

2. Establishes the qualification requirements for the principal Quality Assurance management positions to assure competence commensurate with responsibility. See Appendix A.

3. Approves all changes to the Operational Quality Assurance Program.

4. Reviews or provides company policy relative to Quality Assurance practices conducted at the Plant and Yankee Nuclear Services Division.

5. Authorizes personnel performing Quality Assurance functions to have direct access to management levels which will assure accomplishment of quality-affecting activities.

6. Establishes policies under which the Nuclear Services Division Quality Assurance Department functions.

7. Provides for establishment of, and control and distribution of the Operational Quality Assurance Program and revisions thereto.

8. Provides for implementation of the Program within the Quality Assurance Department.

9. Provides for a periodic review of the Operational Quality Assurance Program to determine the adequacy and effectiveness of the Program. Provide for evaluations of changes to the Quality Assurance Program to the requirements of 10CFR50.54(a)(3).

10. Provides, through the Quality Assurance Department, 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.

11. Ensures that personnel performing Quality Assurance functions have sufficient authority and organizational freedom to:

a. identify quality problems,

b. initiate, recommend, or provide solutions through designated channels, and

c. verify implementation of solutions.

12. Provides for review of and compliance with federal and state regulations and standards for nuclear power facilities.

e. Project Managers

1. Reports to a Vice President.

2. Provides for implementation of the Program within their respective project.

3. Ensures that applicable Program procedures are implemented within their respective project.

4. Provides for independent review and acceptance for selected plant repairs and all engineering changes for their respective plant.

5. Provides for review of material service purchase requests, drawings, specifications and appropriate procedures.

6. Coordinates engineering requirements necessary to support changes related to the operation of the plant.

7. Provides, through Engineering, for the Quality Assurance/Quality Control Standards and/or requirements on all applicable documents.

8. Provides direction to the Project Engineering Managers.

f. Management of Quality Assurance Department

The Quality Assurance Department is divided into three (3) groups. They are the Audit Group, the Vendor Quality Assurance Group, the Quality Services Group, which includes the Quality Control (QC at the Yankee Plant only), and the QA Surveillance functions.

1. The Manager of each group reports directly to the Director of Quality Assurance.

2. Assures that the Operational Quality Assurance Program satisfies the requirements of 10CFR50 Appendix B and ANSI N18.7-1976.

3. Provides for the audit of design changes and specification to verify adequacy of quality requirements.

4. Provides for the audit, inspection and/or surveillance of contractor/vendor activities for operating plants to assure effective lines of communication and compliance with the applicable criteria of 10CFR50 Appendix B and ANSI N18.7-1976.

5. Provides for the inspection, surveillance and/or audit of activities pertaining to plant repairs, and/or changes.

6. Provides assistance as required to train, retrain and/or qualify plant and Quality Assurance personnel in quality control and audit techniques.

7. Ensures through verification that the Program is implemented for all activities requiring Quality Assurance.

8. Provides for the stoppage of unsatisfactory work; and for the control of further processing, delivery, or installation of nonconforming material.

9. Directs the independent verification of plant operational activities to assure that applicable approved procedures, specifications, licenses, and safety regulations are satisfied.

10. Ensures that the Program is modified and/or revised as standards, regulations and experience dictate.

g. Plant Support Department Manager

1. Reports directly to a Vice President.

2. Provides for the Plant Support review of design changes.

3. Provides engineering services to the Projects Departments, upon request.

h. Director of Environmental Engineering

1. Reports directly to a Vice President.

2. Provides for the review and follow of radiation protection programs and activities at the plant.

3. Provides for technical assistance to the plant on matters of radiological protection, radiological engineering and environmental protection.

4. Coordinates the implementation and maintenance of radiological environmental surveillance programs concerning radioactive effluents from the plant.

5. Directs the implementation and maintenance of the Emergency Plan pursuant to state and federal regulatory requirements.

6. Provides for the review of plant meteorological monitoring data.

7. Coordinates the engineering requirements necessary to support changes related to operation of the plant.

i. Director of Human Resources/Fuel Management

1. Reports directly to the President.

2. The Training and Development Services Group, which is part of Human Resources/Fuel Management, performs the following:

a) Assists the company in accomplishing its goals through development of skills and knowledge.

b) Ensures that personnel are provided with both the technical and professional skills required to solve problems, work together effectively, present information, and respond to sponsor needs.

c) Provides training needs assessments to ensure that organizationally relevant training is provided.

d) Conducts training evaluations to determine when desired objectives are obtained.

e) Gathers internal/external training sources to assure training is conducted in the most cost beneficial manner.

3. The Fuel Management Department, which is part of the Human Resources/Fuel Management, performs the following:

   a) Performs fuel cycle and economic studies to improve power costs and as requested by management.

   b) Provides for the general supervision and coordination of all core component design and procurement, nuclear material and service procurement and fuel cycle economic activities.

   c) Ensures that the Operational Quality Assurance Program and the applicable procedures are implemented within the department.

   d) Issues bid invitations, evaluates proposals, and negotiates contracts for fuel cycle services and related material requirements.

   e) Coordinates the fuel cycle requirements necessary to support changes related to operation of the plant.

j. Director of Environmental Laboratory

1. Reports directly to a Vice President.

2. Provides for the radiochemical processing of environmental, effluent, and waste samples from the plants.

3. Provides for the processing and internal dosimetric evaluation of bioassay samples from the plants.

4. Provides for the routine in situ measurements in support of environmental Technical Specifications as well as ad hoc emergency response in situ measurements or emergency response laboratory sample measurements.

5. Provides and coordinates technical quality assurance programs in the areas of plant chemistry (radiological only) and whole body counting for the plants.

6. Provides for the processing of personnel, extremity, and environmental dosimetry needed to support NRC and plant radiological assessment requirements.

7. Provides for the necessary special radiation flux measurements conducted throughout the plant.

8. Provides for on-site support during outages in the personnel dosimetry, whole body counting, and health physics areas.

9. Provides for the general engineering and technical support in the broad areas of radiation measurements, health physics, radiochemistry, and quality assurance.

k. Nuclear Engineering Manager

1. Reports directly to a Vice President.

2. Performs nuclear engineering and economic studies requested by management.

3. Provides for the general supervision and coordination of reactor physics, safety analysis, probabilistic risk assessment, and research and engineering development activities.

4. Ensures that the Operational Quality Assurance Program and the applicable procedures are implemented within the department.

5. Coordinates engineering analysis requirements necessary to support changes related to operation of the plant.

l. Construction Services Manager

1. Reports directly to a Vice President.

2. Establishes, under the cognizance of the Vice President, policies under which the Nuclear Services Division Construction Services functions.

3. Ensures that the Operational Quality Assurance Program and applicable procedures are implemented within the Department.

4. Issues bid invitations, evaluates proposals, prepares construction cost estimates and negotiates contracts for construction services, upon request.

5. Coordinates construction activities between the contractor, the plant and other Nuclear Services Division Departments, upon request.

6. Works closely with Project Managers to implement construction requirements of design changes.

2. Plant - Yankee

a. Plant Superintendent

1. Reports directly to the Vice President/Manager of Operations.

2. Acts as Chairman of the Plant Operation Review Committee with authority and responsibility as established in the Technical Specifications of the plant operating license.

3. Directly responsible for the safe, orderly and efficient operation of the Plant, and for compliance of operations with the requirements of the operating license and applicable State and Federal laws and regulations.

4. Responsible for the on-site implementation of the Operational Quality Assurance Program, Security Program and Fire Protection Program.

5. Responsible for Plant maintenance and repair.

6. Responsible for the control and surveillance of all special nuclear material at the plant site.

7. Provides information and reports to the Yankee Nuclear Services Division and the Nuclear Safety Audit and Review Committee as required and as directed by the Manager of Operations.

8. Provides for and coordinates review of industry operating problems with the aim of minimizing likelihood of occurrence at the plant.

9. Responsible for plant training and administration.

b. Assistant Plant Superintendent

1. Reports directly to the Plant Superintendent.

2. Acts as Vice Chairman of the Plant Operation Review Committee with authority and responsibility as established in the Technical Specifications of the Plant operating license.

3. Acts in the place of the Plant Superintendent during his absence with the authority and responsibility thereof.

4. Responsible for the safe, orderly, and efficient operation of the Plant and for compliance of operations with the requirements of the operating license and applicable State and Federal laws and regulations.

5. Responsible for Plant operations, refueling, maintenance, and technical direction.

6. Provides information and reports as directed by the Plant Superintendent.

c. Technical Director

1. Reports directly to the Assistant Plant Superintendent.

2. Responsible for the implementation of the Operational Quality Assurance Program and the Fire Protection Program.

3. Responsible for the follow of design changes, radiological and chemistry controls, and control and surveillance of all special nuclear material at the plant site.

4. Responsible for the activities of the Plant technical departments.

5. Responsible for carrying out Plant technical activities pursuant to applicable state, federal, and operating license requirements.

6. Provides information and reports as directed by the Plant Superintendent.

7. Acts in the place of the Plant Superintendent/Assistant Plant Superintendent in the absence of both, with all the authority and responsibility thereof, as permitted by Technical Specifications.

d. Operations Director

1. Reports directly to the Assistant Plant Superintendent.

2. Responsible for plant operations in accordance with approved documents and specifications.

3. Responsible for providing for system surveillance and operational testing.

4. Responsible for preparing documents outlining system functions and operating modes.

5. Responsible for ensuring that personnel under his supervision perform their duties according to applicable licenses, specifications, safety rules, and regulations.

6. Responsible for ensuring that maintenance requests are provided for the repair or replacement of defective parts and/or components.

7. Responsible for verifying 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.

8. Responsible for ensuring the safe handling of core and reactor components during refueling operations.

e. Maintenance Director

1. Reports directly to the Assistant Plant Superintendent.

2. Directs the activities of the Maintenance, Instrumentation and Control and Maintenance Support and Outage organizations.

3. Coordinates the review and update of plant drawings and specifications.

4. Directs plant maintenance, repairs, and design changes and assures compliance of maintenance activities to applicable State, Federal, and operating license requirements.

5. Coordinates plant Inservice Inspection Program.

f. Manager of Administrative Services

1. Reports directly to the Plant Superintendent.

2. Supervises the Storekeeper who is responsible for:

a) Preparation of requisition for purchase orders.

b) The receipt, handling, and storage of materials and equipment.

c) Administering a system of material and equipment identification.

d) Maintaining a system which provides traceability and retrievability of Quality Assurance documentation for purchased materials.

3. Coordinates the review, revision, and distribution of procedures.

4. Responsible for plant security.

5. Responsible for the operations of the Plant Document Control Center for the retention of specified Quality Assurance records and reports.

6. Maintains and disseminates information regarding codes, criteria, standards, guidelines, and policy to applicable plant personnel.

7. Responsible for Plant Security activities.

g. Training Manager

1. Reports directly to the Plant Superintendent.

2. Directs all phases of licensed operator training.

3. Coordinates scheduling and responsible for documentation of general employee training.

4. Coordinates and maintains the accredited training programs.

5. Directs the Plant's New Employee Indoctrination Program.

h. Technical Services Manager

1. Reports directly to the Technical Director.

2. Coordinates Plant Quality Assurance activities with the Vice President/Manager of Operations and his staff.

3. Coordinates Plant Fire Protection activities, including Fire Protection Training.

4. Schedules and prepares specified Plant reports and records.

5. Coordinates activities pertaining to State, Federal and operating license requirements.

6. Coordinates and implements the Emergency Plan.

7. Coordinates and transmits information concerning Plant changes to the Vice President/Manager of Operations and his staff.

i. Plant Operations Manager

1. Reports directly to the Operations Director.

2. Conducts plant operations in accordance with approved documents and specifications.

3. Provides for system surveillance and operational testing.

4. Prepares documents outlining system functions and operating modes.

5. Assures that personnel under his supervision perform their duties according to applicable licenses, specifications, safety rules and regulations.

