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Item	Facility	Type	Sub	Document Number / Title	Sheet	Revision	Doc Date	Copy #	Media	Copies
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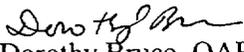
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Memorandum

NO-02-0097  
June 28, 2002

**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 23, Change 9 (Document No. MP-02-OST-BAP01)**

Enclosed please find Quality Assurance Program (QAP) Topical Report - Millstone Power Station, Revision 23, Change 9. The purpose of QA Topical Change Request #02-09 is to modify QAP 1.0, QAP 18.0, and Appendixes F and G to reflect the title change from Vice President and Senior Nuclear Executive to Senior Vice President - Nuclear Operations. The change impacts only the title, QAP roles and responsibilities remain the same, therefore the change is not a reduction in commitment and does not need NRC approval prior to implementation.

Please note that the effective date of Revision 23, Change 9, is **July 1, 2002**. Please replace the entire contents of modify QAP 1.0, QAP 18.0, and Appendixes F and G with the enclosed sections. If you have any questions, please contact D. Bruce at X3185.

Attachments: Summary of Changes for Rev. 23, Change 9

Enclosure:  
Quality Assurance Program Topical Report - Millstone Power Station, Revision 23, Change 9

DSB/dsb

**Summary of Changes to QAP Rev. 23 Incorporated as Change 09**

<b><u>Section</u></b>	<b><u>Summary Description of Changes</u></b>	<b><u>Reference</u></b>
Section 1.0	Reflects the title change from "Vice President and Senior Nuclear Executive" to Senior Vice President - Nuclear Operations"	<b>Request 02-09</b>
Section 18.0	Reflects the title change from "Vice President and Senior Nuclear Executive" to Senior Vice President - Nuclear Operations"	<b>Request 02-09</b>
Appendix F	Reflects the title change from "Vice President and Senior Nuclear Executive" to Senior Vice President - Nuclear Operations"	<b>Request 02-09</b>
Appendix G	Reflects the title change from "Vice President and Senior Nuclear Executive" to Senior Vice President - Nuclear Operations"	<b>Request 02-09</b>

## 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 Site Vice President - Millstone

The Site Vice President - Millstone has been delegated by the SVP/CNO - Dominion Nuclear Connecticut, Inc. the necessary responsibility and authority for the management and direction of all activities related to the operation of Millstone Power Station. 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

#### 1.3.2 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.

### 1.3.3 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.

### 1.3.4 Manager - Nuclear Oversight

The Manager - Nuclear Oversight reports to the Director - Nuclear Oversight. Manager - Nuclear Oversight is responsible to the Director- Nuclear Oversight for the effective performance of 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 station. Overall responsibility for the 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 quality assurance program
- Development and implementation of 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.

#### 1.3.5 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.

#### 1.3.6 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

### 1.3.7 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.

#### 1.3.7.1 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.

#### 1.3.7.2 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.

#### 1.3.7.3 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.

#### 1.3.7.4 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

#### 1.3.7.5 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

### 1.3.8 Nuclear Outage & Planning

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

### 1.3.9 Nuclear Site Services

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

### 1.3.10 Nuclear Procedures & Document Administration

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

### 1.3.11 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

### 1.3.12 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.

### 1.3.13 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.

### 1.3.14 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.

### 1.3.15 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.

### 1.3.16 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.

### 1.3.17 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.

### 1.3.18 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 ANNUAL 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 an annual 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)

