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Memorandum

NO-02-0025
April 10, 2003

TO: Quality Assurance Program Topical Report - Controlled Copy Owners

FROM: Dorothy Bruce, QAP Coordinator
Nuclear Oversight, Ext. 3185

SUBJECT: **Quality Assurance Program (QAP) Topical Report - Millstone Power Station Revision 24, Change 3 (Document No. MP-02-OST-BAP01)**

Enclosed please find Quality Assurance Program (QAP) Topical Report - Millstone Power Station, Revision 24, Change 3. The change modifies QAP 1.0, QAP 2.0, QAP 5.0, QAP 18.0, and QAP Appendix A. QAP 1.0 and QAP 18.0 were modified to include responsibilities in the text for the Senior Vice President – Nuclear Operations and the Director – Nuclear Oversight. QAP 2.0 and QAP 5.0 were modified the procedure process to eliminate some quality assurance reviews of procedures. QAP 2.0 was also modified to clarify the MEPL process, as was Appendix 18.0.

Please note that the effective date of Revision 24, Change 3, is April 14, 2003. Please replace the entire contents of QAP 1.0, QAP 2.0, QAP 5.0, QAP 18.0, and QAP Appendix A with the enclosed sections. If you have any questions, please contact D. Bruce at X 3185.

Attachments: Summary of Changes, Rev. 24, and Change 3

Enclosure:
Quality Assurance Program Topical Report - Millstone Power Station, Revision 24, Change 3

DSB/dsb

Summary of Changes to QAP Rev. 24 Incorporated as Change 3

Section	Summary Description of Changes	Reference
QAP 1.0	Added responsibilities of the SVP Nucl Operations and the Director - Nuclear Oversight and clarified audit finding processes to be consistent with current NBU processes. (This resulted in renumbering Section 1.3 of the QAP.	Request 02-13
QAP 2.0	Clarified the definition/purpose of MEPL.	Request 02-14
	Eliminated the need for Nuclear Oversight concurrence of quality procedures, with the exception of inspection related procedures	Request 03-01
QAP 5.0	Eliminated the need for Nuclear Oversight concurrence of quality procedures, with the exception of inspection related procedures	Request 03-01
QAP 18.0	Added responsibilities of the Director - Nuclear Oversight and clarified audit finding processes to be consistent with current NBU processes.	Request 02-13
Appendix A	Clarified the definition/purpose of MEPL	Request 02-14

1.0 ORGANIZATION

1.1 INTRODUCTION

This section describes the organizations involved in the operation and technical support of Millstone Power Station (MPS). In addition, this section describes the responsibilities governed by the Quality Assurance Program (QAP) Topical Report. Qualifications for key personnel are found in the unit Technical Specifications and Appendix B of this QAP, "Qualification and Experience Requirements."

NOTE

In the remainder of QAP 1.0, the text describes functions that support Millstone Power Station, unless otherwise specified. Units 2 and 3 are operational. Unit 1 is defueled and in a decommissioning mode. Applicable regulations and standards are addressed throughout the QAP as appropriate.

1.2 ORGANIZATION

The Chief Executive Officer - Dominion Nuclear Connecticut, Inc. has ultimate responsibility and overall authority for the Dominion Nuclear Connecticut, Inc. nuclear program, and has delegated the necessary responsibility and authority for all Nuclear Operations to the President and Chief Operating Officer - Dominion Nuclear Connecticut, Inc. who has delegated the necessary responsibility and authority to the Senior Vice President - Nuclear Operations and Chief Nuclear Officer (SVP/CNO) - Dominion Nuclear Connecticut, Inc.

1.3 KEY MANAGEMENT RESPONSIBILITIES AND AUTHORITY

1.3.1 ***The Senior Vice President - Nuclear Operations is the corporate individual responsible to the Senior Vice President - Nuclear Operations and Chief Nuclear Officer (SVP/CNO) - Dominion Nuclear Connecticut, Inc. for the operations of the Nuclear Stations. He has overall responsibility for implementing the quality assurance program for the operational phase of the Nuclear Stations.***

1.3.2 Site Vice President - Millstone

The Site Vice President - Millstone has been delegated ***the necessary responsibility and authority for the management and direction of all activities related to the operation of Millstone Power Station by the SVP/CNO - Dominion Nuclear Connecticut, Inc.*** The Site Vice President - Millstone has overall responsibility for construction, operation, maintenance, modification, quality assurance and implementation of this QAP at Millstone Power Station. The following licensing basis positions report directly to Site Vice President - Millstone:

- Director - Nuclear Station Operations & Maintenance
- Director - Nuclear Station Safety & Licensing

1.3.3 Director - Nuclear Station Operations & Maintenance

Director - Nuclear Station Operations & Maintenance is responsible for establishing common policies and standards pertaining to the operating units, the safe operation and maintenance of the units, including the decommissioning and related activities for Unit 1, for services in support of the station, and implementation of this QAP. The Director - Nuclear Station Operations & Maintenance is responsible for maintaining compliance with requirements of the Operating License and Technical Specifications as well as applicable federal, state and local laws, regulations and codes. The following departments report directly to the Director - Nuclear Station Operations & Maintenance:

- Nuclear Operations
- Nuclear Maintenance
- Nuclear Site Services
- Nuclear Outage and Planning

In addition, the Director - Nuclear Station Operations & Maintenance is responsible for Unit 1 Decommissioning Activities.

Nuclear Training and Supply Chain Management are matrixed to the Director - Nuclear Station Operations & Maintenance.

1.3.4 Director - Nuclear Station Safety & Licensing

Director - Nuclear Station Safety & Licensing is responsible for implementation of this QAP. The following departments report directly to the Director - Nuclear Station Safety & Licensing:

- Nuclear Procedures & Document Administration
- Radiological Protection & Chemistry
- Nuclear Organizational Effectiveness

Emergency Preparedness, Protection Services and Information Technology are matrixed to the Director - Nuclear Station Safety & Licensing.

Nuclear Training, Emergency Preparedness, and Protection Services all report to the Vice President - Nuclear Support Services in the Nuclear Business Unit. Security and Fire Protection are part of Protection Services. Nuclear Engineering reports to the Vice President - Nuclear Engineering and Services in the Nuclear Business Unit.

1.3.5 Director - Nuclear Oversight

The Director - Nuclear Oversight is the corporate individual responsible for the effective performance of Nuclear Oversight. Overall responsibility for the Millstone QAP has been delegated to the Manager - Nuclear Oversight by the SVP/CNO - Dominion Nuclear Connecticut, Inc. The Director - Nuclear Oversight is the corporate individual responsible with the necessary authority and responsibility for the following:

- ***Overall direction of the quality assurance program***
- ***Development and implementation of policies, plans, requirements, procedures, and conduct of audits***

The Director - Nuclear Oversight (NO) is responsible for determining the necessity for escalation activities for Audit Findings.