6. Provides Maintenance Requests for the repair or replacement of defective parts and/or components.

7. 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.

8. Provides for the safe handling of core and reactor components during refueling operations.

j. Plant Chemistry Manager

1. Reports directly to the Technical Director.

2. Directs maintenance of water conditioning in the primary and secondary plant as per specifications and/or documented and authorized recommendations.

3. Directs a program to ascertain the radioactivity levels of liquids, gases and solids as required.

4. Directs the review and interpretation of chemistry test results.

5. Directs the documentation and maintenance of chemistry records for systems operations, refueling, plant modifications and/or additions which will reflect the degree of preventive maintenance required and/or in use as set forth in Technical Specifications, standards, and codes.

k. Reactor Engineering Manager

1. Reports directly to the Technical Director.

2. Analyzes data from physics, thermodynamic and nuclear tests to verify plant operating parameters, guidelines, procedures and adherence to Technical Specifications.

3. Prepares and maintains refueling procedures relative to core components handling and inspection.

4. Prepares reactor physics test and core parameter measurement procedures.

5. Provides supplemental technical information for new, modified and/or existing thermodynamic and data processing equipment.

6. Maintains core component history file of all fuel, control rods, sources and incore detectors.

7. Accounts for all special nuclear material at the plant site.

l. Radiation Protection Manager

1. Reports directly to the Technical Director.

2. Directs all phases of the ALARA and the Radiation Protection Program to assure that these programs meet Plant and governmental standards.

3. Directs the maintenance of the Personnel Exposure Record System.

4. Directs radioactive material shipments and receipts pursuant to Plant and governmental regulations.

m. Security Manager

1. Reports directly to the Manager of Administrative Services.

2. Directs all phases of the Security Plan and Program to assure items meet plant and regulatory requirements.

n. Operations Support Manager

1. Reports directly to the Operations Director.

2. Schedules and prepares specified plant surveillances and records.

3. Coordinates testing of plant hydro requirements.

4. Prepares procedures and documents outlining system functions and operating modes.

5. 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.

3. Vermont Yankee Nuclear Power Corporation

a. Senior Vice President, Operations

1. Reports to the President - Vermont Yankee Nuclear Power Corporation.

2. Evaluates Plant's position of specified In-Plant audit discrepancies and prepares "Implementation Directives" to the Plant.

3. Ensures that applicable Program procedures are implemented.

4. Reviews and approves all changes to the Operational Quality Assurance Program.

5. Reviews and approves certain plant programs and selected procedures.

6. Appointment to the NSAR Committee shall be subject to approval of the Vermont Yankee Senior Vice President, Operations.

7. Acts as the Manager of Operations.

b. Vice President, Engineering

1. Reports to the President - Vermont Yankee Nuclear Power Corporation.

2. Responsible for the Engineering Support area. Oversees the planning, scheduling, and direction of activities of employees engaged in plant design changes and alterations.

3. Reviews and approves safety-related design change documents, selected plant programs and procedures.

4. Provides for review and approval of drawings and specifications.

5. Provides for interfacing between the Plant and the Yankee Nuclear Services Division.

6. Reviews and approves procedures/policies involving procurement activities.

c. Training Manager

1. Reports to the Senior Vice President, Operations.

2. Establishes and maintains all operator and plant training programs.

3. Remains current on all regulatory requirements concerning training and qualifications of plant personnel and ensures that Plant training programs and procedures are revised in a timely manner in response to changing needs and regulations.

4. Provides overall coordination and supervision for the Technical Training Supervisor, the Operations Training Supervisor, and the Simulator Supervisor in carrying out their duties.

5. Evaluates the effectiveness of the training programs and the performance of the individuals participating in the training.

4. Plant - Vermont Yankee

a. Plant Manager

1. Reports to the Senior Vice President, Operations.

2. Directs the on-site implementation of the Operational Quality Assurance Program.

3. Prescribes and directs the development of Plant procedures, instructions, schedules, and programs as necessary to assure the safe and dependable operation of the facility.

4. Maintains a thorough knowledge of, and assures compliance with, the regulatory requirements for operating a nuclear power plant.

5. Directs the preparation and maintenance of power plant records, reports, and logs.

6. Acts as Chairman of the Plant Operations Review Committee with authority and responsibility as established in the Technical Specifications of the plant operating license.

7. Provides information and reports to the Yankee Nuclear Services Division as directed by the Senior Vice President, Operations.

8. Provides information and reports to the Nuclear Safety Audit and Review Committee as required and as directed by the Senior Vice President, Operations.

9. Directs the control and surveillance of all special nuclear material on site.

10. Direct the implementation of training/retraining programs as required by the Plant license, regulations, or applicable standards; and as necessary to assure safe work practices and compliance with standard operating practices, license and Technical Specifications, safety rules, and applicable regulations.

b. Operations Superintendent

1. Reports to the Plant Manager.

2. Oversees in the planning, scheduling, coordination, and direction of activities of employees engaged in the installation, operation, inspection, and maintenance of all equipment, buildings, and structures as appropriate. Is responsible for the Operations, Maintenance, and Instrumentations and Control areas.

3. Assists in the development of Plant procedures, instructions, schedules, and programs as necessary to assure the safe and dependable operation of the facility.

4. Maintains a thorough knowledge of, and assures compliance with, the regulatory requirements for operating a nuclear power plant.

5. Acts as Vice Chairman of the Plant Operations Review Committee with responsibilities as established in the Technical Specifications of the plant operating license.

6. Directs the preparation and maintenance of power plant records, reports, and logs as applicable.

7. Provides information, reports, and records as directed by the Plant Manager.

8. Assists in directing the establishment of safe work practices, and the training and instruction of plant personnel in the observance of standard operating practices, NRC license and Technical Specifications, safety rules and regulations.

c. Technical Services Superintendent

1. Reports to the Plant Manager.

2. Responsible for the Reactor and Computer Engineering, Plant Services areas, Radiation Protection, and Chemistry areas.

3. Assists in the development of Plant procedures, instructions, schedules, and programs as necessary to assure the safe and dependable operation of the facility and the safe conduct of refuel operations.

4. Maintains a thorough knowledge of, and assures compliance with, the regulatory requirements of a nuclear power plant.

5. Acts as Vice chairman of the Plant Operations Review Committee with responsibilities as established in the Technical Specifications of the plant operating license.

6. Directs the preparation and maintenance of power plant records, reports, and logs as applicable.

7. Provides information, reports, and records as directed by the Plant Manager.

8. Assists in directing the establishment of safe work practices, and the training and instruction of plant personnel in the observance of standard operating practices, NRC license and Technical Specifications, safety rules and regulations.

d. Construction Superintendent

1. Reports to the Vice President, Engineering.

2. Oversees the planning, scheduling, coordination and direction of the activities of employees and contractors engaged in construction activities on the plant site.

3. Assists in the development of plant procedures, instructions, schedules, and programs as necessary to ensure the safe and proper conduct of construction activities.

4. Maintains a thorough knowledge of, and assures compliance with the regulatory requirements for operating a nuclear power plant.

5. Directs the preparation and maintenance of power plant records, reports, and logs as applicable.

6. Provides information, reports, and records as directed by the Vice President, Engineering.

7. Assists in directing the establishment of safe work practices, and the training and instruction of plant personnel in standard operating practices, NRC license and Technical Specifications, safety rules and regulations.

e. Plant Services Supervisor

1. Reports to the Technical Services Superintendent.

2. Provides overall coordination and supervision for following supervisory personnel in implementing the Operational Quality Assurance Program.

   a. Stores Supervisor
   b. Document Control Coordinator
   c. Security Supervisor

3. Participates in the establishment of Plant policies covering his/her area of responsibility.

4. Consistent with plant policies and applicable instructions, institutes necessary programs, issues instructions, originates procedures as department administrative systems exist, such that the responsibilities assigned to administrative functions are executed effectively and efficiently in accordance with company intent. Ensures that necessary documentation is prepared, reviewed, approved, and properly filed to establish that department activities meet all requirements.

5. Consistent with plant policies and applicable instructions, organizes department functions and activities, assigns duties, and schedules personnel to accomplish administrative department activities. Reviews and supervises all department activities.

6. Ensures that plant procurement procedures are properly carried out and adequately documented.

7. Completes special projects requested by the Technical Services Superintendent.

8. Coordinates the review, revision, and distribution of Plant procedures.

9. Supervises implementation of the Plant Technical Filing System.

10. Directs the implementation and control of Document Control System.

f. Operations Supervisor

1. Reports to the Operations Superintendent.

2. Fulfills duties and responsibilities similar to and/or as described in the FSAR and is directly in charge of the Operations Department.

3. Has the responsibility and authority for insuring the safe and efficient operation of the plant and its supporting systems in accordance with applicable station licenses, Technical Specifications, procedures, instructions, established company policy and safety rules.

4. Consistent with plant policies and applicable instructions, institutes necessary programs, issues instructions, originates procedures and insures that

department administrative systems exist such that the responsibilities assigned to the Operations Department are executed effectively and efficiently in accordance with company intent. Insures that necessary documentation is prepared, reviewed, approved, and properly processed to verify that department activities meet all established requirements.

5. Maintains current status of Operations Department activities and requirements. Prepares and maintains, plans and schedules for department commitments such as personnel training, retraining and qualification.

6. Insures that all records, tests, reports, and logs maintained by the Operations Department are properly reviewed and approved.

7. Insures that all Operations Department personnel in a training status are actively pursuing the established program and that their performance is being adequately evaluated.

8. Reviews all Operations Department procedures to insure that they are current, accurate, and approved.

9. Implements aspects of the Plant Quality Assurance Program which relate to the activities of the Operations Department.

g. Instrument & Control Supervisor

1. Reports to the Operations Superintendent.

2. Fulfills duties and responsibilities similar to and/or as described in the FSAR and is directly in charge of the Instrument and Control Department.

3. Plans, schedules and supervises the activities of the Instrumentation and Controls Department. Such activities to include; installation, inspection, calibration, adjustment, maintenance, and repair of the plant instrumentation and controls.

4. Coordinates the activities of the Instrument and Controls Department with all other plant functions.

5. Establishes and directs a program of preventive maintenance, calibration, and surveillance testing as required by the plant license, approved plant procedures, or other plant requirements.

6. Establishes calibration techniques, frequencies, and records as necessary to assure reliable indication and control for plant system parameters.

7. Establishes and directs a program of departmental training that will assure a staff of Instrumentation and Controls personnel capable of safely and efficiently performing their duties in accordance with established practices, procedures, and regulations.

8. Prepares and/or supervises the preparation of reports, logs, and historical records as required.

9. Implements those aspects of the Plant Quality Assurance Program which relate to the activities of the Instrumentation and Controls Department.

10. Develops and maintains, in accordance with approved plant procedures, the procedural controls necessary to fulfill the above responsibilities.

h. Maintenance Supervisor

1. Reports to the Operations Superintendent.

2. Fulfills duties and responsibilities similar to and/or as described in the FSAR and is directly in charge of the Maintenance Department.

3. Is responsible for all electrical and mechanical maintenance activities throughout the Plant with the exception of Instrumentation and Control maintenance activities.

4. Consistent with plant policies and applicable instructions, institutes necessary programs, issues instructions, originates procedures, and insures that department administrative systems exist such that the responsibilities assigned to the Maintenance Department are executed effectively and efficiently in

accordance with company intent. Insures that necessary documentation is prepared, reviewed, approved, and properly filed to establish that department activities meet all requirements.