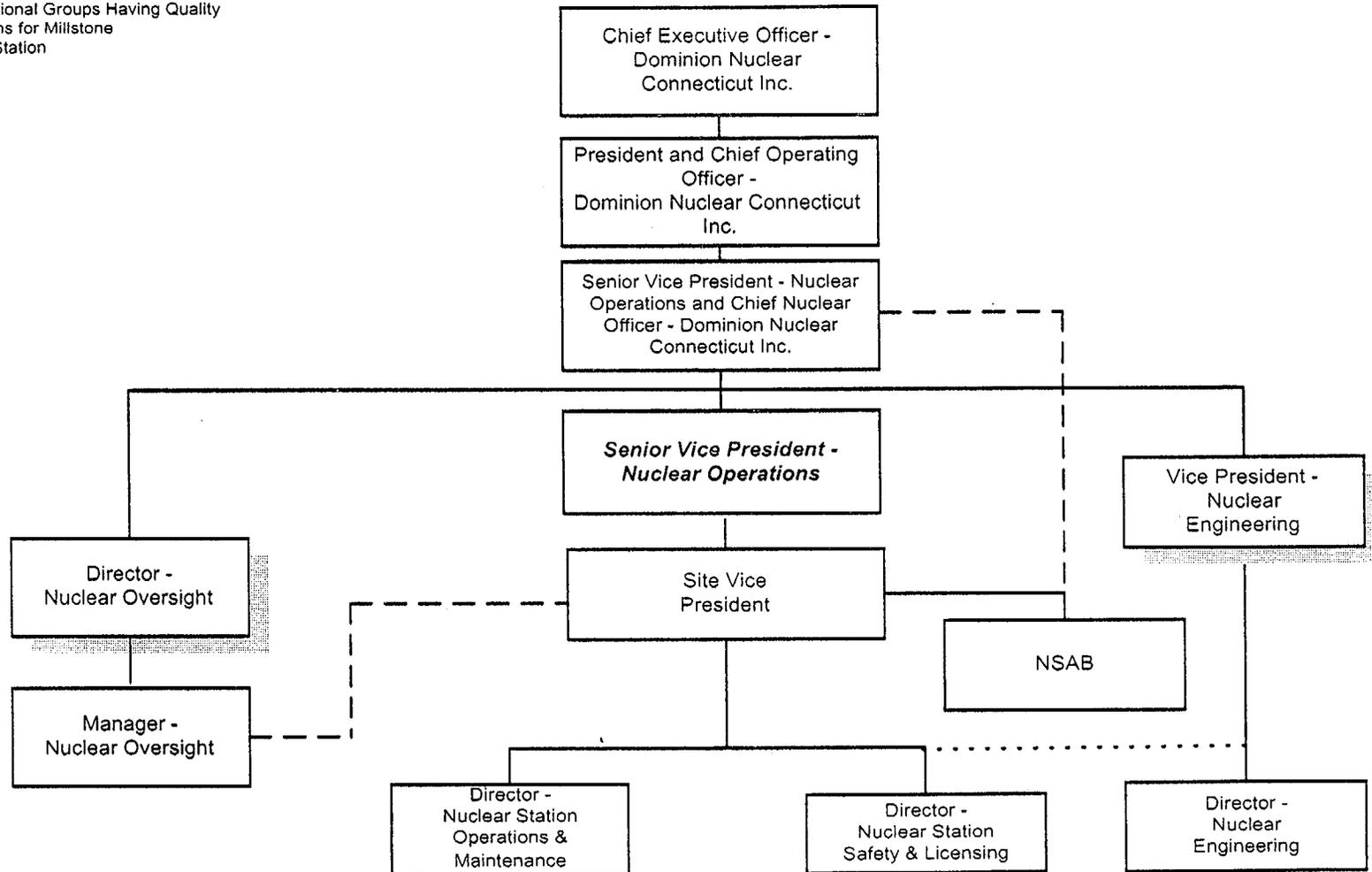
#### 1.8 ORGANIZATION CHARTS

##### NOTE

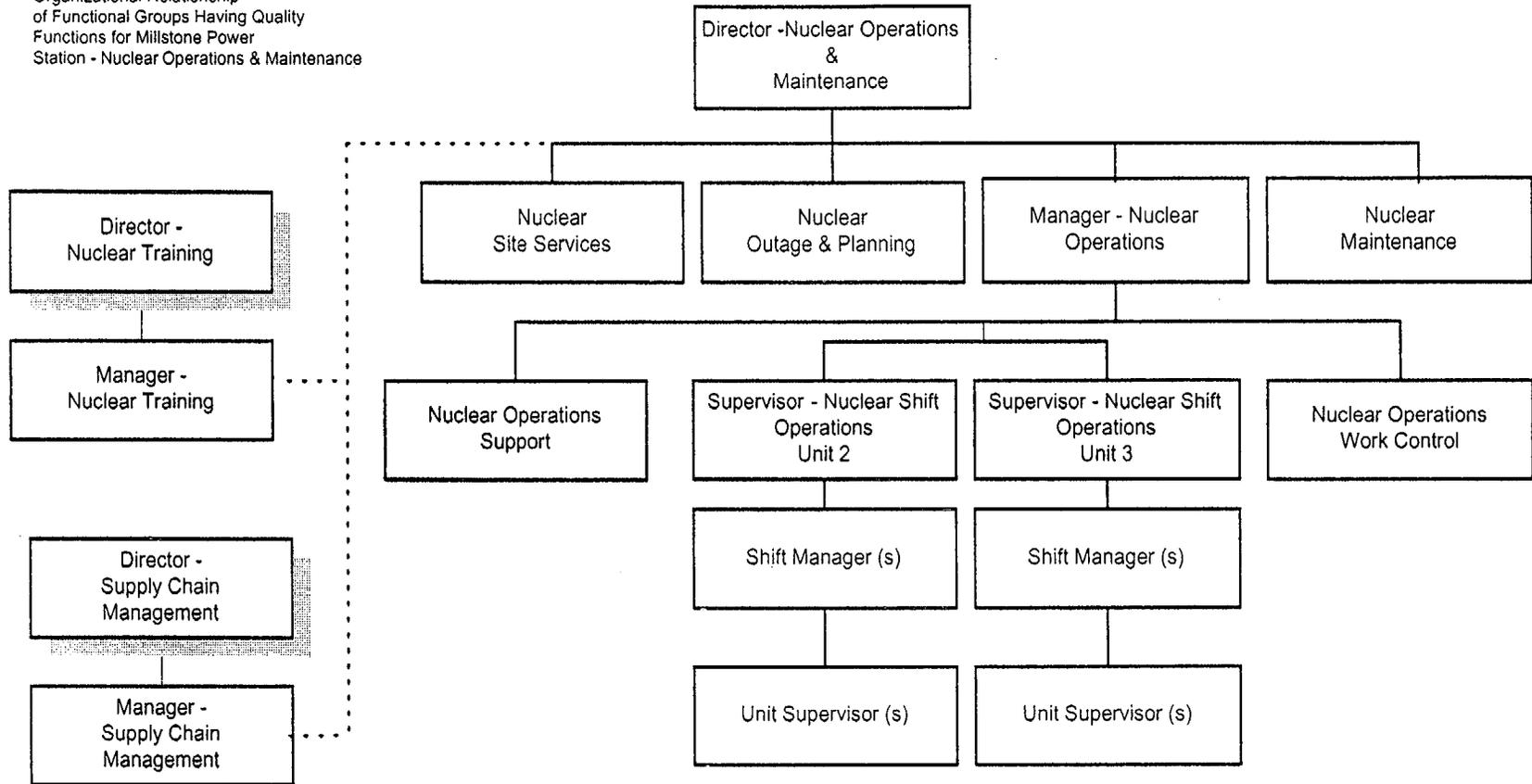
The following organization charts are incorporated by reference in the Emergency Plan - Millstone Power Station. Changes to these organization charts require an effectiveness review in accordance with 10 CFR 50.54 (q).