1.3.6 Manager - Nuclear Oversight

The Manager - Nuclear Oversight reports to the Director - Nuclear Oversight ***and is*** responsible to the Director - Nuclear Oversight for the effective performance of ***Millstone*** Nuclear Oversight. The Manager - Nuclear Oversight acts as advisor to the Site Vice President - Millstone and the SVP/CNO - Dominion Nuclear Connecticut, Inc. on items related to nuclear quality and safety at the ***Millstone Power Station.*** Overall responsibility for the ***Millstone*** QAP has been delegated to the Manager - Nuclear Oversight by the SVP/CNO - Dominion Nuclear Connecticut, Inc. The Manager - Nuclear Oversight has the necessary authority and responsibility for the following:

- Direction of the ***Millstone*** quality assurance program
- Development and implementation of ***Millstone*** policies, plans, requirements, procedures, and audits
- Verification to assure compliance with 10CFR50 Appendix B and other regulatory requirements
- Verification of the implementation of the QAP Topical Report requirements
- Preparation and issuance of the QAP Topical Report
- Identification of quality problems
- Recommendations for solutions to quality problems and verification of the implementation of the solutions

Verification is performed through a planned program of audits, surveillances and inspections by Nuclear Oversight. The Manager - Nuclear Oversight provides objective evidence to management of the performance of quality activities independent of the individual or group directly responsible for performing the specific activity.

The Manager - Nuclear Oversight has the authority and organizational freedom to verify activities affecting quality. This is performed independent of undue influences and responsibilities for schedules and costs.

In order to implement these responsibilities, the Manager - Nuclear Oversight is provided "Stop Work" authority whereby he/she can suspend unsatisfactory work and control further processing or installation of non-conforming materials. The authority to stop work is assigned to Nuclear Oversight personnel and delineated in an approved procedure.

1.3.7 Nuclear Maintenance

Nuclear Maintenance is responsible for on-line maintenance, cost and scheduling, installation, maintenance, alterations, adjustment and calibration, replacement and repair of plant electrical and mechanical equipment, and instruments and controls. Responsibilities include scheduling of surveillances required by Technical Specifications, establishing standards and frequency of calibration for instrumentation and ensuring instrumentation and related testing equipment are properly used, inspected and maintained.

1.3.8 Nuclear Operations

Nuclear Operations is responsible for operations. The Manager - Nuclear Operations is responsible for the safe and efficient operation of the units including Unit 1, which is in a decommissioned mode. During accident situations, if currently holding an active license on the unit (Senior Reactor Operator (SRO) for Unit 2 or 3, or Certified Fuel Handler (CFH) for Unit 1 related responsibilities, the Manager - Nuclear Operations may relieve the Shift Manager of the responsibility of directing the licensed Control Room operators. The following groups report to the Manager - Nuclear Operations:

- Unit Nuclear Operations
- Nuclear Operations Support
- Nuclear Operations Work Control

1.3.9 Unit Nuclear Operations

The Unit Nuclear Operations groups report to the Manager - Nuclear Operations. Each group includes the following key supervisory positions:

- Supervisor - Nuclear Shift Operations
- Shift Manager(s)
- Unit Supervisor(s)

Unit 2 Nuclear Operations is responsible for operations regarding the Unit 1 Spent Fuel Pool Island and auxiliary systems. The transfer of Unit 1 operations responsibility to Unit 2 Nuclear Operations does not impact the capability of Unit 2 Operators to perform their duties, including day-to-day functions and accident and transient mitigation.

1.3.9.1 Supervisor - Nuclear Shift Operations

The Supervisor - Nuclear Shift Operations provides general supervision for the operation of the respective unit, and coordinates unit operations with maintenance, work management, and other groups. As stipulated in Technical Specifications or in Appendix B, either the Manager - Nuclear Operations or the Supervisor - Nuclear Shift Operations holds an appropriate license on the Unit (SRO for Unit 3 and SRO and CFH for Unit 2). Unit 2 Operations is responsible for operations regarding the Unit 1 Spent Fuel Pool Island and auxiliary systems. The Supervisor - Nuclear Shift Operations assures the safe and efficient operation of the

assigned unit in accordance with applicable licenses, operating instructions and procedures, emergency procedures and safety rules and regulations. During accident situations, if currently holding an active license on the unit (SRO for Unit 3 and Unit 2, CFH for Unit 2 responsibilities for Unit 1 Spent Fuel Pool and related systems), the Supervisor - Nuclear Shift Operations may relieve the Shift Manager of the responsibility of directing the licensed Control Room operators.

1.3.9.2 Shift Managers

The Shift Managers report to the Supervisor - Nuclear Shift Operations and are responsible for the Control Room command function. The Shift Manager holds an appropriate license on the unit (SRO for Unit 3; SRO and CFH for Unit 2). The Shift Manager directs and supervises the operation of the unit. Administrative functions that detract from or are subordinate to the management responsibility for assuring the safe operation of the plant are delegated to other operational personnel not on duty in the Control Room. Unit 2 Control Room provides control and supervision of Unit 1 activities.

During accident situations, unless properly relieved, the Shift Manager remains in the Control Room and directs the activities of the licensed operators. The Shift Manager has direct authority to shut down the respective unit if, in the Shift Manager's opinion, serious abnormal conditions exist. A Unit 3 Shift Manager fulfills the facility staff requirements of the Shift Supervisor for the Unit 3 Technical Specifications.

1.3.9.3 Unit Supervisor

The Unit Supervisor holds an appropriate license on the unit (SRO) and supervises the operators in the Control Room. The Unit Supervisor directs activities of the licensed Control Room operators, and may operate the controls of equipment and piping systems from the Control Room, or alternate station control location. Unit 2 Control Room provides control and supervision of activities on Unit 1.

1.3.9.4 Control Operators

Control Operators for Millstone Units 2 and 3 hold a Reactor Operator or Senior Reactor Operator license on the unit. The Control Operators are responsible to perform the following duties:

- Start up, operate, and shut down nuclear plant equipment including, but not limited to, as applicable to the Unit's status, reactor, reactor auxiliaries, turbine generator unit and its auxiliaries as necessary to satisfy system requirements or station conditions. (Unit 1 is decommissioned.)
- Test, as scheduled, control room instruments and controls.

Unit 1 is decommissioned.

- Maintain required logs and calculations, observe these logs for indications of faulty operation, and notify the on-duty Unit Supervisor or the Shift Manager of abnormal plant conditions

1.3.9.5 Plant Equipment Operators

Plant Equipment Operators are responsible to perform the following duties:

- Start up, operate, inspect, adjust, and shut down all auxiliary and other various plant equipment
- Perform or assist with scheduled operational tests
- Make minor repairs

1.3.10 Nuclear Outage & Planning

Nuclear Outage & Planning is responsible for planning, online-maintenance and outage activities.

1.3.11 Nuclear Site Services

Nuclear Site Services is responsible for project support of the station, including project construction and project controls.

1.3.12 Nuclear Procedures & Document Administration

Nuclear Procedures & Document Administration is responsible for nuclear records management and procedures.