5. Consistent with plant policies and applicable instructions, organizes department functions and activities, assigns duties, and schedules personnel to accomplish department requirements. Reviews and supervises all department assignments.

6. Maintains current status of department activities and requirements. Prepares and maintains long-range plans and schedules for department commitments such as personnel training and qualification, preventive maintenance, material procurement, plant modifications, etc.

7. Staffs and trains Maintenance Department personnel.

8. Establishes and maintains equipment history records.

9. Selects and orders materials and spare parts in areas of assigned responsibility.

10. Implements aspects of the Plant Quality Assurance Program which relate to the activities of the Maintenance Department.

11. Reviews mechanical and electrical equipment failure frequency and evaluates equipment reliability.

12. Assumes responsibility for the condition, maintenance, and reliability of all plant electrical and mechanical equipment other than that specifically assigned to other departments.

i. Construction Supervisor(s)

1. Reports to Construction Superintendent.

2. Responsible for all construction activities within the plant with the exception of construction activities performed by the Maintenance and I&C Department(s).

3. Consistent with plant policies and applicable instructions, institutes necessary programs, issues instructions, originates procedures, and insures that department administrative systems exist such that the responsibilities assigned to the Construction Department are executed effectively and efficiently in accordance with company intent. Insures that necessary documentation is prepared, reviewed, approved, and properly filed to establish that department activities meet all requirements.

4. Consistent with plant policies and applicable instructions, organizes department functions and

activities, assigns duties, and schedules personnel to accomplish department requirements. Reviews and supervises all department assignments.

5. Maintains current status of department activities and requirements. Prepares and maintains long-range plans and schedules for department commitments such as personnel training and qualification, material procurement, plant modifications, etc.

6. Staffs and trains VY Construction Department personnel.

j. Engineering Support Supervisor

1. Reports to the Vice President, Engineering.

2. Coordinates Plant Quality Assurance activities with the Nuclear Services Division of Yankee Atomic, through the Senior Vice President, Operations.

3. Coordinates the reviews and updates of plant prints, drawings, and specifications.

4. Schedules, prepares, and retains specified plant reports and records.

5. Maintains and disseminates information regarding codes, criteria, standards, guidelines, and policy to applicable plant personnel.

6. Directs the efforts of the Engineering Support Department to assure that plant design changes and alterations provide for adequacy of design, proper narration and/or documentation and review of potential unresolved safety issues.

7. Directs the implementation of the Nuclear Plant Reliability Data System (NPRDS).

8. Coordinates Plant Inservice Inspection and Plant Leak Rate Testing Programs.

9. Schedules and assigns activities that are the responsibility of the Engineering Support Department.

10. Provides for the accountability and control of Design Changes, Alterations, and Job Orders.

11. Directs the implementation of the Fire Protection Plan.

12. Evaluates potential reportable occurrences, prepares Licensee Event, Fire System and certain Plant Information Reports.

13. Coordinates plant NRC licensing and inspection activities.

k. Chemistry Supervisor

1. Reports to the Technical Services Superintendent.

2. Fulfills duties and responsibilities similar to and/or as described in the FSAR and is directly in charge of the Chemistry Department.

3. Consistent with the policies and applicable instructions, institutes necessary programs, issues instructions, originates procedures, and insures that department administrative systems exist such that the responsibilities assigned to the Chemistry Department are executed effectively and efficiently in accordance with company intent. Insures that necessary documentation is prepared, reviewed, approved, and properly filed to establish that department activities meet all requirements.

4. Consistent with plant policies and applicable instructions, organizes department functions and activities, assigns and schedules personnel to accomplish department requirements. Reviews and supervises all department assignments.

5. Maintains current status of department activities and requirements. Prepares and maintains long-range plans and schedules for department commitments such as personnel training and qualification, preventive maintenance, material procurement, plant modifications, etc.

6. Assumes responsibility for providing the necessary administrative supervision and required personnel to meet the needs of the established Non-Radiological Environmental Monitoring Programs.

7. Prescribes and maintains chemistry conditions and purification of coolants within applicable limits.

8. Develops and maintains records of all nonradioactive waste releases and of all chemistry and radiochemistry aspects of the plant.

1. Radiation Protection Supervisor

1. Reports to the Technical Services Superintendent.

2. Fulfills duties and responsibilities similar to and/or as described in the FSAR and is directly in charge of the Radiation Protection Department.

3. Consistent with the policies and applicable instructions, institutes necessary programs, issues instructions, originates procedures, and insures that department administrative systems exist such that the responsibilities assigned to the Radiation Protection Department are executed effectively and efficiently in accordance with company intent. Insures that necessary documentation is prepared, reviewed, approved, and properly filed to establish that department activities meet all requirements.

4. Consistent with plant policies and applicable instructions, organizes department functions and activities, assigns and schedules personnel to accomplish department requirements. Reviews and supervises all department assignments.

5. Maintains current status of department activities and requirements. Prepares and maintains long-range plans and schedules for department commitments such as personnel training and qualification, preventive maintenance, material procurement, plant modifications, etc.

6. Assumes responsibility for providing the necessary administrative supervision and required personnel to meet the needs of the established Radiological Environmental Monitoring Programs.

7. Develops and maintains records of all radioactive waste releases.

8. Develops work and housekeeping practices in radiologically controlled areas of the plant to minimize personnel exposure and the spread of radioactive contamination.

9. Assumes responsibility for receipt, storage, shipment, and disposal of radioactive material utilizing proper Federal and State regulations (other than nuclear fuel).

m. Reactor and Computer Engineering Supervisor

1. Reports to the Technical Services Superintendent.

2. Fulfills duties and responsibilities similar to and/or as described in the FSAR and is directly in charge of the Reactor and Computer Engineering Department.

3. Plans, schedules, and supervises the activities of the Reactor and Computer Engineering Department. Such activities to include: nuclear and thermal core analysis, planning and scheduling of fuel rearrangements and fuel cycling, computer utilization, rod withdrawal sequences, rod patterns, and reactor maneuvering during plant startup.

4. Coordinates the activities of the Reactor and Computer Engineering Department with all other plant functions.

5. Establishes and directs a program of Nuclear Performance Monitoring and Surveillance Testing as required by the plant license, approved plant procedures, or other plant requirements.

6. Establishes a program of control, accountability and record keeping as required to maintain an accurate inventory of licensed special nuclear material.

7. Establishes and directs a program of departmental training that will assure a staff of Reactor and

Computer Engineering personnel capable of safely and efficiently performing their duties in accordance with established practices, procedures, and regulations.

8. Prepares and/or supervises the preparation of reports, logs, and historical records as required.

9. Implements those aspects of the Plant Quality Assurance Program which relate to the activities of the Reactor and Computer Engineering Department.

10. Develops and maintains, in accordance with approved plant procedures, the procedural controls necessary to fulfill the above requirements.

E. REVIEW AND AUDIT

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

One committee, the Plant Operations Review Committee, is made up of Plant personnel. No more than a minority of the other committee, the Nuclear Safety Audit and Review Committee, shall be individuals having line responsibility for the operation of the Plant.

1. Plant Operations Review Committee

   a. Yankee Plant - See Section 6.5 "Review and Audit" of Appendix A Technical Specifications to the Operating License DPR-3.

   b. Vermont Yankee Plant - See Section 6.2 "Review and Audit" of Appendix A Technical Specifications to the Operating License DPR-28.

2. Nuclear Safety Audit and Review Committee

   a. Yankee Plant - See Section 6.5 "Review and Audit" of Appendix A Technical Specifications to the Operating License DPR-3.

   b. Vermont Yankee Plant

      1. See Section 6.2 "Review and Audit" of Appendix A Technical Specifications to the Operating License DPR-28.

      2. The NSAR Committee shall be responsible for evaluating changes to the Vermont Yankee organizational chart (Figure 2 to Section 1).

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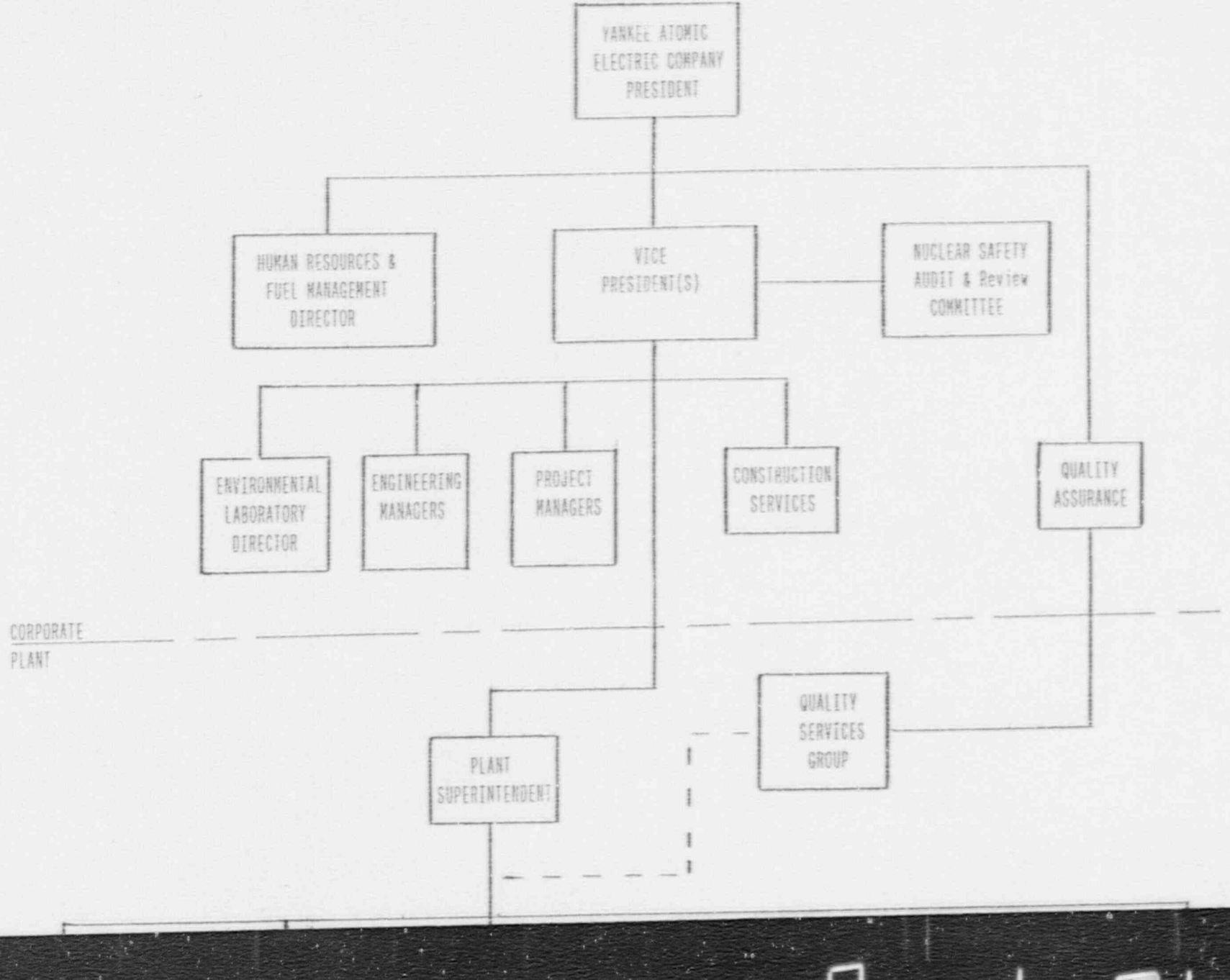

