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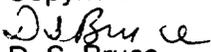
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Utilities System

# Memo

NO-00-0248

July 14, 2000

TO: Northeast Utilities Quality Assurance Program Topical Report Controlled  
Copyholders

FROM:   
D. S. Bruce

SUBJECT: NUQAP Topical Report Revision 22, Appendixes A - G  
(Document No. MP-02-OST-BAP01)

Enclosed are the Appendixes for the Northeast Utilities Quality Assurance Program Topical Report (NUQAP), Revision 22. Revision 22 of the NUQAP was distributed on July 6, 2000, under NO-00-0237, however the appendixes were inadvertently left out of the distribution.

Please replace the contents of the existing Appendixes of the Quality Assurance Program Topical Report, to ensure all controlled copies contain Revision 22, Appendix A through Appendix G.

Revision 22 includes all the changes that have been made in the Change 21. There are no revision bars, as there are no changes to NUQAP content since the most recent NUQAP release of Revision 21, Change 14. To meet the requirements for the NRC submittal, **all** changes since Revision 21 (August 23, 1999) are ***bolded and italicized***. Future changes will reflect only changes made to Revision 22. Please note that the footers of all sections have been revised to reflect the current Revision.

In addition, please remove the NRC Staff letter from the NRC Staff section of the NUQAP. As there was no reduction in commitments, NRC approval was not required. Please leave the tab and insert the attached page with the NRC submittal information. Please note the effective date of Revision 22 was **July 6, 2000**.

If you have any questions, contact D. Bruce at X3185.

Attachments:

1. Explanation for Removal of Staff Letter (to be placed behind "NRC Staff Letter" Tab)

Enclosure:

Northeast Utilities Quality Assurance Program Topical Report Revision 22, Appendixes A-G.

## **INSERT**

*(Behind NRC Staff Letter Tab)*

### **NOTE:**

Northeast Utilities Quality Assurance Topical Report, Revision 22, was submitted to the NRC on June 30, 2000 (NNECO Correspondence Number B18126). As there was no reduction in commitment included in the submittal, there is no requirement to wait for NRC approval prior to implementation.

This tab is left in the book for future NRC Staff Letters. Any NRC Correspondence received regarding the receipt of Revision 22 will be distributed separately, if received in the future.

Thank you.

## APPENDIX A

### NORTHEAST UTILITIES QUALITY ASSURANCE PROGRAM (NUQAP) TOPICAL REPORT - MILLSTONE POWER STATION

#### CATEGORY I STRUCTURES, SYSTEMS AND COMPONENTS

The Materials, Equipment, and Parts List (MEPL) Program provides instructions to identify structures, systems, components, parts, materials, and consumables that need to be safety-related and designated as Category I. ***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 NUQAP.***

The following structures, systems, and components of a Millstone Station nuclear power plant, 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 NU 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 NUQAP, as applicable.

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

## APPENDIX B

### NORTHEAST UTILITIES QUALITY ASSURANCE PROGRAM (NUQAP) TOPICAL REPORT - MILLSTONE POWER STATION

#### QUALIFICATION AND EXPERIENCE REQUIREMENTS

***This appendix consolidates specific qualification and experience requirements for several key positions within the NNECO organization. Much of this material was relocated from the Unit 3 Final Safety Analysis Report.***

#### **DIRECTOR-NUCLEAR OVERSIGHT**

The ***Director-Nuclear Oversight*** shall satisfy the following requirements:

Graduate of a four-year accredited engineering or science college or university, plus fifteen (15) or more years of industrial experience including five years in positions of leadership, such as lead engineer, project engineer, Audit team leader, etc. At least two years of this experience should be associated with nuclear Quality Assurance Activities, and at least one year of this experience is in a Quality Assurance Organization. A masters degree in engineering or business management is considered equivalent to two years of experience.

Note: The education and experience requirements should not be treated as absolute when similar training or an outstanding record provides reasonable assurance that a person can perform the required tasks.