1.3.13 Radiological Protection & Chemistry

Radiological Protection & Chemistry carries out chemistry and health physics functions and reports to the Director - Nuclear Station Safety and Licensing. This reporting relationship provides radiation protection functions with sufficient organizational freedom and independence from operating pressures as required by the unit Technical Specifications. The Supervisor - Health Physics fulfills the "Health Physics Manager" position qualifications required by the unit Technical Specifications. Radiological Protection & Chemistry includes the following:

- scheduling and conducting radiological surveys including contamination sample collection
- determining contamination levels and assigning work restrictions through radiation work permits
- maintaining records and reports on radioactive contamination levels
- administering the personnel monitoring program and maintaining required records in accordance with federal and state codes
- Chemistry

1.3.14 Nuclear Organizational Effectiveness

Nuclear Organizational Effectiveness is responsible for the Corrective Actions Program, the Independent Safety Engineering Group, the Operating Experience Program and Shift Technical Advisors. Nuclear Organizational Effectiveness reports directly to the Director - Nuclear Station Safety and Licensing, and is matrixed to the Director - Organizational Effectiveness.

1.3.15 Emergency Preparedness

Emergency Preparedness is responsible for development and maintenance of the on-site radiological emergency plan and the development and coordination of required off-site radiological emergency response plan. Emergency Preparedness reports to the Director - Protective Services & Emergency Preparedness and is matrixed to the Director - Nuclear Station Safety & Licensing.

1.3.16 Nuclear Protection Services

Nuclear Protection Services is responsible for station protective services, including security and fire protection. Nuclear Protection Services reports to the Director - Protective Services & Emergency Preparedness (corporate) and is matrixed to the Director - Nuclear Station Safety & Licensing.

1.3.17 Nuclear Training

Nuclear Training is responsible for operator and technical training. The operator training group reports to the Director - Nuclear Training (corporate) to provide sufficient organizational freedom and independence from operating pressures as required by the unit Technical Specifications. Nuclear Training is matrixed to the Director - Nuclear Station Operations and Maintenance.

1.3.18 Nuclear Engineering

Nuclear Engineering reports to the Director - Nuclear Engineering. Nuclear Engineering is responsible for design engineering functions, supporting activities, engineering programs, configuration management including design and configuration control and engineering assurance, engineering technical support and systems engineering, including material engineering. The Director - Nuclear Engineering reports to the Vice President - Nuclear Engineering (corporate) and is matrixed to the Site Vice President.

Nuclear Fuel Engineering reports to the Director - Dominion Nuclear Analysis and Fuel. The group is responsible for engineering activities in safety analysis and nuclear fuel, including probabilistic risk assessment and reactor and radiological engineering. Nuclear Fuel Engineering is matrixed to the Director - Nuclear Engineering.

1.3.19 Supply Chain Management (SCM)

Supply Chain Management (SCM) is responsible for procurement. Responsibilities include approval and oversight of vendors that provide quality-related material and services including source and receipt inspection. Supply Chain Management (SCM) reports to the Director - Dominion Supply Chain Management (Generation), and is matrixed to the Director - Nuclear Station Operations & Maintenance.

1.3.20 Information Technology

Information Technology is responsible for the Quality Assurance Software Program. Information Technology reports to the Director - Dominion Information Technology Business Account (Generation), and is matrixed to the Director - Nuclear Station Safety & Licensing.

1.4 QUALITY-RELATED RESPONSIBILITIES COMMON TO ALL DEPARTMENT HEADS

The head of each department performing quality activities is responsible for:

- Administering those activities within their organization which are required by this QAP;
- Ensuring implementation of the Quality Assurance Program;
- Establishing and clearly defining the duties and responsibilities of personnel within their organization who perform quality activities;
- Planning, selecting, and training personnel to meet the requirements of the QAP Topical Report; and
- Performing and coordinating quality activities within their department and interfacing with the Nuclear Oversight department.

Each individual performing or verifying activities affecting quality is responsible to conduct those activities in accordance with the requirements of this QAP and implementing procedures. These individuals shall have direct access to such levels of management as may be necessary to perform this function.

The responsibility, authority, and organizational relationship for performing quality activities within each organization is established and delineated in the Dominion Nuclear Connecticut, Inc. organizational charts, policy statements, and written job or functional descriptions.

Vendors may be delegated the execution of quality assurance functions; however, the licensee shall retain responsibility for this Quality Assurance Program.

1.5 MANAGEMENT QUALITY ASSURANCE REVIEW

The Senior Vice President - Nuclear Operations and Chief Nuclear Officer - Dominion Nuclear Connecticut, Inc. is responsible for the assessment of the scope, status, implementation, and effectiveness of the QAP. To meet this responsibility, a team of qualified individuals is appointed to perform a biennial Management Quality Assurance Review. The team is made up of individuals knowledgeable in quality assurance, quality activities, auditing, management responsibilities, and the QAP Topical Report. This review is:

- A systematic evaluation;
- pre-planned toward the objective of determining the adequacy of the QAP and its compliance with Appendix B to 10 CFR 50 and other regulatory requirements; and
- capable of identifying, communicating, and tracking any required corrective action.

The Senior Vice President - Nuclear Operations and Chief Nuclear Officer - Dominion Nuclear Connecticut, Inc. has delegated the responsibility for the Management Quality Assurance Review to the Manager - Nuclear Oversight.

1.6 SPECIFIC QAP RESPONSIBILITIES

The Senior Vice President - Nuclear Operations and Chief Nuclear Officer - Dominion Nuclear Connecticut, Inc. resolves all disputes related to the implementation of the QAP for which resolution is not achieved at lower levels within the organization.

1.7 SUCCESSION OF RESPONSIBILITY FOR OVERALL PLANT OPERATION

The succession of responsibility for overall plant instructions or special orders, in the event of absences, incapacitation of personnel or other emergencies, is as follows:

- Site Vice President - Millstone
- Director - Nuclear Station Operations & Maintenance
- Manager - Nuclear Operations
- Licensed Supervisor - Nuclear Shift Operations designated by Site Vice President - Millstone
- Shift Manager (SRO)
- Licensed Unit Supervisor (SRO)