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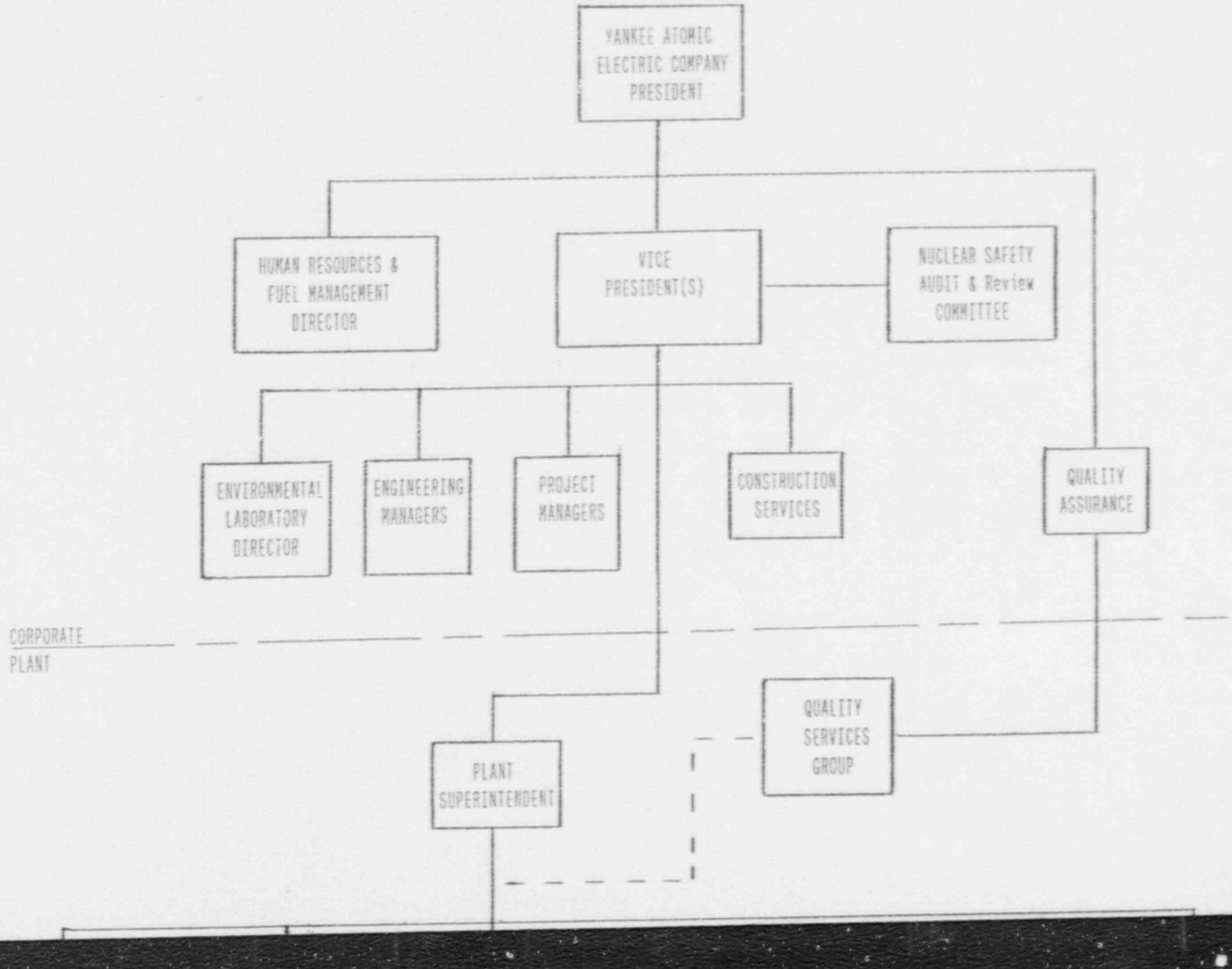

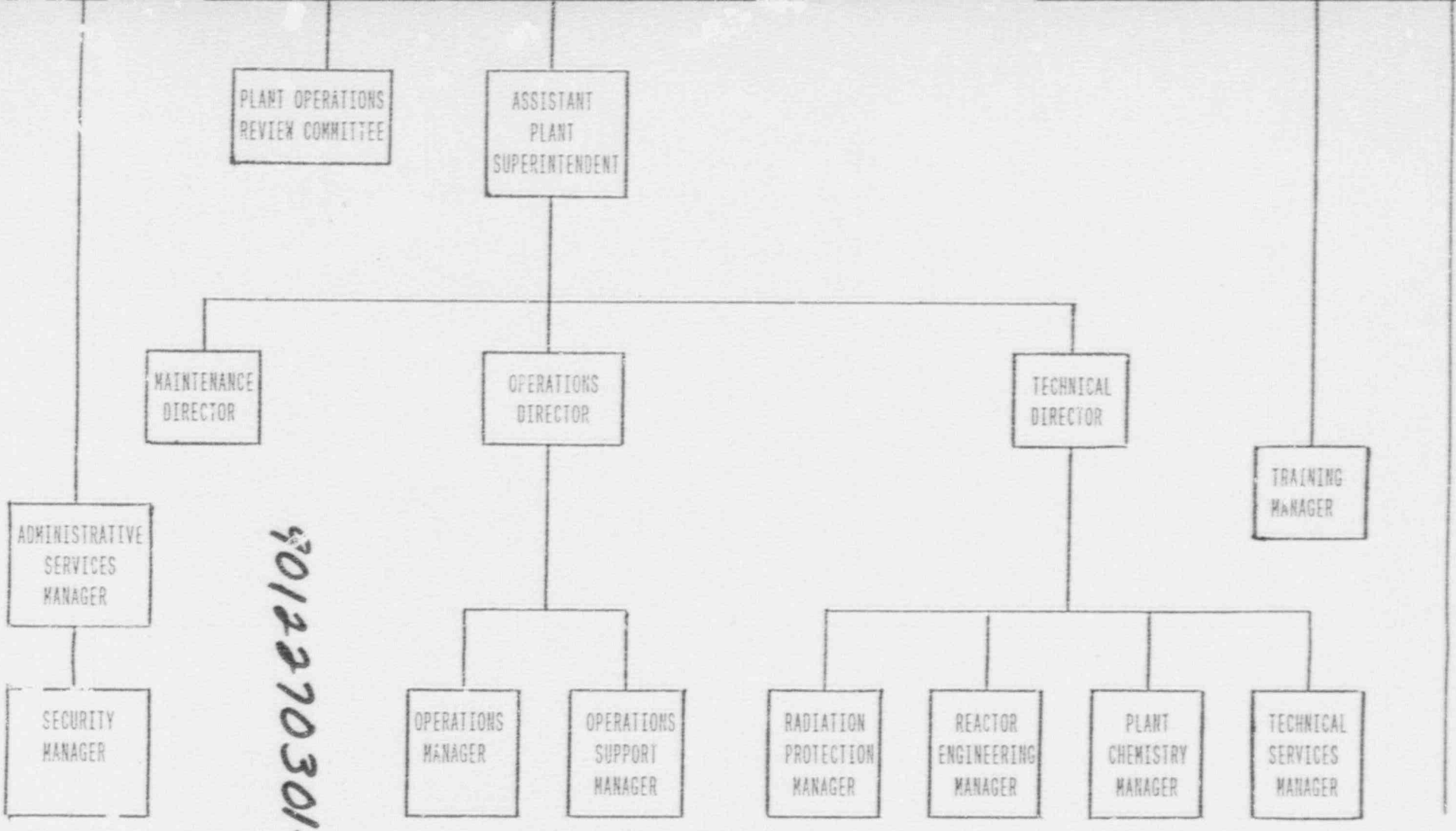

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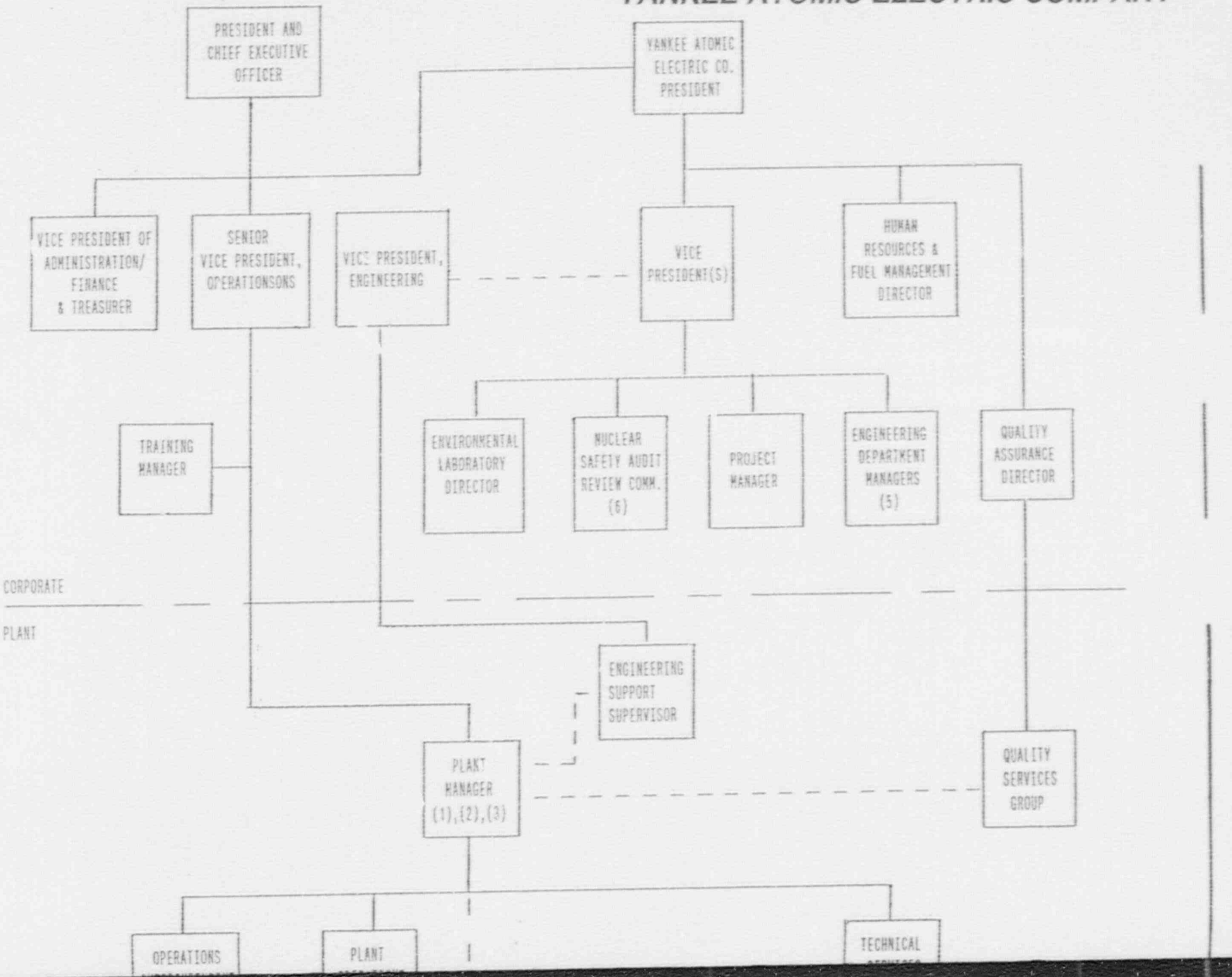