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

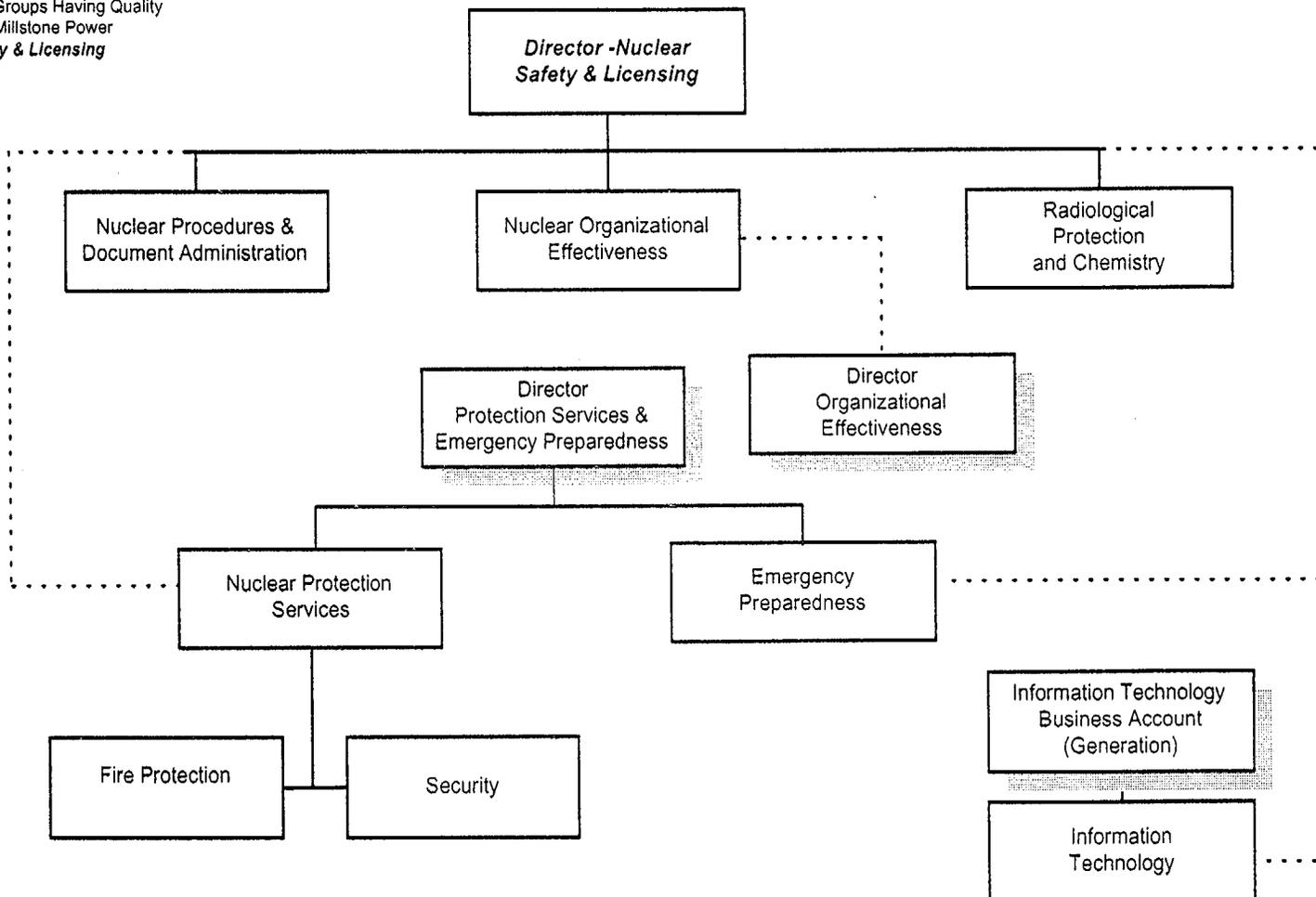
Organizational Relationship  
of Functional Groups Having Quality  
Functions for Millstone  
Power Station