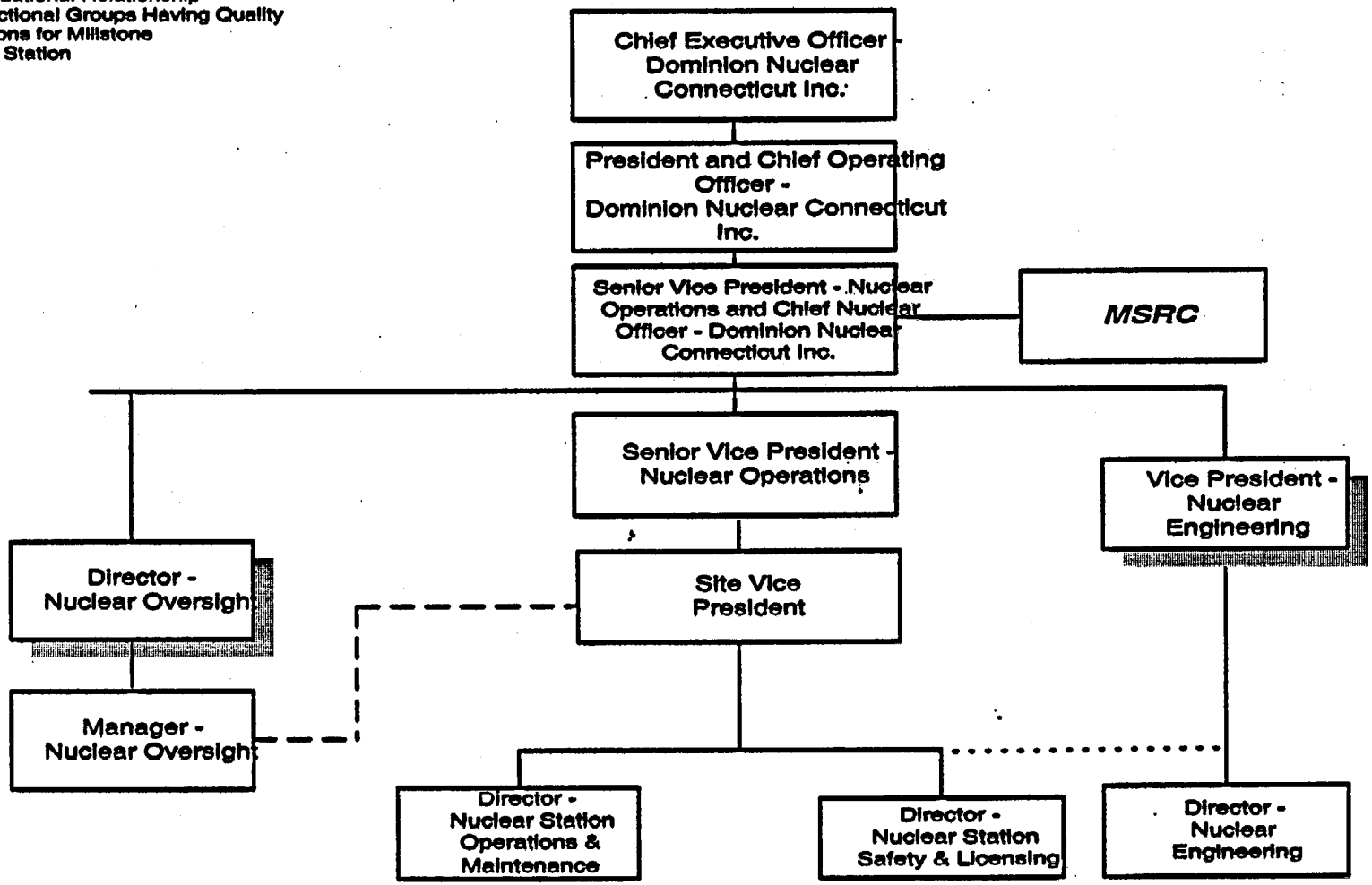
1.8 ORGANIZATION CHARTS

NOTE

The following organization charts are incorporated by reference in the Emergency Plan - Millstone Power Station. Changes to these organization charts require an effectiveness review in accordance with 10 CFR 50.54 (q).

Offsite Vice President/ Directors are shadowed to denote corporate reporting positions. Dotted lines represent matrixed relationships for site related communication and administrative purposes.

Organizational Relationship
of Functional Groups Having Quality
Functions for Millstone
Power Station