#### **ANSI N18.1-1971 Requirements**

***As stated in Appendix C, education and experience requirements for Millstone Station personnel are established by ANSI N18.1 as endorsed by Regulatory Guide 1.8-1977, subject to the exceptions in Appendix E. The table below identifies ANSI N18.1 requirements applicable to specific positions at Millstone Units 2 and 3.***

**Table B-1**

<b>Position</b>	<b>Applicable ANSI N18.1-1971 Requirements</b>
<b>Station Director</b>	<b>Plant Manager (4.2.1)*</b>
<b>Manager - Chemistry</b>	<b>Radiochemistry (4.4.3)</b>
<b>Manager - Radiation Protection and Waste Services</b>	<b>Radiation Protection (4.4.4) See Note 1</b>
<b>Manager - Operations</b>	<b>Operations Manager (4.2.2) See Note 2</b>
<b>Shift Managers</b>	<b>Supervisors Requiring AEC Licenses (4.3.1)</b>
<b>Unit Supervisors, Control Operators, Plant Equipment Operators</b>	<b>Operators (4.5.1)</b>
<b>Manager - I&amp;C Maintenance</b>	<b>Instrumentation &amp; Control (4.4.2)</b>
<b>Director - Maintenance</b>	<b>Maintenance Manager (4.2.3)</b>
<b>Mechanics, Electricians, Technicians (repairmen)</b>	<b>Repairmen (4.5.3)</b>
<b>Manager - Unit System Engineering Manager - Plant Support Engineering Manager - Common System Engineering</b>	<b>Technical Manager (4.2.4)</b>
<b>Supervisor - Reactor Engineering</b>	<b>Reactor Engineering and Physics (4.4.1)</b>

\* Numbers in () refer to section numbers in ANSI N18.1-1971.

**Notes:**

1. For the position of **Manager - Radiation Protection and Waste Services**, the qualifications considered as minimum acceptable substitutes for a bachelor's degree equivalent are: a high school diploma or its equivalent and four years of applied managerial experience at a nuclear facility in the area of radiation protection.
2. If the **Unit 3 Manager - Operations** does not hold an SRO license for Unit 3, then the **Manager - Operations** shall have held an SRO license at a pressurized water reactor (PWR), and the **Assistant Manager - Operations** shall hold an SRO license for Unit 3.

If the **Unit 2 Manager - Operations** does not hold an SRO license for Unit 2, then the **Manager - Operations** shall have held an SRO license at a PWR, and an individual serving in the capacity of the **Assistant Manager - Operations** shall hold an SRO for Unit 2.

## APPENDIX C

### NORTHEAST UTILITIES QUALITY ASSURANCE PROGRAM (NUQAP) TOPICAL REPORT - MILLSTONE POWER STATION

#### REGULATORY GUIDE AND ANSI/IEEE STANDARD COMMITMENTS

NOTE: This NUQAP is committed to utilize the guidance obtained from the following regulatory documents and their endorsed standards. Exceptions to these positions are listed in Appendix E of this Topical Report.

Appendix B to 10 CFR, Part 50 - Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants.

10 CFR 50, Section 50.54, Condition of Licenses.

10 CFR 50, Part 55 - Operator's Licenses and its Appendix A - Requalification Programs for Licensed Operators of Production and Utilization Facilities.

Regulatory Guide 1.8 - I - R - 5/77 - Personnel Selection and Training - Endorses ANSI N18.1 - 1971.

Regulatory Guide 1.28 - 2/79 - Quality Assurance Program Requirements (Design and Construction) Endorses ANSI N45.2-1977.

Regulatory Guide 1.30 - (Safety Guide 30), 8-11-72 - Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electrical Equipment - Endorses ANSI N45.2.4-1972.

Regulatory Guide 1.33 - 2/78 - Quality Assurance Program Requirements (Operation) - Endorses ANSI N18.7-1976/ANS3.2.

Regulatory Guide 1.37 - Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants, 3-16-73 - Endorses ANSI N45.2.1 1973.

Regulatory Guide 1.38 - Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water-Cooled Nuclear Power Plants, 5/77 - Endorses ANSI N45.2.2 - 1972.