Organizational Relationship  
of Functional Groups Having Quality  
Functions for Millstone Power  
Station - Nuclear Operations & Maintenance



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



## 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 which cannot be resolved by affected management are submitted for resolution to the Site Vice President and the Director - Nuclear Oversight.

#### 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 F  
QUALITY ASSURANCE PROGRAM (QAP)  
TOPICAL REPORT - MILLSTONE POWER STATION

ADMINISTRATIVE CONTROLS<sup>1</sup>

NOTE:

1. "Technical Specification" numbers refer to the unit specific Technical Specifications as identified.

INDEPENDENT SAFETY ENGINEERING GROUP (ISEG)

Function

The ISEG shall function to advise **Senior Vice President - Nuclear Operations** and the Site Vice President - Millstone on matters related to nuclear safety. The ISEG shall include, as part of its function, examination of unit operating characteristics, NRC issuances, industry advisories, Licensee Event Reports, and other sources of unit design and operating experience information, including units of similar design, which may indicate areas for improving unit safety. The ISEG shall make detailed recommendations for revised procedures, equipment modifications, maintenance activities, operations activities, or other means of improving unit safety to appropriate station/corporation management.

The ISEG reports to management who is not in the direct chain of command for power production. This relationship provides for access to a high-level, technically oriented, management position such that the required authority and organizational freedom to perform assessment is not influenced by cost and schedule when opposed to nuclear safety considerations. The ISEG is directly involved in meeting the requirements of NUREG-0737 for item I.B.1.2 for Millstone Units 2 and 3. The ISEG is independent of the SORC and the NSAB.

Composition

The ISEG shall be composed of at least five full-time personnel located on site to perform the functions described above for Millstone Units 2 and 3. Each person shall have either:

- (1) A bachelor's degree in engineering or related science and at least 2 years of professional level experience in his field, at least 1 year of which experience shall be in the nuclear field, or,
- (2) At least 10 years of professional level experience in his field, at least 5 years of which experience shall be in the nuclear field.

A minimum of 50% of these personnel shall have the qualifications specified in (1) above.

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<sup>1</sup> Relocation of Technical Specification Administrative Controls Related to Quality Assurance in Response to AL 95-06.

## Responsibilities

The ISEG shall be responsible for maintaining surveillance of unit activities to provide independent verification\* that these activities are performed correctly and that human errors are reduced as much as practical.

## Records

Records of activities performed by the ISEG shall be prepared and maintained, and quarterly reports of completed evaluations will be made to the SVP/CNO - Dominion Nuclear Connecticut, Inc., the **Senior Vice President - Nuclear Operations**, and the Site Vice President - Millstone.

\*Not responsible for sign-off function

## REVIEW AND AUDIT

### Site Operations Review Committee (SORC)

#### Function

The SORC shall function to advise the Site Vice President - Millstone on all matters related to nuclear safety for Millstone Power Station. The Site Vice President - Millstone shall advise the SVP/CNO - Dominion Nuclear Connecticut, Inc. and **Senior Vice President - Nuclear Operations** on all matters related to nuclear safety requiring higher level of responsibility and authority.

#### Composition

The SORC shall be composed of a minimum of eleven members. Members shall collectively have experience and expertise in the following areas:

- Plant Operations
- Engineering
- Reactor Engineering
- Maintenance
- Instrumentation and Controls
- Radiation Protection
- Chemistry
- Work Planning
- Quality Assurance

Each SORC member shall meet the following minimum qualifications:

- 1) Have an academic degree in an engineering or physical science field, and have a minimum of five years technical experience in their respective field of expertise,  
or
- 2) Hold a management position, and have a minimum of five years technical experience in their respective field of expertise.

The members of SORC shall be appointed in writing by the Site Vice President - Millstone. The SORC Chairperson and two Vice Chairpersons shall be drawn from the members and shall be appointed in writing by the Site Vice President - Millstone.

#### Alternates

Alternate members shall be appointed in writing by the SORC Chairperson to serve on a temporary basis. Each alternate shall meet the minimum qualifications described above for SORC members, and shall have the same area of expertise as the member being replaced.

#### Meeting Frequency

The SORC shall meet at least once per calendar month and as convened by the SORC Chairperson.