Organizational Relationship
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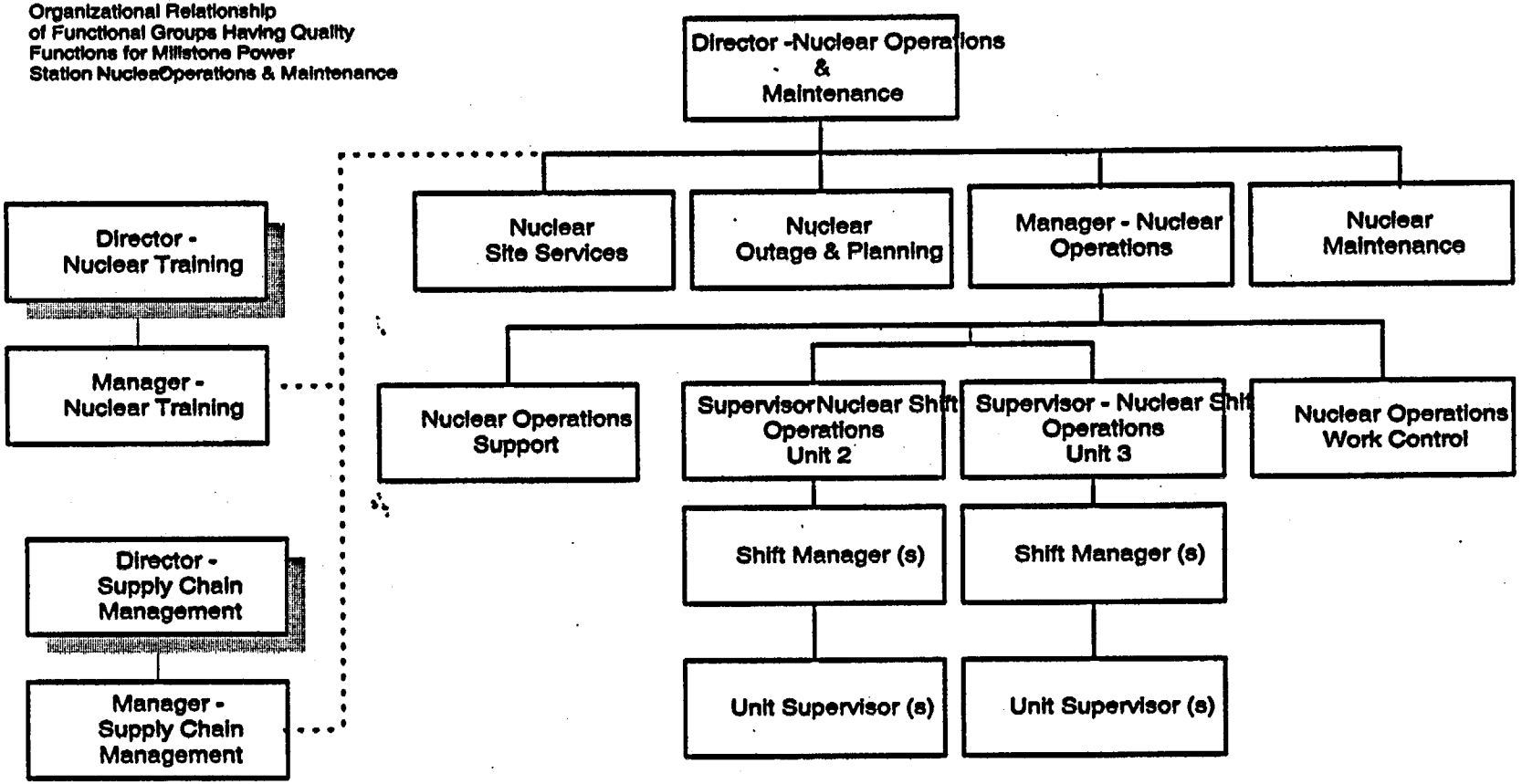
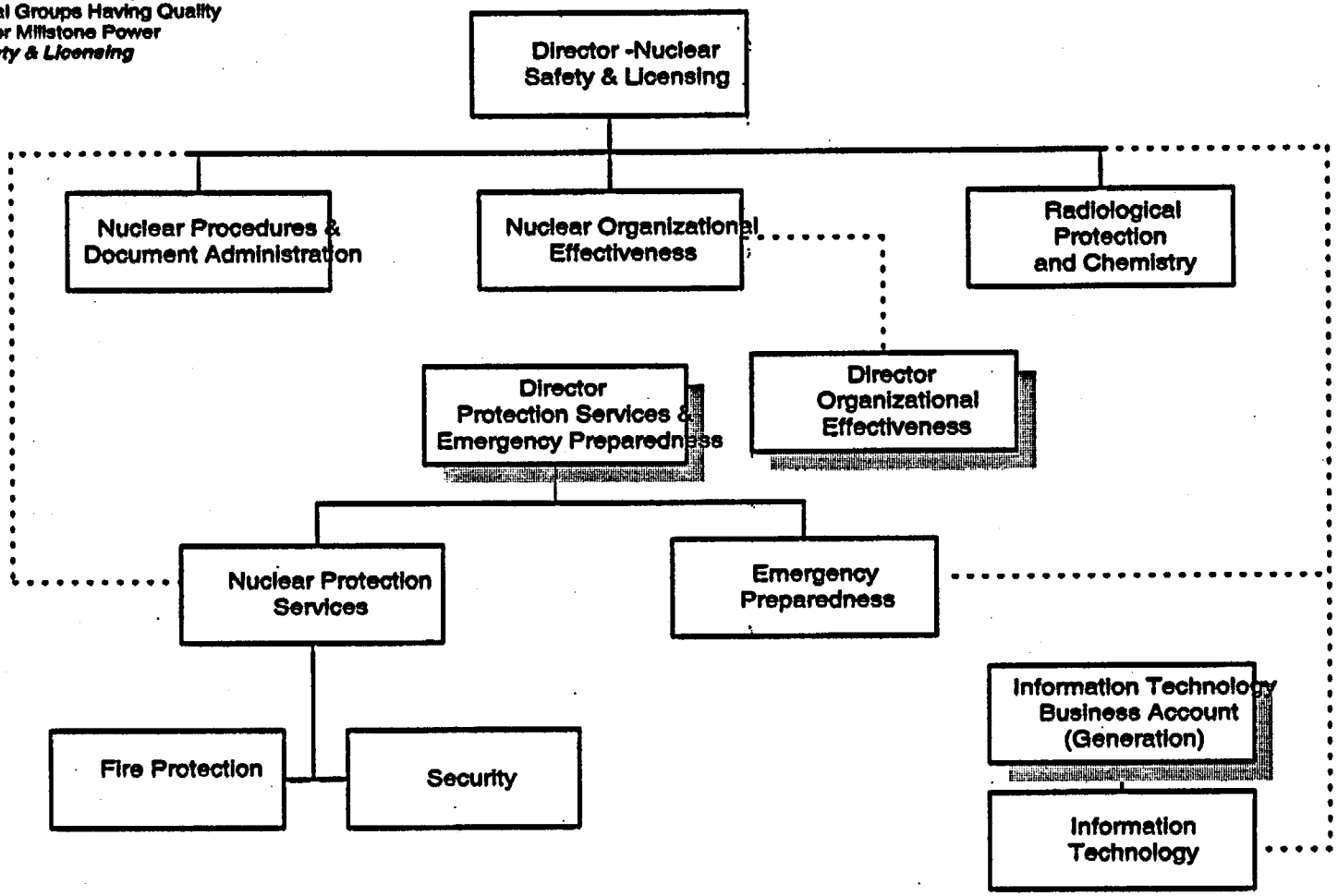
Functions for Millstone Power
Station NuclearOperations & Maintenance



Organizational Relationship
of Functional Groups Having Quality
Functions for Millstone Power
Station ***Safety & Licensing***



2.0 QUALITY ASSURANCE PROGRAM

2.1 GENERAL REQUIREMENTS

The licensee has established a Quality Assurance Program (QAP) for the Millstone Power Station which complies with the criteria of 10CFR50, Appendix B, and follows the regulatory documents and their endorsed ANSI/IEEE standards identified in Appendix C with exceptions as identified in Appendix E. The quality assurance requirements set forth in the attached Policy Statement, supplemented by quality assurance procedures, provide the primary basis of this program and the licensee's policy with regard to quality assurance for the Millstone Power Station nuclear units. This QAP Topical Report is established to accomplish the required level of quality in activities carried out throughout the life of the Station's operating nuclear power plants and the decommissioning of Unit 1.

This QAP applies in its entirety to all activities affecting the safety-related functions of structures, systems and components of the Millstone Power Station nuclear units. Safety-Related structures, systems and components for Millstone Units 2 and 3 are functionally identified in Appendix A of this QAP and are designated Category I by the licensee. Applicability of Appendix A to each FSAR is addressed by existing Nuclear Unit specific Design Bases and Licensing commitments, and also as specifically identified in each FSAR addressing Section 3.2.1 of Regulatory Guide 1.70. Millstone Unit 1 Safety-related structures, systems and components are defined in the DSAR. This QAP is also applicable in its entirety to materials, equipment, parts, consumables and services designated Category I.

This QAP applies to other quality programs including Anticipated Transient Without Scram (ATWS) Quality Assurance, which is applicable to MP-2 only (MP-3 commits to Generic Letter 85-06), and to Electrical Equipment Qualification (EEQ), as defined by licensee commitments. Portions of this QAP are also applicable to Fire Protection Quality Assurance (FPQA), Station Blackout Quality Assurance (SBOQA) and Radwaste Quality Assurance (RWQA) which are delineated in applicable procedures.

The Materials, Equipment, and Parts List (MEPL) ***Program is the process used to evaluate, determine and assign the appropriate quality assurance classification (Safety related or augmented quality) to structures, systems, components, parts, materials, activities and consumables.*** For quality software, the Software Quality Assurance (SQA) Program provides instructions to classify software and describe the appropriate level of documentation that is warranted for software used to support those functions of structures, systems, and components that are affected by the QAP.

The requirements of this QAP are implemented by the licensee which operates Millstone Power Station, and their vendors performing activities affecting quality structures, systems, and components of the Station's nuclear power plants.