Regulatory Guide 1.39 - Housekeeping Requirements for Water-Cooled Nuclear Power Plants, 9/77 - Endorses ANSI N45.2.3-1973.

Regulatory Guide 1.58 - Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel, Rev. 1, 9/80 - Endorses ANSI N45.2.6-1978.

Regulatory Guide 1.64 - Quality Assurance Requirements for the Design of Nuclear Power Plants, 6/76 - Endorses ANSI N45.2.11-1974.

Regulatory Guide 1.70 - "A Guide for the Organization and Content of Safety Analysis Reports" Revision 0, June 30, 1966 was utilized for Millstone Power Station Unit No. 2; however, certain revised sections **of the Unit 2 Final Safety Analysis Report are written to the Revision 3 format**. Revision 3, November 1978 is utilized for Millstone Power Station Unit No. 3.

Regulatory Guide 1.88 - Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records - 10/76 Endorses ANSI N45.2.9-1974.

Regulatory Guide 1.94 - Quality Assurance Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plant - 4/76 - Endorses ANSI N45.2.5 - 1974 and Section 6.11 of ANSI N45.2.5-1978.

Regulatory Guide 1.116 - Quality Assurance Requirements for Installation, Inspection, and Testing Mechanical Equipment and Systems - 5/77 - Endorses ANSI N45.2.8-1975.

Regulatory Guide 1.123 - Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants - 7/77 - Endorses ANSI N45.2.13-1976.

Regulatory Guide 1.144 - Auditing of Quality Assurance Programs for Nuclear Power Plants - Rev. 1 - 9/80 Endorses ANSI N45.2.12 - 1977.

Regulatory Guide 1.146 - Qualification of Quality Assurance Program Audit Personnel For Nuclear Power Plants - 8/80 Endorses ANSI N45.2.23-1978.

Regulatory Guide 1.152 - "Criteria for Digital Computers in Safety Systems of Nuclear Power Plants", January 1996 - Endorses IEEE ANS 7 - 4.3.2 - 1993.

## APPENDIX D

### NORTHEAST UTILITIES QUALITY ASSURANCE PROGRAM (NUQAP) TOPICAL REPORT - MILLSTONE POWER STATION

#### GLOSSARY OF QUALITY ASSURANCE TERMS

Accept As Is - (also known as "Use-As-Is") A disposition which may be imposed for a nonconformance when it can be established that the discrepancy will result in no adverse conditions and that the item under consideration will continue to meet all engineering functional requirements including performance, maintainability, fit and safety.

Approved Vendors - Vendors approved to provide material, equipment, parts or services under their quality assurance program.

As-Built Documents - Documents which accurately describe the condition actually achieved in a system, structure, or component. These documents include: material certification and test data; reports of inspections, examinations, and test results; drawing, specifications, procedures, and instructions; and records of nonconformance and their resolution.

Audit - A formal, documented activity performed in accordance with written procedures or checklists to verify by evaluation of objective evidence that a quality assurance program has been developed, documented, and implemented in accordance with applicable requirements.

Augmented Quality - Nonsafety-related items for which a design basis or regulatory commitment has been made. The augmented quality items are included within the scope of Quality Assurance Program. These items fall under nuclear indicators such as FPQA (Fire Protection Quality Assurance), RWQA (Radwaste Quality Assurance), ATWS (Anticipated Transient Without Scram) and SBOQA (Station Blackout Quality Assurance).

Calibration - The process by which measuring and test equipment are checked against standards of known higher accuracy and adjusted as necessary to assure their compliance with designated specifications.

Category I - Designation given to safety-related structures, systems, and components (SSC) of a Northeast Utilities nuclear power plant and material, equipment, parts, consumables, and services applicable to the safety-related functions of these SSCs.

Category 1 Structures, Systems and Components - Defined in each unit FSAR and functionally described in Appendix A.

Cleaning - Those actions performed to maintain an item in accordance with cleanliness requirements.