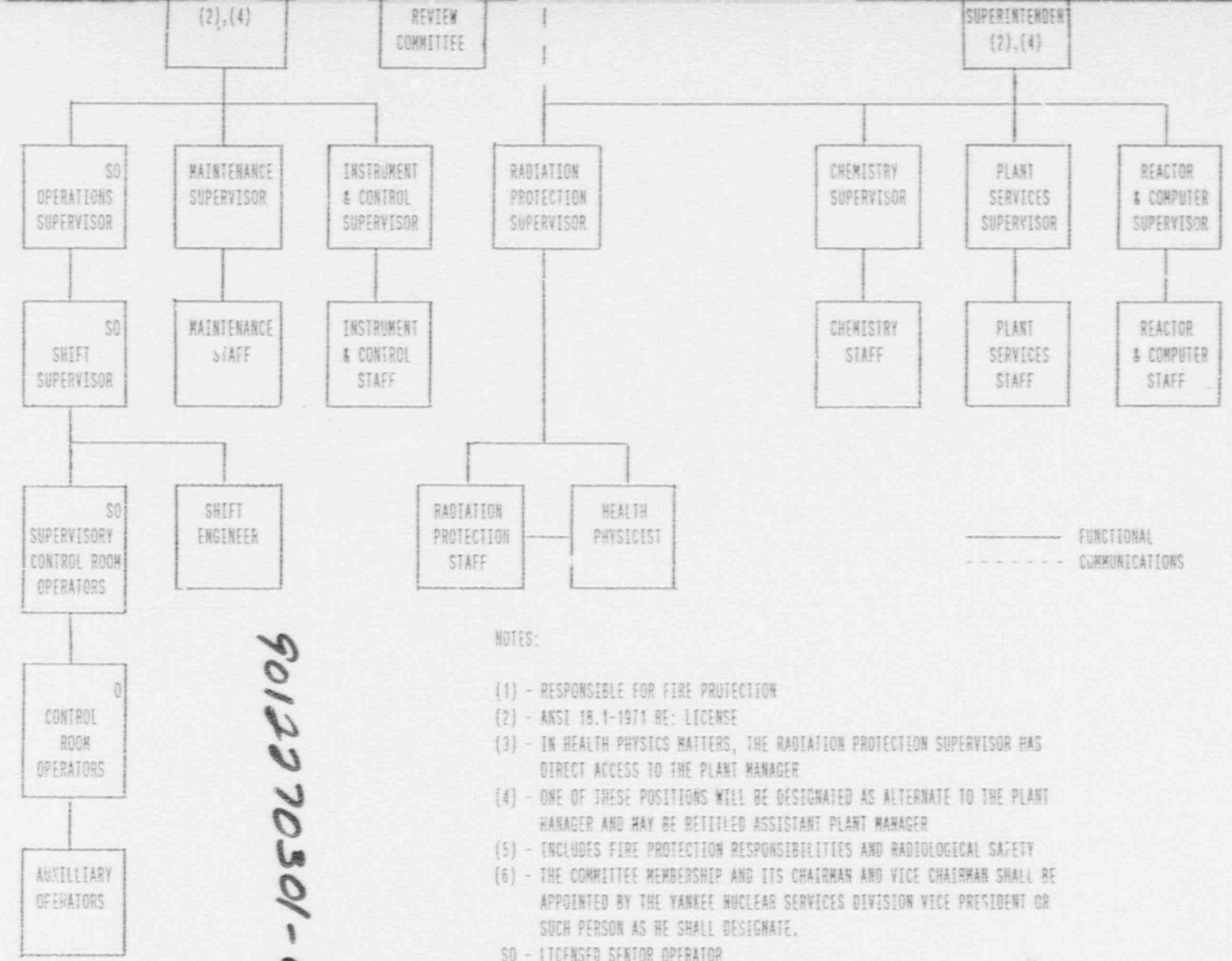

NOTES:

(1) - RESPONSIBLE FOR FIRE PROTECTION
(2) - ANSI 18.1-1971 RE: LICENSE
(3) - IN HEALTH PHYSICS MATTERS, THE RADIATION PROTECTION SUPERVISOR HAS DIRECT ACCESS TO THE PLANT MANAGER
(4) - ONE OF THESE POSITIONS WILL BE DESIGNATED AS ALTERNATE TO THE PLANT MANAGER AND MAY BE RETITLED ASSISTANT PLANT MANAGER
(5) - INCLUDES FIRE PROTECTION RESPONSIBILITIES AND RADIOLOGICAL SAFETY
(6) - THE COMMITTEE MEMBERSHIP AND ITS CHAIRMAN AND VICE CHAIRMAN SHALL BE APPOINTED BY THE YANKEE NUCLEAR SERVICES DIVISION VICE PRESIDENT OR SUCH PERSON AS HE SHALL DESIGNATE.

SO - LICENSED SENIOR OPERATOR
O - LICENSED OPERATOR
- ADMINISTRATIVE POSITIONS NOT SHOWN

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II. QUALITY ASSURANCE PROGRAM

A. SCOPE

This section establishes the criteria to be applied to systems requiring Quality Assurance which prevent or mitigate the consequences of postulated accidents which could cause undue risk to the health and safety of the public. The structures, systems, components and other items requiring quality assurance are listed in Appendix D for the Yankee plant. A listing for the Vermont Yankee plant is provided in the Vermont Yankee Safety Classification Manual.

B. RESPONSIBILITIES

1. Compliance with the requirements of the Operational Quality Assurance Program - based on the criteria of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, and ANSI N18.7-1976 - shall be the responsibility of all personnel involved with activities affecting operational safety. Each facility shall have a matrix of major quality assurance procedures cross referenced to each applicable criteria of 10CFR50 Appendix B. The performance of quality-related activities shall be accomplished with specified equipment under suitable environmental conditions.

   Note: Each criterion section for the Program incorporates the designation of specific organizational responsibilities.

2. Individuals having direct responsibilities for establishment/distribution control/implementation of the Operational Quality Assurance Program are delineated in Section I "Organization" of the Program.

C. IMPLEMENTATION

Establishment of an effective Operational Quality Assurance Program is assured through consideration of and conformance with the Regulatory Position in the below listed Regulatory Guides as modified in Appendix B. Implementation of this Program is assured through Quality Assurance procedures derived from Quality Assurance policies, goals and objectives. Quality Assurance shall review Quality Assurance program procedures to assure their derivation from the policies, goals and objectives established by the l

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 (Endorsed by Regulatory Guide 1.33, Revision 2)

3. ANSI N45.2.1-1973, Cleaning of Fluid Systems and Associated Components During Construction Phase of Nuclear Power Plants (Endorsed by Regulatory Guide 1.37, March 16, 1973)

* 4. ANSI N45.2.2-1972, Packaging, Shipping, Receiving, Storage and Handling f Items for Nuclear Power Plants (Endorsed by Regulatory Guide 1.38, Revision 2)

* 5. ANSI N45.2.3-1973, Housekeeping During the Construction Phase of Nuclear Power Plants (Endorsed by Regulatory Guide 1.39, Revision 2)

6. ANSI N45.2.4-1972, Installation, Inspection and Testing Requirements for Instrumentation and Electric Equipment During the Construction of Nuclear Power Generating Plants (Endorsed by Regulatory Guide 1.30, August 11, 1972)

7. 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 (Endorsed by Regulatory Guide 1.94, Revision 1)

* 8. ANSI N45.2.6-1978, Qualification of Inspection, Examination, and Testing Personnel for the Construction Phase of Nuclear Power Plants (Endorsed by Regulatory Guide 1.58, Revision 1)

9. 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 (Endorsed by Regulatory Guide 1.116, Revision 0-R)

10. ANSI N45.2.9-1974, Requirements for Collection, Storage and Maintenance of Quality Assurance Records for Nuclear Power Plants (Endorsed by Regulatory Guide 1.88, Revision 2)

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

12. ANSI N45.2.11-1974, Quality Assurance Requirements for the Design of Nuclear Power Plants (Endorsed by Regulatory Guide 1.64, Revision 2)

* 13. ANSI N45.2.12-1977, Requirements for Auditing of Quality Assurance Program for Nuclear Power Plants (Endorsed by Regulatory Guide 1.144, Revision 1)

14. ANSI N45.2.13-1976, Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants (Endorsed by Regulatory Guide 1.123, Revision 1)

15. ANSI N45.2.23-1978, Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants (Endorsed by Regulatory Guide 1.146, August 1980)

16. ANSI N18.1-1971, Selection and Training of Nuclear Power Plant Personnel (Endorsed by Regulatory Guide 1.8, Revision 1-R)

* 17. Regulatory Guide 1.26, Revision 3, Quality Group Classifications and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants

* 18. Regulatory Guide 1.29, Revision 3, Seismic Design Classification

Notes: 1) When conflicts in similar requirements contained in Technical Specifications and the above documents exist, the requirements contained in Technical Specifications override those in the documents. Requirements in the documents will be considered when they supplement and are not in conflict with similar requirements in Technical Specifications.

2) Revisions to the above listed documents will be considered for applicability to the Yankee Operational Quality Assurance Program upon written direction thereof by the Regional Administrator, Nuclear Regulatory Commission - Office of Inspection and Enforcement - Region I.

3) Only those documents listed above shall be considered applicable to the Yankee and Vermont Yankee Plants. Documents further referenced by the above listed documents shall not be considered applicable. They may, however, be considered as guidelines.

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

4) This Program shall be applicable to those activities requiring quality assurance which occur commencing within 90 days after acceptance of the Program by the Nuclear Regulatory Commission.

5) The NRC shall be notified of changes, that reduce commitments in the accepted description of the QA program, for their review and acceptance prior to implementation. Acceptance will be assumed 60 days after submittal unless notified otherwise.

6) Changes that do not reduce QA program commitments shall be submitted to the NRC at least annually.

7) Editorial changes or personnel reassignments of a non-substantive nature do not require NRC notification.

D. MANAGEMENT EVALUATION

The Cognizant Corporate Officer 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 quality related activities.

E. TRAINING

1. The Vice President(s) and Manager of Operations are responsible for the indoctrination and training of their staffs involved with activities affecting quality during plant operation.

2. The Training Manager is responsible for the indoctrination and training of plant staff personnel performing activities affecting operations or requiring quality assurance, and of the operators who are formally licensed or qualified.

3. Within YNSD, each department Director/Manager is responsible for the indoctrination and training of department personnel performing activities affecting quality in applicable design and engineering, test, operational, construction, or quality phases.

4. The indoctrination and training programs shall provide the following:

   a. Instruction as to the purpose, scope, and implementation of quality-related manuals, instructions, and procedures.

   b. Training and qualification in the principles and techniques of the activity being performed.

   c. Documentation of the scope, objective, and method of implementing the program.

d. Maintenance of personnel proficiency by retraining, re-examining, and/or recertifying.

e. Documentation of the training sessions including content, attendance, dates and results where applicable.

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 Nuclear Services Division Quality Assurance Department shall be responsible for auditing design documents and engineering specifications to verify that quality requirements, such as inspection requirements and acceptance criteria, have been included by the responsible parties.

2. The Nuclear Services Division Engineering/Project Departments/Plants 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. Design analysis and delineation of acceptance criteria for inspections and tests.

d. Verification of the adequacy of a specific design feature by implementation of a prototype test when required.

e. Review of inspection and test data for compliance with established engineering criteria.

3. The Plant Operations Review Committee shall be responsible for:

a. Review of all proposed plant changes and recommending their approval or disapproval to the Plant Superintendent/Manager.

b. Determination of whether proposed changes involve unreviewed safety questions.

4. The Plant Superintendent/Manager shall be responsible for:

a. Review of the recommendations of the Plant Operations Review Committee.

b. Review and approval of proposed plant changes.