Procedures define the required indoctrination and training of personnel performing activities affecting quality, as necessary, to assure that suitable proficiency is achieved and maintained.

Training sessions are documented. The content of the training sessions is described, attendees and attendance date indicated, and the results (e.g., examination results) of the training sessions recorded, as applicable.

Periodic program review of the status and adequacy of this QAP is accomplished by Nuclear Oversight audits, surveillances and inspections, by offsite review committee reviews, and by the independent review team which performs the biennial Management Quality Assurance Review described herein and in QAP 1.0, "Organization", Section 1.5. Organizations outside the licensee are required to review the status and adequacy of that part of this QAP for which they have been delegated responsibility.

2.2 IMPLEMENTATION

2.2.1 GOALS AND OBJECTIVES

The goals of this QAP are to maintain quality levels in an effective and efficient manner and to assure a high degree of functional integrity and reliability of Station nuclear power plant quality structures, systems, and components. To meet these goals, the following objectives of this QAP have been defined:

a. Define, through procedures, the quality activities that apply to design, fabrication, procurement, construction, testing, operation, refueling, repair, maintenance and modification of the Station nuclear power plants;

b. Establish, assign, and document the responsibilities for the conduct of those activities affecting quality structures, systems, and components;

c. Establish confidence that (a) quality activities for the Station nuclear power plants are performed consistent with the licensee's policies and (b) quality activities are performed by qualified personnel, and are verified through a system of audits, surveillances, and inspections of those organizations with quality responsibilities;

d. Apprise the Site Vice President - Millstone and the Senior Vice President - Nuclear Operations & Chief Nuclear Officer - Dominion Nuclear Connecticut, Inc. of unresolved problems and trends which could have a significant effect on nuclear power plant safety.

2.2.2 PROGRAM DOCUMENTATION

This QAP defines the licensee's nuclear policies, goals, and objectives, and is used as guidance for the development of the various division, department, branch, or section procedures. Revisions to this QAP shall be made as needed to reflect current requirements and descriptions of

activities prior to implementation. These revisions shall be made in accordance with a licensee Procedure.

Revisions to this QAP, which reduce commitments previously accepted by the NRC, are submitted to the NRC for review and approval prior to implementation.

Revisions which do not reduce previously accepted commitments are periodically submitted to the NRC as required by 10 CFR 50.54 (a)(3); 10 CFR 50.55 (f)(3); and 10 CFR 50.71(e) and (f).

Quality procedures are developed by the departments performing quality activities. These procedures are reviewed for concurrence by the departments which are responsible for implementing portions of these procedures and are approved by the initiating department. Nuclear Oversight reviews other department quality procedures for compliance with this QAP ***through its audit and surveillance program.*** Changes to procedures are subjected to the same degree of control as that utilized in the preparation of the original document.

Each Vice President and Director is responsible for implementation of this QAP within their organization which includes individual departmental procedure requirements applicable only to their respective activities. In addition, they are responsible for the preparation, approval, and distribution of those instructions, operating procedures, testing procedures, or other instructions where further guidance is necessary.

2.2.3 STRUCTURES, SYSTEMS AND COMPONENTS

This QAP applies to all activities affecting the safety-related functions of the structures, systems and components as addressed in the Safety Analysis Reports (SARs). Safety-Related structures, systems, and components are functionally identified in Appendix A for Units 2 and 3 and also as specifically identified in each FSAR addressing Section 3.2.1 of NRC Regulatory Guide 1.70. Unit 1 Safety-Related structures, systems, and components are defined in the DSAR.

For structures, systems and components covered by the ASME Code, the licensee's procedures describe the measures taken to assure that the quality assurance requirements contained in the code are supplemented by the specific guidance of the applicable regulatory guides and endorsed ANSI standards listed in Appendix C.

For structures, systems and components, regulatory commitments and the licensee's procedures describe the measures taken to assure that the quality assurance requirements are met.

The degree of control over activities affecting quality structures, systems, and components is consistent with their importance to safety. Such

controls include use of appropriate equipment, establishment of suitable environmental conditions, and assurance that all prerequisites for a given activity have been satisfied. This QAP provides controls over special processes and skills necessary to attain the required quality, and the need for verification of quality by inspection and test.

Nuclear Oversight and applicable licensee technical organizations jointly determine and identify the extent quality assurance controls are applied to quality structures, systems, and components. The quality assurance controls are in conformance with this QAP, which complies with the 18 criteria set forth in Appendix B to 10 CFR 50.

2.2.4 PARTICIPATING ORGANIZATIONS

The organization for Millstone Power Station activities affecting the quality of structures, systems, and components is identified in QAP 1.0, "Organization", which also briefly describes assigned responsibilities.

Nuclear Oversight is responsible for: a) the development, coordination, and administrative control of this QAP including coordination of Nuclear Oversight procedure review and approval and b) assuring issuance of this QAP Topical Report as a controlled document (as described in QAP 6.0, 'Document Control). Procedure reviews shall be performed in accordance with QAP 5.0, "Procedures, Instructions, and Drawings".

The licensee requires that its approved vendors performing quality activities invoke upon their subvendors, via purchase orders/contracts, requirements for a quality assurance program to meet the applicable criteria of Appendix B to 10 CFR 50, including the applicable elements of the regulatory guides and their endorsed ANSI/IEEE standards identified in Appendix C. However, the licensee retains overall responsibility for the Millstone Power Station Quality Assurance Program. The specific quality activities performed by these organizations are specified in the procurement documents. Supply Chain Management (SCM) is responsible for the review and approval of these vendors' quality assurance programs prior to initiation of contracted activities.

The object of the review is to verify that these vendors have an adequate quality assurance program to meet applicable requirements of 10 CFR 50, Appendix B.

In addition to the initial review, Supply Chain Management (SCM) is responsible for the subsequent performance, as appropriate, of audits, surveillances, and inspections of approved vendor's quality assurance programs to assure continued implementation of quality requirements. Supply Chain Management (SCM) assures that the quality assurance programs of vendors that perform quality activities are periodically reviewed to assure that the vendors are implementing adequate programs. Evaluation, review, and monitoring of vendor quality programs

is conducted in accordance with section QAP 7.0, "Control of Purchased Material, Equipment and Services".

Vendors may be delegated the execution of quality assurance functions by Contract. These Contracts are reviewed and approved in accordance with this QAP. These vendors may be contracted to perform quality activities under their approved quality assurance program or directly under the requirements of this QAP.

2.2.5 INDOCTRINATION AND TRAINING

A program is established and maintained for quality assurance indoctrination and training which provides confidence that the required level of personnel competence and skill is achieved and maintained in the performance of quality activities. Quality procedures delineate the requirements for an indoctrination program to assure that personnel responsible for performing quality activities are instructed in the purpose, scope, and implementation of quality procedures and that compliance to these documents is mandatory. Each Department is responsible for assuring assigned personnel who perform quality activities have been appropriately indoctrinated and trained.