#### Quorum

A quorum of the SORC shall consist of the Chairperson or Vice Chairperson and five members or designated alternates. However, no more than two alternates may vote at any one time.

For any SORC decision affecting site-wide issues, the Chairperson shall ensure appropriate representation.

#### Responsibilities

The SORC shall be responsible for:

- a. Review of 1) all procedures required by Unit 2/3 Technical Specification 6.8 or Unit 1 Technical Specification 5.5 and changes thereto, 2) all programs required by Unit 2/3 Technical Specification 6.8 or Unit 1 Technical Specification 5.6 and changes thereto, 3) any other proposed procedures, programs, or changes thereto as determined by the SVP/CNO - Dominion Nuclear Connecticut, Inc., **Senior Vice President - Nuclear Operations**, or Site Vice President - Millstone to affect site nuclear safety. Programs and procedures required by Unit 2/3 Technical Specification 6.8 or Unit 1 Technical Specification 5.5 and 5.6 that are designated for review and approval by the Station Qualified Reviewer Program do not require SORC review.
- b. Review of all proposed changes to Technical Specifications.
- c. Review of all proposed tests and experiments that affect nuclear safety.
- d. Review of all proposed changes or modifications to systems or equipment that affect nuclear safety.
- e. Render determinations in writing or meeting minutes if any item considered under (a) through (d) above, as appropriate and as provided by 10CFR50.59 or 10CFR50.92, requires a license amendment or requires a significant hazards consideration determination.
- f. Performance of special reviews and investigations and reports as requested by the Chairperson of the Nuclear Safety Assessment Board.
- g. Review of the fire protection program and implementing procedures.

- h. Investigations of all violations of Technical Specifications, including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence, to the Site Vice President - Millstone, SVP/CNO - Dominion Nuclear Connecticut, Inc., **Senior Vice President - Nuclear Operations**, and to the Chairperson of the Nuclear Safety Assessment Board;
- i. Review of all Millstone Power Station REPORTABLE EVENTS;
- j. Review of facility operations to detect potential safety hazards;
- k. Review of Unit 3 Turbine Overspeed Protection Maintenance and Testing Program and revisions thereto.

#### Authority

The SORC shall:

- a. Recommend to the Site Vice President - Millstone written approval or disapproval in meeting minutes of items considered under Responsibilities (a) through (k) above. The Site Vice President - Millstone will report to the **Senior Vice President - Nuclear Operations** and the SVP/CNO - Dominion Nuclear Connecticut, Inc., any issues that require higher level of authority.
- b. Provide immediate written notification or meeting minutes to the **Senior Vice President - Nuclear Operations**, the SVP/CNO - Dominion Nuclear Connecticut, Inc. and the Chairperson of the Nuclear Safety Assessment Board of disagreement between the SORC and the Site Vice President - Millstone; however, the **Senior Vice President - Nuclear Operations** shall have responsibility for resolution of such disagreements pursuant to Unit 2/3 Technical Specification 6.1.1 and Unit 1 Technical Specification 5.1.1.

#### Records

The SORC shall maintain written minutes of each meeting and copies shall be provided to the Site Vice President - Millstone, the **Senior Vice President - Nuclear Operations** and Chairperson of the Nuclear Safety Assessment Board. Minutes regarding investigations of violations of Tech Specs and disagreements addressed by SORC shall also be provided to the SVP/CNO - Dominion Nuclear Connecticut, Inc.

#### Nuclear Safety Assessment Board (NSAB)

##### Function

The minimum qualifications of NSAB members are as follows:

- a. The Chairperson and NSAB members shall have:
  - 1. An academic degree in an engineering or physical science field, or hold a senior management position, and
  - 2. A minimum of five years technical experience in their respective field of expertise.
- b. The NSAB shall have experience in and shall function to provide independent oversight review and audit of designated activities in the areas of:

1. Nuclear power plant operations;
2. Nuclear engineering;
3. Chemistry and radiochemistry;
4. Metallurgy;
5. Instrumentation and control;
6. Radiological safety;
7. Mechanical and electrical engineering; and
8. Quality assurance practices.

The NSAB serves to advise the Site Vice President - Millstone on matters related to nuclear safety and notify the SVP/CNO - Dominion Nuclear Connecticut, Inc., **Senior Vice President - Nuclear Operations**, and the Site Vice President - Millstone within 24 hours of a safety significant disagreement between the NSAB and the organization or function being reviewed.

#### Composition

The Site Vice President - Millstone shall appoint, in writing, a minimum of seven members to the NSAB and shall designate from this membership, in writing, a Chairperson and a Vice Chairperson. The membership shall function to provide independent review and audit in the areas listed in Function (b) above.

#### Alternates

All alternate members shall be appointed, in writing, by Site Vice President - Millstone; however, no more than two alternates shall participate as members in NSAB activities at any one time.

#### Meeting Frequency

The NSAB shall meet at least once per calendar quarter.