5. The Nuclear Safety Audit and Review Committee shall be responsible for the review of plant changes.

6. The Vice President(s) and Manager of Operations and their staff shall be responsible for:

a. Approval of procedures for processing plant design changes and engineering design changes.

b. Review, approval and distribution of plant change documents.

7. The Nuclear Services Division Construction Services Department shall be responsible for the distribution of design change documents to the contractor performing the work where contract administration responsibilities have been assigned.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the Nuclear Services Division and/or plant 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. The responsibilities and qualifications of the verifier, the areas and features to be verified, the pertinent considerations to be verified, and the extent of documentation are identified in procedures.

Procedures will provide the criteria that specify when verification should be by test. If the verification method is by test only, prototype, component, or feature testing is performed in accordance with written procedures prior to relying upon the component, system, or structure to perform its function.

e. Subjection of design and specification changes, including those originating "on-site", 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.

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.

i. Establishment of procedures to assure that computer programs are verified and validated for a particular application.

IV. PROCUREMENT DOCUMENT CONTROL

A. SCOPE

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

B. RESPONSIBILITIES

1. The Nuclear Services Division Quality Assurance Department shall be responsible for review of procurement requisitions initiated by the Plant and the Yankee Nuclear Services Division, except for Vermont Yankee who may request such reviews. The Vermont Yankee staff shall be responsible for the Procurement Requisition reviews.

2. The Plant or their corporate staffs shall be responsible for:

   a. The preparation, review, issue, and control of purchase documents.

   b. Preparation of detailed procedures as to how purchase documents are prepared, reviewed, approved, issued, and controlled.

c. Review of plant procurement requisitions (Vermont Yankee plant only).

3. The Nuclear Services Division Engineering and/or Project Departments shall be responsible for:

a. Preparation of engineering specifications which detail the technical and quality requirements for material, equipment and services.

b. Initiation and/or review (Yankee plant only) of purchase documentation for material, equipment, and services required for Plant changes.

4. The Nuclear Services Division Construction Services Department shall be responsible for initiation and/or review (Yankee plant only) of purchase documentation for construction services including contractor supplied material and equipment required for plant changes where contract administration responsibilities have been assigned.

5. The Vice President(s) and Manager of Operations and their staff shall be responsible for the review and approval of procurement documents. (For Vermont Yankee, this function is performed by the Vermont Yankee staff.)

C. IMPLEMENTATION

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

a. Documentation of the review and approval of procurement documents prior to release and availability of this documentation for verification.

b. Identification of the vendor's applicable quality assurance requirements of 10CFR50, Appendix B and/or ANSI N18.7, and/or other applicable codes, standards or regulatory documents referenced in procurement documents which are to be reviewed by the qualified personnel knowledgeable in quality assurance. For Vermont Yankee, this function will be the responsibility of the Vermont Yankee staff.

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 materia:

6. Quality Assurance Department's right of the access to the vendor's facilities and records for surveillance and/or audit to procurement documentation.

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.

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

Within Yankee Nuclear Services Division, each Department Director/Manager is responsible for establishing and complying with applicable procedures governing the activities affecting quality.

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 Nuclear Services Division Quality Assurance Department shall be responsible for review and approval of all Plant Operational Quality Assurance procedures.

2. The Plant shall be responsible for the preparation, approval, maintenance, and implementation of all instructions and procedures associated with plant activities.

3. The Nuclear Services Division Engineering and/or Project Departments shall be responsible for:

   a. Preparation and approval of engineering drawings and instructions, welding and nondestructive examination procedures, and procedures for Engineering Design Control.

   b. Updating and control of original drawings 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 Superintendent/Manager.

5. The Nuclear Services Division Construction Services Department shall be responsible for the preparation, approval, maintenance, and implementation of all instructions and procedures associated with Construction Services Department activities.

C. IMPLEMENTATION

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

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 by the Quality Assurance Department or other personnel knowledgeable in quality assurance.

VI. DOCUMENT CONTROL

A. SCOPE

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

B. RESPONSIBILITIES

1. All participating departments shall establish document control measures which provide for the following:

   a. Identification of organizations responsible for preparation, review, approval, and control of documents.

   b. Identification of documentation to be used in performing the 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 organizations have the unique responsibilities delineated below.

2. The Plant shall be responsible for:

   a. Controlling the issuance of plant operating, maintenance, repair, refueling, inspection and test, and change documents.

   b. Distribution and maintenance of all plant approved and/or revised documents assuring quality at the location where the activity is performed.

   c. Review and distribution of drawings.

3. The Nuclear Services Division Engineering and/or Project Departments shall be responsible for:

   a. Controlling the issuance of engineering drawings, specifications, welding and nondestructive examination documents.

   b. Revision and distribution of welding and nondestructive examination documents.

   c. Maintenance and distribution of engineering specifications and drawings.

4. The Vice President(s) and Manager of Operations and their staff shall be responsible for:

   a. A system of review and approval of Plant drawings and specifications.

b. Controlling the Nuclear Services Division Operational Support quality assurance documents.

5. The Director of Quality Assurance shall be responsible for establishing the means for the control and distribution of the Operational Quality Assurance Program and Approved Vendors List and revisions thereto.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the Nuclear Services Division and/or plant 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 the controlling authority.

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 instructions, specifications, drawings, procurement documents, or other quality assuring documents.

e. Control of documents identified as follows:

1. Design documents (i.e., Engineering/Plant Design Change Requests, Specifications, Calculations, etc.)

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

6. Test documents

7. Design changes

8. Nonconformance reports

f. Appendices to the Operational Quality Assurance Program are considered to be part of the Program and are reviewed and approved in accordance with the Program.

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 Nuclear Services Division Quality Assurance Department shall be responsible for:

   a. Audit of vendor quality assurance programs.

   b. Maintenance of a listing of qualified vendors based upon (a) above.

   c. Surveillance of vendor activities.

2. The Nuclear Services Division Engineering and/or Project Departments shall be responsible for evaluating vendor manufacturing and technical capabilities upon request.

3. The Plant shall be responsible for:

   a. Receipt inspection and control of material and equipment.

b. Evaluation of purchased services during and/or after completion of the service.

c. The Plant Services/Administrative Department shall be responsible for the control of purchased material, parts and components until issued for installation or use.

C. IMPLEMENTATION

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

a. Audit 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 assure conformance to purchase specifications.

b. Documentation and maintenance of the results of vendor audits.

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 the plant:

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, in accordance with predetermined instructions, to assure:

1. Material is identified and conforms with receiving documentation.

2. Material and documentation are determined acceptable prior to use.

3. Inspection records or certificates of conformance attesting 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.

R. Evaluation of the vendor's effectiveness to control quality is performed at intervals consistent with the importance, complexity and quality of the item.

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 Nuclear Services Division Quality Assurance Department shall be responsible for 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. The Plant shall be responsible for:

   a. Preparation and approval of documents for the identification and control of materials, parts, components and storage of lubricants and other consumable materials.

   b. Maintenance of traceability of materials, parts, and components received, stored, installed, and used at the Plant.

3. The Nuclear Services Division Engineering and/or Project Departments and/or the Vermont Yankee staff shall be

responsible for assuring that specifications contain appropriate requirements for the identification and control of materials, parts, and components.

4. The Vice President(s) and Manager of Operations and their staff shall be responsible for providing review and approval of documentation for the purchase of materials, parts, and components. (For Vermont Yankee, this function is performed by the Vermont Yankee staff.)

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the Nuclear Services Division and/or plant 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 Material 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.

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 Nuclear Services Division Quality Assurance Department shall be responsible for:

   a. Surveillance of certain nondestructive tests in accordance with "Yankee Atomic Electric Company Welding and Nondestructive Examination Procedures".

   b. Training, qualification, and requalification of Plant and Quality Assurance Department personnel in nondestructive testing, such as liquid penetrant examination.

   c. Review of special process documents generated by the Nuclear Services Division Engineering/Project Departments and vendors for use on-site and when otherwise specified.

2. The Nuclear Services Division Engineering and/or Project Departments shall be responsible for:

a. Preparation of documents for welding, heat treating, filler metal control, and nondestructive examinations.

b. Review and approval of special process documents provided by the vendor for use on-site and when otherwise specified.

3. The Plant 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.

4. The Vice President(s) and Manager of Operations and their staff shall be responsible for review and approval of purchase documentation for special process material. (For Vermont Yankee, this function is performed by the Vermont Yankee staff.)

C. IMPLEMENTATION

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

a. Completion of qualification records of documents, equipment, and personnel connected with special processes in accordance with applicable codes, standards, and specifications.

b. Performance of 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.

X. INSPECTION

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, specifications and instructions.

B. RESPONSIBILITIES

1. The Nuclear Services Division Quality Assurance Department shall be responsible for:

   a. Surveillance of documentation pertinent to the Inservice Inspection and Test Program.

   b. Surveillance of vendor inspection activities and personnel.

   c. Review of Installation and Test Procedures and Maintenance Requests to ascertain the extent of any required QA surveillances and QC inspections (Yankee Plant only).

   d. Incorporation of mandatory notification/hold points for plant/vendor/service group activities into the QA surveillances and mandatory hold points for inspections (Yankee Plant only).

   e. Writing, reviewing and approving quality control inspection checklists. (Yankee Plant only.)

f. Perform QC inspection activities to assure that predetermined requirements have been met. (Yankee Plant only.)

2. The Plant shall be responsible for:

a. Writing and approving inspection instructions and check lists.

b. Assuring that activities requiring quality assurance meet predetermined requirements.

c. Providing qualified personnel and necessary equipment for inspections to assure quality work.

d. Perform inspection activities to assure that predetermined requirements have been met.

e. Hold points incorporation where applicable.

C. IMPLEMENTATION

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

a. Independence of personnel performing the inspection from the personnel performing the activity being inspected.

b. Use of instructions or check lists which incorporate the details listed in Section XVII Item C.1.a.

c. Use of necessary drawings and specifications when performing inspection operations.

d. Inspection of repairs and replacements in accordance with the approved 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.

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 Nuclear Services Division Quality Assurance Department shall be responsible for:

   a. Surveillance of vendor test program activities.

   b. Surveillance of the documentation generated during the test program.

2. The Nuclear Services Division Engineering/Project Departments/Plants shall be responsible for:

   a. Determination of when testing is required following plant changes.

   b. Establishment of specifications, requirements, and acceptance criteria for testing following plant changes.

   c. Development of test documents, performance of tests, and documentation, evaluation, and approval of test results.

d. Provision of qualified personnel and calibrated equipment for testing.

3. The Nuclear Safety Audit and Review Committee shall be responsible for reviewing proposed tests or experiments which involve an unreviewed safety question as defined in Section 50.59, 10CFR.

4. The Plant Operations Review Committee shall be responsible for the review of all test documents and test results for special tests.

C. IMPLEMENTATION

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

a. Assurance that changes, repairs, and replacements are tested in accordance with the approved 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.

c. Procedures shall provide for specification of test equipment with suitable accuracy. The criteria for determining the accuracy requirements of test equipment shall be provided when identification of specific equipment is not practical.

XII. CONTROL OF MEASURING AND TEST EQUIPMENT

A. SCOPE

This section of the Operational Quality Assurance Program establishes 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. Each Plant Department shall be responsible for:

   a. Development of the implementing documents for control of measuring and test equipment including identification and calibration for equipment under their control.

   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 Nuclear Services Division and/or plant actions listed below:

   a. Identification and traceability of measuring and test equipment to the calibration test data.

   b. Labeling or tagging of measuring and test equipment to indicate due date for calibration.

   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) requirement of no more than 1/4 of the tolerance of 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.

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 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 Nuclear Services Division and/or Plant 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.