Nuclear training programs shall be developed and implemented to provide training for all individuals attached to or associated with the Station nuclear power plants. Additional guidance is established in the licensee's procedures.

Procedures describe the nuclear training program requirements which assure that:

a. Documentation of formal training and qualification programs includes the objective, content of the program, attendees, date of attendance; and results (e.g., examination results), as applicable.

b. Proficiency of personnel performing and verifying activities affecting quality is established and maintained. Personnel proficiency is established and maintained by training, examination/testing, and/or certification based upon the requirements of the activity. Acceptance criteria are developed to determine if individuals are properly trained and qualified;

c. Certificates or other documentation of qualification clearly delineate the specific functions personnel are qualified to perform and the criteria used to qualify personnel in each function.

This program also requires the head of each department to be responsible for a training plan which assures that personnel performing quality activities are trained in the principles and techniques of the activity being performed.

2.2.6 MANAGEMENT PARTICIPATION

Millstone Power Station Vice President and Directors are responsible for implementing this QAP within their organization. The Manager - Nuclear Oversight will assist in development, coordination, and review of the program.

The Senior Vice President - Nuclear Operations & Chief Nuclear Officer - Dominion Nuclear Connecticut, Inc. assures that a management review of this QAP is conducted on a biennial basis by an independent team to assess the scope, status, implementation, and effectiveness, and to assure compliance with NRC licensing commitments. Senior Vice President - Nuclear Operations & Chief Nuclear Officer - Dominion Nuclear Connecticut, Inc. has delegated the responsibility for the management review to the Manager - Nuclear Oversight.

Actions considered by the Management Quality Assurance Review may include, but are not limited to:

a. Review of selected procedures and documents;

b. Verification of the implementation of selected procedural requirements;

c. Review of past audit results and other inspection/review results such as those from previous Management Quality Assurance Reviews, the NRC or other departments.

The Management Quality Assurance Review's findings of deficiencies and recommendations for program improvement are forwarded to the Senior Vice President - Nuclear Operations & Chief Nuclear Officer - Dominion Nuclear Connecticut, Inc. who shall assure appropriate corrective action is taken.

5.0 PROCEDURES, INSTRUCTIONS AND DRAWINGS

5.1 GENERAL REQUIREMENTS

This QAP provides measures for the preparation, review, approval, control and distribution of procedures, instructions and drawings for activities affecting quality structures, systems, and components of the Millstone Power Station nuclear units. The documents include appropriate quantitative and qualitative acceptance criteria which specify the activity to be performed, the methods of fabrication, construction, and testing to be employed; the materials, equipment or parts to be used; a sequence of operation, and the required documentation.

5.2 IMPLEMENTATION

Quality procedures provide direction for personnel performing quality activities. Nuclear Oversight reviews other quality procedures which implement this QAP as described in Section 5.2.1 below. Comments concerning compliance with this QAP and regulatory requirements are ***identified and*** resolved. Any vendors utilized to perform quality activities for the Station nuclear power plants may be delegated responsibility for preparing, maintaining, issuing and verifying the implementation of appropriate program documents which are selectively reviewed/approved by the appropriate Director or Responsible Engineer. Audits, surveillances, and inspections are performed, as appropriate, to verify that these vendors are effectively complying with their quality assurance program requirements for compliance with procedures and instructions. Vendor quality assurance programs are required to clearly delineate the actions to be accomplished in the preparation, review and control of procedures, instructions and drawings and the methods for complying with 10 CFR 50, Appendix B.

5.2.1 PROCEDURES AND INSTRUCTIONS

Procedures and instructions for activities affecting quality are prepared, reviewed, and approved in accordance with written procedures and instructions.

The cognizant Director or responsible engineer assures that any vendors utilized to perform quality activities for the Station nuclear power plants implement quality assurance programs which contain written instructions for preparation, review and approval of procedures and instructions affecting quality. In addition, vendor procedures ***which affect quality that are*** to be used for onsite activities are reviewed for concurrence by Nuclear Oversight to assure compliance with this QAP Topical Report.

The licensee is responsible for the preparation, review and approval of station and plant quality procedures. The procedures include test procedures and overall site administrative procedures which implement the requirements of this QAP. Each licensee organization is also responsible for the preparation, review and approval of procedures

covering quality activities in accordance with individual license requirements. Nuclear Oversight reviews quality procedures and special process procedures through its audit and surveillance program. The criteria for documents requiring Nuclear Oversight review is defined in quality procedures to assure:

a. Administrative procedures and manuals comply with this QAP and applicable Appendix C regulatory guides and endorsed ANSI/IEEE standards.

b. Work procedures and work documents used to perform quality activities have the necessary quality assurance controls as described in QAP 10.0, "Inspection". ***The Nuclear Oversight Quality Control group must concur with quality related procedures related to maintenance, modification and inspection.***

5.2.2 DRAWINGS

The design control and verification measures described in QAP 3.0, "Design Control", are applicable for the review and approval of drawings. Review and approval of new drawings or modifications to existing drawings are described in licensee procedures. The originating organization may delegate to other organizations or departments the work of design and review activities, or any part thereof, but retains responsibility for this work.

The measures taken to assure the preparation of as-built drawings and related documentation in a timely manner to accurately reflect the actual plant are described in licensee procedures. Drawings critical to operation are updated prior to system turnover to operation and are available to the operating personnel.

5.2.3 ACCEPTANCE CRITERIA

Cognizant department heads review and approve departmental procedures, instructions and drawings to assure the inclusion of adequate quantitative and qualitative acceptance criteria, as appropriate, for determining satisfactory work performance and quality compliance for applicable quality activities.

18.0 AUDITS

18.1 GENERAL REQUIREMENTS

This QAP requires that a comprehensive system of planned and periodic audits shall be carried out to verify that quality activities for Millstone Power Station nuclear units are performed in compliance with this QAP and to determine the effectiveness of the program.

Audits are conducted in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited.

Audit results are documented and reviewed by management having responsibility in the area audited and the responsible management takes the necessary action to address any audit findings revealed by the audit.

18.2 IMPLEMENTATION

18.2.1 PROGRAM

The audit program requires audits of Corporate and Station nuclear power plant quality activities under the oversight of the Nuclear Safety Assessment Board. Audits are performed on activities where the requirements of 10 CFR 50, Appendix B and respective nuclear unit Technical Specifications are being implemented. In addition to those activities, audits are performed on areas associated with indoctrination and training programs, interface control among the licensee and vendors, vendor quality programs and the Supply Chain Management (SCM) procurement function. Audits are regularly scheduled on the basis of the status and safety importance of the activities being performed. Regularly scheduled audits are supplemented by audits for one or more of the following conditions:

a. When significant changes are made in functional areas of the quality assurance program, such as significant reorganization or procedure revisions;

b. When it is suspected that the quality of the item is in jeopardy due to deficiencies in the quality assurance program;

c. When a systematic, independent assessment of program effectiveness is considered necessary;

d. When necessary to verify implementation of required corrective action.