#### Quorum

The quorum of the NSAB shall consist of a majority of NSAB members including the Chairperson or Vice Chairperson. No more than a minority of the quorum shall have line responsibility for operation of a Dominion Nuclear Connecticut, Inc. nuclear unit. No more than two alternates shall be appointed as members at any meeting in fulfillment of the quorum requirements.

#### Review Responsibilities

The NSAB shall be responsible for the review of:

- a. The evaluations for changes to the facility and procedures, and tests or experiments completed under the provisions of 10 CFR 50.59, to verify that such actions did not require a license amendment as defined in 10 CFR 50.59;

- b. Proposed changes to the facility or procedures that require a license amendment as defined in 10 CFR 50.59;
- c. Proposed tests or experiments that require a license amendment as defined in 10 CFR 50.59;
- d. Proposed changes to Technical Specifications and the Operating License;
- e. Violations of applicable codes, regulations, orders, license requirements, or internal procedures having nuclear safety significance;
- f. All Licensee Event Reports required by 10 CFR 50.73;
- g. Indications of significant unanticipated deficiencies in any aspect of design or operation of structures, systems, or components that could affect nuclear safety;
- h. Significant accidental, unplanned, or uncontrolled radioactive releases, including corrective actions to prevent recurrence;
- i. Significant operating abnormalities or deviations from normal and expected performance of equipment that could affect nuclear safety;
- j. The performance of the corrective action program; and
- k. Audits and audit plans.

Reports or records of these reviews shall be forwarded to the **Senior Vice President - Nuclear Operations** and the Site Vice President - Millstone within 30 days following completion of the review.

#### Audit Program Responsibilities

The NSAB audit program shall be the responsibility of Nuclear Oversight. NSAB audits shall be performed at least once per 24 months in accordance with administrative procedures and shall encompass:

- a. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions;
- b. The training and qualifications of the unit staff;
- c. The implementation of all programs required by Units 2/3 Technical Specification 6.8 and Unit 1 Technical Specification 5.6;
- d. The Fire Protection Program and implementing procedures.
- e. The fire protection equipment and program implementation utilizing either a qualified offsite license fire protection engineer or an outside independent fire protection consultant.
- f. Actions taken to correct deficiencies occurring in equipment, structures, systems, components, or method of operation that affect nuclear safety; and

- g. Other activities and documents as requested by the Site Vice President - Millstone, the *Senior Vice President - Nuclear Operations* or SVP/CNO - Dominion Nuclear Connecticut, Inc.

## Records

Written records of reviews and audits shall be maintained. As a minimum these records shall include:

- a. Results of the activities conducted under the provisions of this NSAB Section;
- b. Deleted
- c. Deleted

## Station Qualified Reviewer Program

### Function

The designated manager, designated officer, Site Vice President - Millstone may establish a Station Qualified Reviewer Program whereby required reviews of designated procedures or classes of procedures required by SORC, Responsibilities item (a) are performed by Station Qualified Reviewers and approved by designated managers. These reviews are in lieu of reviews by the SORC. However, procedures which require a 10 CFR 50.59 evaluation in accordance with the station 50.59 Screen and Evaluation procedure must be reviewed by the SORC.

### Responsibilities

The Station Qualified Reviewer Program shall:

- a. Provide for the review of designated procedures, programs, and changes thereto by a Qualified Reviewer(s) other than the individual who prepared the procedure, program, or change.
- b. Ensure cross-disciplinary review of procedures, programs, and changes thereto when organizations other than the preparing organization are affected by the procedure, program, or change. These are performed by the affected disciplines, or by other persons designated by cognizant manager or director as having specific expertise required to assess a particular procedure, program, or change. Cross-disciplinary reviewers may function as a committee.
- c. Provide for written recommendation by the Qualified Reviewer(s) to the designated manager for approval or disapproval of procedures and programs considered under SORC Responsibilities item (a), and ensure that the procedure or program was screened by a qualified individual and found not to require a 10 CFR 50.59 evaluation.

Personnel recommended to be Station Qualified Reviewers shall be designated in writing by their designated manager or designee. The Manager, Nuclear Procedures and Document Administration, reviews and recommends for approval. The SORC Chairman or designee shall provide final approval. This qualification shall apply to all procedures and programs considered under SORC Responsibilities (a).

Temporary procedure changes shall be made in accordance with Unit 2/3 Technical Specification 6.8.3 and Unit 1 Technical Specification 5.5.5 with the exception that

changes to procedures for which reviews are assigned to Station Qualified Reviewers will be reviewed and approved as described in Responsibilities (a) through (c) above.

#### Records

The review of procedures and programs performed under the Station Qualified Reviewer Program shall be documented in accordance with administrative procedures.