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, logs, data sheets, 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 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 Nuclear Services Division and/or plant 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 of the bypassing of required inspections, tests and other critical operations with the concurrence of the Quality Assurance Department.

c. Procedural control of the application and removal of inspection and status indicators such as tags, markings, labels and stamps.

XV. NONCONFORMING MATERIALS, PARTS, AND COMPONENTS

A. SCOPE

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

B. RESPONSIBILITIES

1. The Nuclear Services Division Quality Assurance Department shall be responsible for:

   a. Review of nonconformance reports to determine repetitive nonconforming conditions and to verify resolution of significant conditions adverse to quality to preclude recurrence.

   b. Establishment of feedback system between Yankee Atomic Electric Company and vendor representatives in regard to nonconforming material or services.

   c. Initiation of nonconformance reports when conditions are found which may adversely affect the quality of plant systems, structures, activities, or components.

2. The Nuclear Services Division Engineering and/or Project Departments shall be responsible for:

a. Review of nonconforming services or items which cannot be corrected by vendor action.

b. Preparation or approval of implementing documents for repair and/or rework of nonconforming items.

3. The Vice President(s)/Manager of Operations and their staff shall be responsible for the review and approval of all plant-initiated nonconforming item, service, or activity dispositions.

4. The Plant shall be responsible for.

a. Writing implementation documents for the identification, documentation, and corrective action for services, material, installation, testing, operation, and/or surveillance nonconformances at the Plant.

b. Establishment of measures to provide for the documented control of nonconforming materials, parts, and components.

c. Establishment of feedback system between the plant and vendor representatives for the disposition of nonconforming services, materials, parts and components.

C. IMPLEMENTATION

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

a. Identification, disposition, inspection and segregation of nonconforming items or activities.

b. Identification of those individuals or groups delegated the responsibility and authority for the disposition and written approval of nonconforming items or activities.

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.

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 Nuclear Services Division Quality Assurance Department shall be responsible for review of recommendations to prevent recurrence of a significant condition adverse to quality.

2. The Vice President(s) and Manager of Operations and their staff shall be responsible for:

   a. Review of significant adverse conditions reported by the Plant.

   b. Coordination of comments between the Nuclear Services Division Projects Departments and the Plant.

   c. Review of corrective action taken by the Plant.

3. The Plant shall be responsible for:

   a. Identification of causes of conditions adverse to quality.

b. Implementation of the corrective action.

c. Documentation of corrective action taken.

4. The Nuclear Services Division Engineering and/or Project Departments shall be responsible for:

a. Review of conditions adverse to quality which involve design deficiencies to determine the cause of the condition.

b. Recommendations of corrective action to preclude repetition of design deficiencies.

5. The Plant Operations Review Committee shall be responsible for:

a. Review of significant conditions adverse to quality and recommending corrective action.

b. Recommendations involving repetition of operating deficiencies.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of the Nuclear Services Division and/or plant 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, both "off-site" and "on-site".

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, but not be limited to, plant history; operating logs; principal maintenance; design change activities; reportable occurrences; nonconformance reports; results of reviews, inspections, 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 Nuclear Services Division Quality Assurance Department shall be responsible for:

   a. Maintenance of qualification/certification records for Quality Assurance Department personnel.

b. Maintenance of audit, surveillance and inspection records of quality assurance activities generated by the Quality Assurance Department personnel or their designates.

2. The Plant shall be responsible for:

a. Writing implementation documents for the establishment and maintenance of Plant Operational Quality Assurance records.

b. Designating individuals and establishing requirements for the control of plant design, procurement, and operational records involving quality assurance.

c. Provision of facilities to prevent deterioration or loss of documentation.

d. 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.

3. The Nuclear Services Division Engineering and/or Project Departments shall be responsible for establishing a system of review, approval and retention of documents relating to quality assurance for the operation of the departments.

4. The Director of Quality Assurance shall be responsible for 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 Nuclear Services Division and/or plant actions listed below:

   a. Specifying the details required for inspections 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.

      7) Acceptance and rejection criteria.

      8) Identification of required procedures, drawings, and specifications and revisions.

      9) Specification of the necessary measuring and test equipment including accuracy requirements.

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 records shall be stored in a separate remote location when the type of document is not included in the record storage facility.

XVIII. AUDITS

A. SCOPE

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

B. RESPONSIBILITIES

1. The Nuclear Services Division Quality Assurance Department shall be responsible for:

   a. Providing check lists for audits/surveillances of activities encompassed by the 18 criteria of 10CFR50 Appendix B, and ANSI N18.7.

   b. Training of audit and surveillance personnel.

   c. Scheduling, coordinating, and implementing the formal In-Plant Audit/Surveillance Programs performed on activities covered in Sections III through XVII of this document.

   d. Preparing information regarding the In-Plant Audit Program for review by the Nuclear Safety Audit and Review Committee.

e. Performing audits of vendors.

f. Following up of discrepancies discovered during audits/surveillance.

g. Making recommendations to preclude possible audit/surveillance discrepancy repetition.

h. Performing periodic audits of all YNSD Departments having responsibilities under the Quality Assurance Program.

2. The Vice President(s) and Manager of Operations and their staff shall be responsible for:

a. Evaluation of plant position on specified In-Plant Audit Program deficiencies.

b. Preparation of "Implementation Directive" to the Plant on resolution of those deficiencies.

3. The Plant shall be responsible for:

a. Documentation of the plant position concerning any outstanding item resulting from an audit requiring a response.

b. Implementation of action to be taken as directed by the Vice President and Manager of Operations.

4. The Nuclear Safety Audit and Review Committee shall be responsible for:

   a. Evaluation of the Operational Quality Assurance Program to determine its overall effectiveness.

   b. Reporting results of Program reviews and recommendations resulting therefrom to the cognizant corporate officer.

5. The Nuclear Services Division Departments shall be responsible for:

   a. Documentation of the department position concerning any outstanding item resulting from an audit.

   b. Implementation of action to be taken to correct deficiencies revealed by an audit.

C. IMPLEMENTATION

1. Satisfaction of this criterion shall be assured through the implementation of plant and/or Nuclear Services Division documents.

2. The implementing documents shall provide for the following:

   a. Documentation of audit/surveillance results and review with management having responsibility in the area.

b. Necessary action to be taken by responsible management to correct deficiencies revealed by the audit/surveillance.

c. Re-audit 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, instructions, procedures, and drawings.

3) Receiving and plant inspections.

4) Indoctrination and training programs.

5) Implementation of operating and test procedures.

6) Calibration of measuring and test equipment.

g. Scheduling of audits regularly on the basis of the status and safety importance of the activities being performed.

YANKEE ATOMIC ELECTRIC COMPANY

APPENDIX A

Qualification Requirements for
Management of Quality Assurance

Management of Quality Assurance must meet the below listed qualification requirements:

A. EDUCATION:

Bachelor's degree in Science or Engineering, or the equivalent in practical experience.

B. EXPERIENCE:

1. Four years experience in the field of Quality Assurance, or

2. Equivalent number of years of nuclear plant experience in a supervisory position preferably at an operating nuclear power plant or a combination of the two.

a) At least one year of this four years experience shall be nuclear power plant experience in the implementation of the Quality Assurance Program, and

b) Six months of the one year experience shall be obtained within a Quality Assurance organization.

YANKEE ATOMIC ELECTRIC COMPANY

APPENDIX B

Exceptions

The sub-categories of this Appendix summarize the exceptions noted in Section II of the Yankee Atomic Electric Company Operational Quality Assurance Manual.

Appendix B Sub-Category	Standard/Guide	Title
I.	ANSI N45.2.3-1973	Housekeeping During the Construction Phase of Nuclear Power Plants
II.	ANSI N45.2.9-1974	Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants
III.	ANSI N45.2.10-1973	Quality Assurance Terms and Definitions
IV.	ANSI N45.2.12-1977	Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants
V.	ANSI N45.2.2-1972	Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants
VI.	ANSI N45.2.6-1978	Qualification of Inspection, Examination and Testing Personnel for the Construction Phase of Nuclear Power Plants
VII.	R.G. 1.26, Rev. 3	Quality Group Classifications and Standards for Water-, Steam- and Radioactive-Waste-Containing Components of Nuclear Power Plants
VIII.	R.G. 1.29, Rev. 3	Seismic Design Classification

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

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

A. EXCEPTION:

Subsection 2.1 - Planning

The Yankee operating plants take exception to the five-zone requirements specified in the subject standard.

ALTERNATIVE:

The Yankee operating plants 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.

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

The Yankee operating plants take exception to the control of tools, equipment, materials and supplies used in Zone III.

ALTERNATIVE:

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

II. ANSI N45.2.9 - 1974, Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants

A. EXCEPTION:

Subsection 5.6(3) Facility

The Yankee operating plants take exception to "structures, doors, frames, and hardware should be Class A fire rated with a recommended four hour minimum rating."

ALTERNATE:

"Doors, structures, frames, and hardware shall be designed to comply with the requirements of a minimum two (2) hour fire rating, meeting NFPA No. 232 guidelines."

JUSTIFICATION:

The two (2) hour rating has been endorsed by the NRC Standard Review Plan NUREG-0800, Revision 2, dated July 1981.

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

A. EXCEPTION:

Subsection 2 - Terms and Definitions

The Yankee operating plants take exception to the definitions of "Certificate of Conformance" and "Certificate of Compliance".

ALTERNATIVE:

The Yankee operating plants 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 Yankee specifications.

IV. ANSI N45.2.12 - 1977, Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants

A. EXCEPTION:

Subsection 4.2.2 Team Selection

The Yankee operating plants take exception to the requirement for a "Lead Auditor".

ALTERNATIVE:

Team Selection - Audits shall be performed under the cognizance of a Lead Auditor. 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.

V. 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

The Yankee operating plants take 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

The Yankee operating plants take 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.

C. EXCEPTION:

Subsection 5.2.1 - Shipping Damage Inspection

The Yankee operating plants take exception to the requirement that a preliminary visual inspection or examination be performed prior to unloading.

ALTERNATIVE:

The Yankee operating plants shall perform those required inspections after unloading. In special instances, preunloading 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

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

ALTERNATIVE:

The Yankee operating plants shall perform receiving inspection in a manner and in an environment which do 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 case 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.

E. EXCEPTION:

Subsection 5.2.3 - Special Inspection

The Yankee operating plants take 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:

Subsection 6.1.2 - Levels of Storage

The Yankee operating plants take exception to two specific requirements associated with fuel storage (classified level A).

ALTERNATIVE:

The Yankee operating plants shall meet the requirements of level A storage for new fuel with the exception of special air filtering; and temperature and humidity controls.

JUSTIFICATION:

The existing storage conditions at the Yankee operating plants are consistent with the protection provided to the fuel while in storage at the manufacturer (vendor) and/or while in transit to the plant site and are judged to provide adequate protection to the fuel assembly structure which is of highly corrosion resistant materials. We believe that the above listed requirements are intended for application at the manufacturing facility (vendor) where the uranium pellets may be exposed to the atmosphere and not in its fully encapsulated, and therefore, fully protected form in a completed fuel assembly.

G. EXCEPTION:

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

The Yankee operating plants take 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.

H. EXCEPTION:

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

The Yankee operating plants take exception to the requ ement that container markings shall appear on a minimum of two sides.

ALTERNATIVE:

Containers shall be adequately marked to provide identification and retrievability.

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.

I. EXCEPTION:

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

The Yankee operating plants take 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.

J. EXCEPTION:

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

The Yankee operating plants take 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.

VI. ANSI N45.2.6 - 1978, Qualification of Inspection, Examination and Testing Personnel for Nuclear Power Plants

A. EXCEPTION:

The Yankee operating plants take exception to the application of the Standard to all Yankee and Vermont Yankee personnel performing inspection, examination and testing.