Commercial Grade Item (CGI) - A commercial grade item per 10CFR21 is a structure, system, or component, or part thereof that affects its safety function that was not designed and manufactured as a basic component. Commercial grade items do not include items where the design and manufacturing process require in-process inspections and verifications to assure that defects or failures to comply are identified and corrected (i.e., one or more critical characteristics of the item cannot be verified).

Commercial Grade Survey - Activities conducted by the purchaser to ascertain and verify that a supplier or manufacturer of commercial grade items, controls the technical and quality characteristics determined to be critical for satisfactory performance of specifically designated commercial grade items, as a method to accept those items for safety-related use.

Condition Adverse to Quality - Failures, malfunctions, deficiencies, deviations, defective materials and equipment, abnormal occurrences and nonconformances.

Contractor - Any organization under contract for furnishing items or services.

Corrective Action - Action taken to correct an identified condition adverse to quality.

Deficiencies - Departures from specified requirements.

Department - The use of the word "Department" throughout this NUQAP can refer to any portion of the NUSCO/NNECO organization (i.e., Group, Division, Department, Branch, Section, or Unit, as applicable).

Design - The technical and management process which leads to and includes the issuance of design output documents such as drawings, specifications, and other documents defining technical requirements of structures, systems, and components.

Design Changes - Changes in drawings and specifications that define the design of structures, systems, and components of nuclear power plants.

Design Documents - The drawing, calculation, specification, or other document(s) that define the technical requirements of structures, systems, or components.

Engineering Service Organization - Organizations that provide services such as analysis, computer software, testing, and inspection.

***Group - The use of the word "group" in Section 1.0 of this NUQAP refers to a portion of the NUSCO/NNECO organization (i.e., Department, Unit, Branch, as applicable).***

Handling - An act of physically moving an item by hand or by mechanical machinery, but not including transport modes.

Identification - A means by which material, equipment and parts can be traced to their associated documentation through the use of heat numbers, lot numbers, part numbers, serial numbers, or other appropriate means.

Item - Any level of unit assembly, including structures, systems, subsystems, subassembly, component, part, or material.

Inspection - A phase of quality control which, by means of examination, observation, or measurement, determines the conformance of material, supplies, components, parts, appurtenances, systems, processes, structures, or services to predetermined quality requirements.

Inspection Status - Identification of material, equipment, and parts that have completed inspection, either acceptable or unacceptable.

Licensing Basis - The set of requirements that includes the applicable NRC regulations, plant - specific NRC requirements, plant - specific design basis and regulatory commitments that are docketed and in effect.

Life Records - Those quality documents that are maintained for the lifetime of an in-service nuclear power plant (the duration of the operating license) or for the life of the particular component or part. Life records are those which would be of significant value in meeting one or more of the following criteria:

- (1) demonstrating capability for safe operation.
- (2) maintaining, reworking, repairing, replacing or modifying the item.
- (3) determining the cause of an accident or malfunction of an item.
- (4) providing required base line data for in-service inspection.

Material Request - A formal electronic request for the purchase of material, equipment, parts and/or services.

Measuring and Test Equipment - Those instruments, gages, tools, fixtures, reference and transfer standards, nondestructive test equipment, and measuring devices used during inspection and testing to determine that the measuring and test parameters comply with appropriate requirements in specifications and drawings.

Nonconformance - A deficiency in characteristic documentation or procedure which renders the quality of an item unacceptable or indeterminate.

Non-Life Records - Those quality documents that are maintained for a specific period of time other than the lifetime of the in-service nuclear power plant or the particular component or part.

Northeast Utilities (NU) - A public utility holding company which owns Northeast Utilities Service Company (NUSCO) and the Northeast Nuclear Energy Company (NNECO).

Northeast Nuclear Energy Company (NNECO) - The Northeast Utilities Power Operating Company responsible for the operation of the Millstone Station nuclear power plants.

Northeast Utilities Service Company (NUSCO) - A wholly owned subsidiary of Northeast Utilities that provides support engineering, purchasing, and quality assurance services for the Millstone Station nuclear power plants.

Northeast Utilities Quality Assurance Program (NUQAP) - Millstone Power Station - Consists of this NUQAP Topical Report, Nuclear Oversight Department procedures and other NUSCO/NNECO Group/Division/Department/Branch/Section/Unit quality procedures.