#### Training and Qualification

The training and qualification requirements of personnel designated as a Qualified Reviewer in accordance with the Station Qualified Reviewer Program shall be in accordance with administrative procedures. Qualified reviewers shall have:

- a. A Bachelors degree in engineering, related science, or technical discipline, and two years of nuclear power plant experience;

OR

- b. Six years of nuclear power plant experience;

OR

- c. An equivalent combination of education and experience as approved by a Manager or Director.

#### SAFETY LIMIT VIOLATION - Units 2 and 3

The SVP/CNO - Dominion Nuclear Connecticut, Inc., **Senior Vice President - Nuclear Operations**, Site Vice President - Millstone, and the Chairperson of the NSAB shall be notified within 24 hours in the event a Safety Limit is violated.

The Safety Limit Violation Report shall be submitted to the Commission, the Chairperson of the NSAB, SVP/CNO - Dominion Nuclear Connecticut, Inc., the **Senior Vice President - Nuclear Operations**, and the Site Vice President - Millstone within 14 days of the violations.

#### RECORD RETENTION - Units 1 and 2

- (1) The following records shall be retained for at least five years:
  - a. Records and logs of facility operation covering time interval at each power level.
  - b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
  - c. ALL REPORTABLE EVENTS.
  - d. Records of surveillance activities, inspections, and calibrations required by these technical specifications.
  - e. Records of reactor tests and experiments.
  - f. Records of changes made to operating procedures.
  - g. Records of radioactive shipments.

- h. Records of sealed source leak tests and results.
  - i. Records of annual physical inventory of all sealed source material of record.
- (2) The following records shall be retained for the duration of the facility operating license:
- a. Records and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
  - b. Records of new and irradiated fuel inventory, fuel transfers, and assembly burnup histories.
  - c. Records of facility radiation and contamination surveys.
  - d. Records of radiation exposure for all individuals entering radiation control areas.
  - e. Records of gaseous and liquid radioactive material released to the environs.
  - f. Records of transients or operational cycles for those facility components designed for a limited number of transients or cycles.
  - g. Records of training and qualification for current members of the plant staff.
  - h. Records of inservice inspections performed pursuant to the Technical Specifications.
  - i. Records of quality assurance activities required by the QA Manual.
  - j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR Part 50.59.
  - k. Records of meetings of the NSAB and the SORC.
  - l. Records of Environmental Qualification (which are covered under the provisions of Technical Specification 6.13. for Unit 2)
  - m. Records of reviews performed for changes made to the Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMDCM) and the Process Control Program.

#### RECORD RETENTION - Unit 3 Only

- (1) In addition to the applicable record retention requirements of Title 10, Code of Federal Regulations, the following records shall be retained for at least the minimum period indicated.
- (2) The following records shall be retained for at least five years:
  - a. Records and logs of unit operation covering time interval at each power level;
  - b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety;
  - c. All REPORTABLE EVENTS;

- d. Records of surveillance activities, inspections, and calibrations required by Technical Specifications;
- e. Records of changes made to the procedures required by Technical Specification 6.8.1;
- f. Records of radioactive shipments;
- g. Records of sealed source and fission detector leak tests and results; and
- h. Records of annual physical inventory of all sealed source material of record.

(3) The following records shall be retained for the duration of the unit Operating License:

- a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the Final Safety Analysis Report;
- b. Records of new and irradiated fuel inventory, fuel transfers, and assembly burnup histories;
- c. Records of radiation exposure for all individuals entering radiation control areas;
- d. Records of gaseous and liquid radioactive material released to the environs;
- e. Records of transient or operational cycles for those unit components identified in Technical Specification Table 5.7-1.
- f. Records of reactor tests and experiments;
- g. Records of training and qualification for current members of the unit staff;
- h. Records of inservice inspections performed pursuant to the Technical Specifications;
- i. Records of quality assurance activities required by the Quality Assurance Topical Report not listed in (2) a. through (2) h. above;
- j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR Part 50.59;
- k. Records of meetings of the NSAB and the SORC;
- l. Records of the service lives of all hydraulic and mechanical snubbers required by Technical Specification 3.7.10 including the date at which the service life commences and associated installation and maintenance records;
- m. Records of secondary water sampling and water quality; and
- n. Records of analyses required by the Radiological Environmental Monitoring Program that would permit evaluation of the accuracy of the analysis at a later date. This should include procedures effective at specified times and QA records showing that these procedures were followed.

- o. Records of reviews performed for changes made to the Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMDCM) and the Process Control Program.