ALTERNATIVE:

Yankee and Vermont Yankee personnel identified in ANSI N18.1-1971 who perform inspection, examination and testing will be qualified to ANSI N18.1-1971.

Yankee and Vermont Yankee personnel not identified in ANSI N18.1-1971 who perform inspection, examination and testing will be qualified to ANSI N45.2.6-1978.

VII. Regulatory Guide 1.26, Rev. 3, (2/76), Quality Group Classifications and Standards for Water-, Steam- and Radioactive-Waste-Containing Components of Nuclear Power Plants

A. EXCEPTION:

The Yankee operating plants take exception to the Regulatory Guide in its entirety.

ALTERNATIVES:

Yankee

Yankee shall continue to classify structures, components and systems in accordance with ANSI Standard N18.2, January 1973, "Nuclear Safety Criteria for the Design of Stationary Pressurized Water Reactor Plants", as in the past.

Vermont Yankee

Vermont Yankee shall continue to classify structures, components and systems in accordance with ANS-22, Draft No. 4, Rev. 1, May 1973, "Nuclear Safety Criteria for the Design of Stationary Boiling Water Reactor Plants", as in the past.

VIII. Regulatory Guide 1.29, Rev. 3, (9/78), Seismic Design Classification

A. EXCEPTION:

The Yankee operating plants take exception to the application of Regulatory Guide 1.29, Rev. 3, (9/78).

ALTERNATIVES:

Yankee

Yankee shall apply Regulatory Guide 1.29, Rev. 3, (9/78), to those structures, systems and components as determined by the USNRC System Evaluation Program.

Vermont Yankee

The seismic design classification of structures, systems, and components at Vermont Yankee shall be as defined in the Vermont Yankee FSAR.

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

A. EXCEPTION: (Vermont Yankee Plant only)

Subsection 5.3.9 - Emergency Procedures

The Vermont Yankee Operating Plant takes exception to the requirements that detail Emergency Procedures be in accordance with Paragraph 5.3.9.

ALTERNATIVE:

Vermont Yankee Emergency Operating Procedures are written in accordarce with the Symptom/Function-Based Guidelines developed by the BWR Owners Group and accepted by the NRC. These Symptom/Function- Based Procedures, mandated by the NRC in NUREG-0737, have format and content different from the Event-Oriented Emergency Procedures described in ANSI N18.7-1976.

JUSTIFICATION:

NUREG 0737 supersedes ANSI N18.7-1976 in the area of Emergency Operating Procedures. Changes to procedure format are required in order to develop Symptom/Function-Based Procedures.

YANKEE ATOMIC ELECTRIC COMPANY

VERMONT YANKEE

CLASSIFICATION OF STRUCTURES, COMPONENTS, AND SYSTEMS

NOTE: A comprehensive listing is in the Vermont Yankee Safety Classification Manual.

CLASSIFICATION OF STRUCTURES, COMPONENTS AND SYSTEMS

I. ELECTRICAL SYSTEMS AND COMPONENTS

Electrical and Instrumentation systems and components not originally 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. 480 Volt Emergency Buses
B. 480 Volt Emergency Motor Control Centers
C. 125 Volt DC Batteries
D. Battery Chargers
E. 125 Volt Distribution Switchboards
F. Diesel Generators
G. Diesel Generator Control Panels
H. Manual Throwovers (in emergency power system)
I. Reactor Protection System
J. Safety Injection Actuation
K. Containment Isolation Actuation
L. Containment Hydrogen Control
M. Main Steam Isolation Actuation
N. 480 Volt Emergency Bus Degraded Voltage Instrumentation

SECTION I NOTES:

1. For those electrical and instrumentation systems designated above, Quality Assurance instrumentation program requirements are applicable only to those portions of systems defined in Section III 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 II.

II. ELECTRICAL AND INSTRUMENTATION SYSTEM COMPONENT EXCLUSION CRITERIA

1. Any component of an electrical instrumentation system (Section I) is excluded from the QA Program requirements if it meets the following criteria:

   a. A failure of the component by 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.

III. MECHANICAL STRUCTURES, COMPONENTS AND SYSTEMS

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."

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 D.1.

IV. OTHER ITEMS REQUIRING GRADED 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
f. Lithium Hydroxide

6. Reagents (including shelf life)
   a. Those reagents used in performance of analyses required by Technical Specifications
7. Packaging of Radioactive Materials
8. Fire Protection for safety-related areas
9. Vapor Container Accident Area Radiation Monitors A and B
10. Effluent and Environmental Monitoring Program
11. Primary Vent Stack High Range Noble Gas Monitoring

YANKEE ATOMIC ELECTRIC COMPANY

TABLE D.1

(Sheet 1 of 6)

MECHANICAL STRUCTURES, COMPONENTS AND SYSTEMS CLASSIFICATION LIST

STRUCTURE(S)	SAFETY CLASS
Vapor Container	2
COMPONENTS AND SYSTEMS	
Main Coolant System	
Reactor Vessel	1
Control Rod Drive Mechanism Housing	1
Steam Generator (tube side)	1
Steam Generator (shell side)	2
Pressurizer	1
Pressurizer Surge and Spray Line	1
Safety Valves	1
Relief Valves	1
Valves to Main Coolant System Boundary	1
Main Coolant Loop Isolation Valves	1
Main Coolant Check Valves	1
Main Coolant Loop Bypass Line	1
Incore Flux Tubes	2
Pressurizer Vent Capillaries	1
Main Coolant Piping	1
Main Coolant Pressure Control and Relief Rupture Disc	1
Main Coolant Pressure Control and Relief (from Vapor Container Penetration to Low Pressure Surge Tank)	2
Main Coolant Vent System (from Pressurizer Capillaries to Low Pressure Surge Tank and Sample Sink Cooler)	2
Feedwater System	
Emergency Boiler Feed Pumps	3
Demineralized Water Storage Tank	3
Feedwater Piping (from Motor Operated Feed Valve to Feed Regulating Valve)	3

TABLE D.1

(Sheet 2 of 6)

COMPONENT	SAFETY CLASS
Feedwater Piping (from Feedwater Regulating Valve to Steam Generator)	2
Service Water System	
Service Water Pumps	3
Valves and Piping up to and through charging pump oil coolers and purification pump bearing	3
Primary Makeup Water System	
Primary Water Storage Tank	3
Piping System (from Primary Water Storage Tank to Demineralized Water Storage Tank and Seal Water Tank)	3
Piping System (from demineralized Water Storage Tank through Emergency Boiler Feed Pump to Steam Generator Feedwater System)	3
Primary Pumps Sealing System (from Primary water Storage Tank through Seal Water Tank to Primary Pump Seals)	3
Seal Tank Makeup Pumps	3
Seal Water Tank	3
Post Accident Hydrogen Vent System	
Piping and Valves from Vapor Container (V.C.) to and including Hydrogen Analyzer Isolation Valves	2
Chemical and Volume Control System	
Feed and Bleed Heat Exchangers	1
Bleed Line Orifices	1
Low Pressure Surge Tank (L.P.S.T.)	2
Charging Pumps	2

TABLE D.1

(Sheet 3 of 6)

COMPONENT	SAFETY CLASS
Low Pressure Surge Tank Cooler (includes piping system and cooler tubes)	2
Low Pressure Surge Tank Cooler (Shell)	3
Low Pressure Surge Tank Cooling Pump	2
Bleed Line Piping (from Main Coolant System to orifice motor operated isolation valve)	1
Bleed Line Piping (from orifice motor operated isolation valves to LPST)	2
Charging System Piping (from Low Pressure Surge Tank to Check Valves in Vapor Container)	2
Charging System Piping (from Check Valves in Vapor Container to Main Coolant System)	1
Purification Pumps	2
Boric Acid Mix Tank	3
Boric Acid Transfer Pump	3
Boric Acid Mix Tank Heating System	3
Safety Injection System	
Safety Injection Tank (S.I.T.)	2
Low Pressure Safety Injection Pumps	2
High Pressure Safety Injection Pumps	2
Safety Injection Accumulator	2
Nitrogen Storage Bottles	2
Nitrogen Regulating Valves	2
Safety Injection Individual Loop Motor Operated Valves	1
Safety Injection Tank Heater (Steam side)	3
Vapor Container Recirculation System Piping	2
Core Shutdown Cooling System	
Shutdown Cooling Pump	2
Shutdown Cooling Pump Heat Exchanger (tube)	2
Shutdown Cooling Pump Heat Exchanger (shell)	3

YANKEE ATOMIC ELECTRIC COMPANY

TABLE D.1

(Sheet 4 of 6)

COMPONENT	SAFETY CLASS
Shutdown Cooling Piping (from Main Coolant System to and including Motor Operated valves)	1
Shutdown Cooling Piping (from motor operated valve through cooler and pump to motor operated valve)	2
Liquid Waste System	
Primary Drain Collecting Tank	3
Waste Holdup Tank	3
Activity Decay and Dilution Tank	3
Primary Drain Collecting Tank Pumps	3
Component Cooling Water System	
Component Cooling Water Pumps	3
Component Cooling Heat Exchangers	3
Component Cooler Surge Tank	3
Component Cooling Piping (to and from Vapor Container)	2
Component Cooling Piping (from Pumps through components outside of Vapor Container)	3
Main Steam System	
Main Steam Piping (from Steam Generator up to and including Nonreturn Valves)	2
Safety Valves	2
Emergency Atmospheric Steam Dumps	2
Atmospheric Steam Dump	2
Steam Driven Emergency Boiler Feed Pump Steam Supply Piping (from emergency atmospheric steam dump piping to isolation valve before pressure regulator)	2
Steam Driven Emergency Boiler Feed Pump Steam Supply Piping (from isolation valve before pressure regulator up to steam turbine)	3

TABLE D.1

(Sheet 5 of 6)

COMPONENT	SAFETY CLASS
Steam Trap Drain Piping (from main steam piping and steam-driven emergency boiler feed pump steam supply piping to air-operated trip valve)	2
Steam Generator Blowdown System	
Piping (up to and including air operated trip valve)	2
Sample and Drain System	
Drain and Sample Piping (from Main Coolant System to sample and drain motor-operated and manual isolation valves)	1
High Pressure Sample Cooler (including piping from motor-operated and manual isolation valves)	2
Containment Ventilation	
Ventilation Ring Duct	2
Post-Accident Fans	2
Vapor Container Heating Steam Supply Piping (from air-operated trip valve to check valve inside containment)	2
Vapor Container Heating Steam Return Piping (from first weld inside containment to air-operated trip valve)	2
Emergency Diesel Generator System	
Fuel Oil Storage Tank	3
Diesel Fuel Day Tanks	3
Diesel Engines	3
Diesel Fuel Filters	3
Fuel Oil Piping System (excluding piping from fuel oil transfer pumps suction isolation valves, to pumps and from pumps to discharge check valves)	3

TABLE D.1

(Sheet 6 of 6)

COMPONENT	SAFETY CLASS
Spent Fuel Pit Cooling and Cleanup System	
Spent Fuel Pit Cooling Pump	3
Spent Fuel Pit Cooler	3
Spent Fuel Pit Cooling Piping	3
Fuel Transfer System	
Fuel Chute (from spectacle flange to first joint in VC)	2
Fuel Chute (from spectacle flange to lower lock valve)	3
Fuel Chute Dewatering Pump Discharge (from the blanked flange to the first joint inside the VC)	2
Fuel Chute Dewatering Pump Suction (from fuel chute to inlet isolation valve)	3
Fuel Chute Dewatering Pump Discharge (from blank flange to air-operated control valve)	2

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