Nuclear Document Services - The organization responsible for establishing the Corporate Nuclear Plant Records Program which is implemented at each Nuclear Document Services Facility.

Nuclear Grade - The procurement classification applied to all materials and services intended for items listed as Category I (CAT I) in the MEPL. These may require validating documentation such as Certificate of Material Test Report, Certificate of Conformance, Certificate of Compliance, personnel qualifications, etc., as specified by codes or standards, and have been designed/qualified for a nuclear application. Nuclear Grade items are manufactured/qualified under a 10CFR50, Appendix B program with the vendor responsible for 10CFR21. The vendor should be an "Approved Vendor".

Nuclear Document Services Facilities (NDSF) - A facility which has been established for the purpose of handling nuclear power plant records in accordance with the Nuclear Records Program.

Objective Evidence - Any statement of fact, information, or record, either quantitative or qualitative, pertaining to the quality of an item or service based on observation, measurements, or tests which can be verified.

Preservation - Those actions performed to maintain an item in its original and usable condition.

Procedures and Instructions - Documents that specify how an activity is to be performed. They may include methods to be employed; material, equipment, or parts to be used; and a sequence of operations.

Procurement Documents - Purchase requisitions/material requests, purchase orders, contracts, drawings, specifications or instructions used to define requirements for purchase.

Product Acceptance Test - Activities conducted as part of the receiving or source inspection process to verify acceptability of one or more critical characteristics of the item being inspected.

Purchased Material, Equipment, and Parts (MEP) - Items procured for installation in the Millstone Station nuclear power plants quality structures, systems, and components, and items procured as spare MEP for potential installation in those structures, systems, and components.

Purchased Services - Services provided by vendor when requested under a QA Material Request and performed under a quality assurance program other than this NUQAP. (Synonymous with "Services" and "Quality Services" in this NUQAP)

Quality Activities - All activities affecting the safety functions of structures, systems, and components; these activities include designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, and modifying. Quality activities also include those activities associated with Augmented Quality (including Radwaste Packaging and Shipping) and other regulated programs to which this NUQAP is applicable.

Quality Assurance Records - Any record pertaining to the quality of material, equipment, parts, processes, or operations relating to structures, systems, and components which are founded on observations, measurements, or tests which can be fully checked or verified. Such statements may be recorded on a written or preprinted document or tag. The statements are authorized with a signature or stamp identifiable to the person making the statement of fact.

Quality Structures, Systems and Components - Structures, systems, and components (SSC) including Safety-Related SSCs, Augmented Quality items, and items under other regulated programs to which this NUQAP is applicable.

Quality Procedures - Those Nuclear Oversight Department and other department procedures which implement the requirements of this NUQAP.

Repair - A disposition applied to nonconforming material, equipment, and parts that are unsuitable for their intended purpose which are modified by the use of additional operations and/or processes so that they are suitable for their intended purpose but may not meet all specified requirements.

Reportable Item - An event or condition that could affect nuclear plant safety and must be reported to the NRC in accordance with regulatory requirements such as 10CFR50.72, 10CFR50.73, or 10CFR50.9(b).

Responsible Engineer - A NNECO employee assigned the responsibility to coordinate the engineering activities addressed in NUQAP. The responsible engineer may be designated as the project engineer.

Retest - A test conducted prior to operation following installation inspections of work associated with maintenance and refueling to verify that structures, systems, and components will function satisfactorily when in operation. A retest may also be performed when original test results are invalidated.

Return to Vendor - A disposition applied to nonconforming material, equipment, and parts that are unsuitable for their intended purpose but which are feasible to repair or rework at a vendor's facility.

Rework - A disposition applied to nonconforming material, equipment, and parts that are unsuitable for their intended purpose due to incomplete operations or variations from original engineering requirements but which are modified through the use of additional operations or processes to meet all specified requirements.