APPENDIX G  
TECHNICAL SPECIFICATION POSITION CROSS REFERENCE

MILLSTONE UNIT 1

T.S. SECTION	T.S. POSITION	STATION ORGANIZATION POSITION
<b>Responsibility</b>		
5.1.1	Designated Officer Designated Manager	Site Vice President Director - Nuclear Station Operations & Maintenance
5.1.2	Shift Manager	Unit 2 Shift Manager
5.1.3, 5.2.1.b	Quality Assurance Topical Report	Quality Assurance Program
<b>Organization</b>		
5.2.1b Offsite and onsite organizations	Designated Manager	Director - Nuclear Station Operations & Maintenance
5.2.1c Offsite and onsite organizations	Designated Officer	Site Vice President
5.2.2	Shift Manager	Unit 2 Shift Manager
<b>Staff Qualifications</b>		
5.3.1	Operations Manager or Assistant Operations Manager	Manager - Nuclear Operations Unit 2 Supervisor Nuclear Shift Operations
5.3.1.2	Health Physics Manager	Supervisor - Health Physics
<b>Procedures</b>		
5.5.2	Designated Manager  Designated Officer Designated Senior Officer	Director - Nuclear Station Operations & Maintenance Director - Nuclear Station Safety & Licensing Site Vice President <b>Senior Vice President - Nuclear Operations</b>
5.5.3	Designated Manager  Designated Officer	Director - Nuclear Station Operations & Maintenance Director - Nuclear Station Safety & Licensing Site Vice President
5.5.4	Designated Manager  Designated Officer	Director - Nuclear Station Operations & Maintenance Director - Nuclear Station Safety & Licensing Site Vice President
5.5.5c	Designated Manager  Designated Officer	Director - Nuclear Station Operations & Maintenance Director - Nuclear Station Safety & Licensing Site Vice President
5.5.6; 5.5.7	Individual from the Radiological Branch or Production Laboratory (POSL)	Individual from Nuclear Fuel Engineering or designee

T.S. SECTION	T.S. POSITION	STATION ORGANIZATION POSITION
Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODOCM)		
5.6.1	Designated Officer	Site Vice President

Notes:

Generic position titles are as approved by Amendment No. 105 to the Unit 1 Technical Specifications.

**MILLSTONE UNIT 2**

T.S. SECTION	T.S. POSITION	STATION ORGANIZATION POSITION
<b>Responsibility</b>		
6.1.1	Designated Officer Designated Manager	Site Vice President Director - Nuclear Station Operations & Maintenance
<b>Organization</b>		
6.2.1b Offsite and onsite organizations	Designated Manager	Director - Nuclear Station Operations & Maintenance
6.2.1c Offsite and onsite organizations	Designated Officer	Site Vice President
<b>Facility Staff Qualifications</b>		
6.3.1a	Operations Manager Assistant Operations Manager	Manager - Nuclear Operations Unit 2 Supervisor Nuclear Shift Operations
6.3.1c	Health Physics Manager	Supervisor - Health Physics
<b>Procedures</b>		
6.8.2a	Designated Manager  Designated Officer Designated Senior Officer	Director - Nuclear Station Operations & Maintenance Director - Nuclear Station Safety & Licensing Site Vice President <b>Senior Vice President - Nuclear Operations</b>
6.8.2b	Designated Manager  Designated Officer	Director - Nuclear Station Operations & Maintenance Director - Nuclear Station Safety & Licensing Site Vice President
6.8.5	Individual from the Radiological Branch or Production Laboratory (POSL)	Individual from Nuclear Fuel Engineering
<b>High Radiation Area</b>		
6.12.1c	Health Physics Manager	Supervisor - Health Physics
<b>Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMDCM)</b>		
6.15b	Designated Officer	Site Vice President

Notes:

Generic position titles are as approved by Amendment No. 235 to the Unit 2 Technical Specifications

**MILLSTONE UNIT 3**

<b>T.S. SECTION</b>	<b>T.S. POSITION</b>	<b>STATION ORGANIZATION POSITION</b>
<b>Responsibility</b>		
6.1.1	Designated Officer Designated Manager	Site Vice President Director - Nuclear Station Operations & Maintenance
<b>Organization</b>		
6.2.1b Offsite and onsite organizations	Designated Manager	Director - Nuclear Station Operations & Maintenance
6.2.1c Offsite and onsite organizations	Designated Officer	Site Vice President
<b>Facility Staff</b>		
6.2.2	SS - Shift Supervisor	Shift Manager
<b>Facility Staff Qualifications</b>		
6.3.1a	Operations Manager Assistant Operations Manager	Manager - Nuclear Operations Unit 3 Supervisor Nuclear Shift Operations
6.3.1c	Health Physics Manager	Supervisor - Health Physics
<b>Procedures</b>		
6.8.2a	Designated Manager  Designated Officer Designated Senior Officer	Director - Nuclear Station Operations & Maintenance Director - Nuclear Station Safety & Licensing Site Vice President <b>Senior Vice President - Nuclear Operations</b>
6.8.2b	Designated Manager  Designated Officer	Director - Nuclear Station Operations & Maintenance Director - Nuclear Station Safety & Licensing Site Vice President
6.8.5	Individual from the Radiological Branch or Production Laboratory (POSL)	Individual from Nuclear Fuel Engineering or designee
<b>High Radiation Area</b>		
6.12.1c	Health Physics Manager	Supervisor - Health Physics

Notes:

Generic position titles are as approved by Amendment No. 171 to the Unit 3 Technical