Schedules for the audit of Corporate and Station, quality activities are originated and maintained by Nuclear Oversight. Schedules for vendor quality assurance activities are maintained by Supply Chain Management (SCM) and Nuclear Oversight, as appropriate.

Audits are performed as specified in procedures by qualified personnel, using an audit plan prepared by the auditing organization. Audits may include evaluation of the work areas, activities, processes, items, and review of documents and records to determine the effectiveness of implementation and conformance to this QAP.

Approved vendors utilized to perform quality activities for the Station nuclear power plants are responsible for developing and implementing a system of planned and periodic audits to verify compliance with and to determine the effectiveness of all aspects of their quality assurance program. Supply Chain Management (SCM) is responsible for verifying the acceptability of vendor audit programs. Audits, are performed as appropriate, to verify that these vendors are effectively complying with their quality assurance requirements.

In addition to the audits, other methods, such as surveillances and inspections are used to assure that quality activities are in compliance with this QAP.

18.2.2 REPORTING OF AUDIT RESULTS

Audit results are reviewed, approved, and reported in accordance with Nuclear Oversight and Supply Chain Management (SCM) procedures, as applicable. The audit reports are issued to the appropriate management of the area audited to assure appropriate and/or timely corrective action is taken to address conditions adverse to quality identified by the audit findings. In addition, audit data and reports are accumulated as part of the review for quality trends and assessed to assure the effectiveness of this QAP.

Audit reports and follow up of audit item reports will be distributed to the Senior Vice President/Chief Nuclear Officer (SVP/CNO) - Dominion Nuclear Connecticut, Inc., the Senior Vice President - Nuclear Operations, the Site Vice President - Millstone and the Director - Nuclear Oversight.

18.2.3 REVIEW, ACTION, AND FOLLOW-UP OF AUDIT FINDINGS

Audit findings that involve conditions adverse to quality are reviewed and investigated by the management having the responsibility for the area audited. The responsible management is required to take the necessary action to address any conditions adverse to quality identified by the audit and: report the results of such reviews and investigations, take the necessary actions to correct problems reported, and report the completion of corrective action within specified time frames.

Follow-up of audit findings involving conditions adverse to quality is performed by the auditing organization as necessary to verify appropriate actions have been taken to resolve audit findings. Items that cannot be resolved by affected management are submitted ***to the Director - Nuclear Oversight*** for resolution ***with the responsible Vice President or the Senior VP - Nuclear Operations, with final resolution by the Senior Vice President/Chief Nuclear Officer.***

18.2.4 RECORDS/REPORTS OF AUDITS

Audit records, reports, and associated documentation are retained in the licensee records retention facilities, as specified in applicable procedures.

APPENDIX A

QUALITY ASSURANCE PROGRAM (QAP)
TOPICAL REPORT - MILLSTONE POWER STATION
Unit 2/3 CATEGORY I STRUCTURES, SYSTEMS AND COMPONENTS

(Note: This Appendix is not applicable to Unit 1 - See DSAR)

The Materials, Equipment, and Parts List (MEPL) Program ***is the process used that*** provides instructions to identify structures, systems, components, parts, materials, and consumables that need to be safety-related and designated as Category I ***and Augmented Quality.*** For quality software, the Software Quality Assurance (SQA) Program provides instructions to classify software and describe the appropriate level of documentation that is warranted for software used to support those functions of structures, systems, and components that are affected by the QAP.

The following structures, systems, and components of a Millstone Power Station nuclear unit, including their foundations and supports, are designated as Category I. The pertinent quality assurance requirements of Appendix B to 10 CFR 50 are applied to all activities affecting the safety-related function of the structures, systems, and components as listed below and to other items and services specifically identified by the licensee in each FSAR addressing Section 3.2.1 of NRC Regulatory Guide 1.70.

(a) The reactor coolant pressure boundary.

(b) The reactor core and reactor vessel internals.

(c) Systems or portions of systems that are required for (1) emergency core cooling; (2) post-accident containment heat removal or; (3) post-accident containment atmosphere cleanup (e.g., hydrogen removal system).

(d) Systems or portions of systems that are required for (1) reactor shutdown; (2) residual heat removal or; (3) cooling the spent fuel storage pool.

(e) Those portions of the steam and feedwater systems of pressurized water reactors extending from and including the secondary side of steam generators up to and including the outermost containment isolation valves, and connected piping of 2-1/2 inches or larger nominal pipe size up to and including the first valve (including a safety or relief valve) that is either normally closed or capable of automatic closure during all modes of normal reactor operation.

(f) Cooling water, component cooling and auxiliary feedwater systems or portions of these systems including the intake structures, that are required for: (1) emergency core cooling; (2) post-accident containment heat removal; (3) post-accident containment atmosphere cleanup; (4) residual heat removal from the reactor or; (5) cooling the spent fuel storage pool.

(g) Cooling water and seal water systems or portions of these systems that are required for functioning of safety-related reactor coolant system components such as PWR reactor coolant pump seals.

(h) Systems or portions of systems that are required to supply fuel for emergency equipment.

(i) All electrical and mechanical devices and circuitry between the process and the actuated devices involved in generating or responding to signals that provide protective functions of safeguard systems.

(j) Systems or portions of systems that are required for (1) monitoring of systems safety-related and; (2) actuation of systems safety-related.

"Required for monitoring," i.e. Those parameters that provide information that is essential to permit the control room operator to take specific manually controlled actions for the direct accomplishment of the specified safety function.

(k) The spent fuel storage pool structure, including the fuel racks.

(l) The reactivity control system (e.g., control rods, control rod drives, and boron injection system).

(m) The control room, including its associated equipment and all equipment needed to maintain the control room with safe habitability limits for personnel and safe environmental limits for vital equipment.

(n) Primary and secondary reactor containment.

(o) Systems other than radioactive waste management systems not covered by items (a) through (o) above which contain or may contain radioactive materials and whose postulated failure would result in conservatively calculated potential offsite doses (using meteorology as prescribed by Regulatory Guides 1.3 and 1.4) which are more than 0.5 rem to the whole body or its equivalent to any part of the body.

(p) The Class IE electric systems, including the auxiliary systems for the onsite electric power supplies, that provide the emergency electric power needed for functioning of plant features included in items (a) through (p) above.

(q) Those portions of structures, systems, or components whose continued function is not required but whose failure could reduce the functioning of any plant feature included in items (a) through (q) above to an unacceptable safety level or could result in incapacitating injury to occupants of the control room should be designed and constructed so that the SSE would not cause such failures.

(r) Items and services associated with Radioactive Material Transport Packages as described in 10CFR71.

CONSUMABLES

The following specific consumables when utilized in safety-related systems shall be included in those portions of this QAP, as applicable.

1. Emergency generator diesel fuels
2. Hydraulic snubber fluids
3. Reagents
4. Resins
5. Boric Acid
6. Lubricants