Safety-Related Structures, Systems and Components - Those structures, systems and components that are relied on to remain functional during and following design basis (postulated) events to assure:

- 1) The integrity of the reactor coolant pressure boundary;
- 2) The capability to shut down the reactor and maintain it in a safe shutdown condition; and
- 3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the applicable guideline exposures set forth in 10CFR50.34(a)(1) or 10CFR100.11 as applicable.

Significant Condition Adverse to Quality - A condition adverse to quality involving actual or potential consequences that **have** a serious impact on public or personnel health and safety or plant operations, and requiring a root cause evaluation to determine corrective action to prevent recurrence.

Special Processes - Processes for which the desired level of quality can only be assured through the use of additional process controls, and where control through direct inspection alone is inadequate, impossible, or disadvantageous. These processes are performed under controlled conditions in accordance with special requirements utilizing qualified procedures, equipment, and personnel. Special processes may include, but are not limited to welding, brazing, soldering, cleaning, heat treating, and nondestructive testing.

Station Blackout - The complete loss of alternating current electric power to the essential and non-essential switchgear buses in a nuclear power plant as defined in 10CFR50.2. It involves the loss of offsite power concurrent with turbine trip and failure of the onsite emergency ac power system, but not the loss of available ac power to buses fed by Station batteries through inverters or the loss of power from alternate ac sources.

Storage - The act of holding an item at the site in an area other than its permanent location in a plant.

Surveillance - A documented record of the observation of work operations performed at the Millstone Power Station or vendor's site to assure compliance with applicable codes, standards, specifications, procedures, drawings, and procurement documents. Surveillance may be performed with a prepared checklist.

Test and Operating Status - Identification of material, equipment, and parts that are ready for test or operation, or an existing stage of a test operation.

Testing - The determination or verification of the capability of an item to meet specified requirements by subjecting the item to a set of physical, chemical, environmental, or operating conditions.

Vendors - Organizations that provide material, equipment, parts, computer software, or services. This includes contractors, engineering service organizations, and consultants. (Synonymous with "Supplier" in this NUQAP)

Work Procedures and Work Documents - Procedures, instructions, and documents used to control and document maintenance and modification work performed on Millstone Station nuclear plant structures, systems, and components.

## APPENDIX E

### NORTHEAST UTILITIES QUALITY ASSURANCE PROGRAM (NUQAP) TOPICAL REPORT - MILLSTONE POWER STATION

#### PROGRAM EXCEPTIONS

1. ANSI N45.2.9, states in part, "structure, doors, frames, and hardware should be Class A fire-related with a recommended four-hour minimum rating." The three record storage vaults at NNECO have a two-hour rating.

NNECO's vaults are used for storage of documentation that is unsuitable for filming or awaiting filming.

A records organization exists along with written procedures addressing the control of quality assurance records.

2. ***Deleted***

3. ANSI N45.2.9-1974, paragraph 1.4, definition of "Quality Assurance Records" states in part: "For the purposes of this standard, a document is considered a quality assurance record when the document has been completed."

Northeast Utilities has developed the following alternative definition to provide guidance during the interim period from the time a document is completed until it is transmitted to the Nuclear Document Services Facility:

"A record is considered a working document until it is transmitted to the Nuclear Document Services Facility (NDSF) at which time it is designated as a Quality Assurance Record. The following maximum time limits are established for the transmittal of working documents to the NDSF:

Operations Documents - Documentation generated during plant operations may be maintained, as needed, by operating plant departments, for up to one year.

New Construction or Betterment Documents - Documents which evolve during new construction or betterment projects shall be transmitted to NDSF within 90 days of completion of a new construction project or turnover of a betterment project or plant operations.

Procurement Documents - Inspection/Surveillance/Audit Reports generated during vendor oversight activities which are used to maintain vendor status for current and future procurements may be maintained, as needed, by Nuclear Materials and Document Management for up to three years.

All Other Working Documents - All other working documents shall be transmitted to NDSF within 6 months of their receipt or completion."

The requirements of ANSI N45.2.9-1974 do not apply to these "working documents" based on paragraph 1.1 of the ANSI standard which states:

"It (ANSI N45.2.9) is not intended to cover the preparation of the records nor to include working documents not yet designated as Quality Assurance Records."

4. Regulatory Guide 1.64 - 6/76, the Regulatory position states, in part, "It should not be construed that such verification constitutes the required independent design verification." Northeast Utilities has developed the following alternative to allow for adequate independent design verification:

This review may be performed by the originator's Supervisor, only if the Supervisor:

Did not specify a singular design approach;

Did not establish the design inputs or did not rule out certain Design considerations;

Is the only individual in the organization competent to perform the review.

Where the Supervisor performs the design review, the next level of management shall fulfill the Supervisor's responsibilities.

5. ANSI N45.2.13 - 1976, paragraph 10.3.4, states in part, "Post-Installation Test requirements and acceptance documentation (should) shall be mutually established by the purchaser and supplier." Involvement by the supplier in establishing Post-Installation Test requirements and acceptance documentation is requested only when it is deemed necessary and proper by the responsible engineering organization.

Northeast Utilities no longer has any nuclear plants under construction. As a result, most procurements are made for spare parts from suppliers who are not the original equipment manufacturer. In these cases, the supplier may have little or no understanding or knowledge of either the operation of the system the component is to be installed in, or applicable Post-Installation Test requirements and acceptance documentation. As such, Northeast Utilities assumes responsibility for establishing Post Installation Test requirements and acceptance documentation.

6. ANSI N45.2.2-1972, paragraph 1.2, states in part that, "The requirements of this standard apply to the work of any individual or organization that participates in the packaging, shipping, receiving, storage, and handling of items to be incorporated into nuclear power plants."

Since a portion of Northeast Utilities procurement activities involve commercial suppliers which do not fully comply with the requirements of ANSI N45.2.2, the Northeast Nuclear Energy Company Nuclear Materials and Document Management organization verifies

through source inspections, receipt inspection, and/or survey activities that the quality of the materials, items, components or equipment is preserved by those suppliers to the extent that packaging, shipping, storage and handling methods are employed which are commensurate with the nature of the product.

7. ANSI N18.1-1971, paragraph 4.2.2, states in part "The Operations Manager shall hold a Senior Reactor Operator's license". NU has developed an alternative to this requirement which has been accepted by the NRC via amendment 132 for the Millstone Power Station Unit No. 3 license which allows that:

If the Operations Manager does not hold a Senior Reactor Operator license for Millstone Unit No. 3, then the Operations Manager shall have held a Senior Reactor Operator license at a pressurized water reactor, and the Assistant Operations Manager shall hold a Senior Reactor Operator license for Millstone Unit No. 3.

8. ANSI N18.1-1971, paragraph 4.2.2, states in part "The Operations Manager shall hold a Senior Reactor Operator's license". NU has developed an alternative to this requirement which has been accepted by the NRC via amendment 190 for the Millstone Power Station Unit No. 2 license which allows that:

If the Operations Manager does not hold a Senior Reactor Operator license for Millstone Unit No. 2, then the Operations Manager shall have held a Senior Reactor Operator license at a pressurized water reactor, and an individual serving in the capacity of the Assistant Operations Manager shall hold a Senior Reactor Operator license for Millstone Unit No. 2.

9. Regulatory Guide 1.33 - 2/78, regarding audits, states in part:

- (a) "The results of actions taken to correct deficiencies...at least once per 6 months."
- (b) "...technical specifications and applicable license conditions - at least once per 12 months."
- (c) "The performance, training, and qualifications of the facility staff - at least once per 12 months."

NU has developed an alternative which modifies these Audit frequencies to at least once per 24 months. This alternative has previously been accepted by the NRC via license amendments 79, 184, and 104 for MP1, MP2, and MP3, respectively.

10. Deleted.

11. ANSI N45.2.13-1976, paragraph 10.3.5., states in part, "in certain cases involving procurement of services only, such as third party inspection; engineering and consulting services, and installation, repair, overhaul or maintenance work; the Purchaser may accept the service by any or all of the following methods:

- (a) Technical verification of the data produced
- (b) Surveillance and/or audit of the activity
- (c) Review of the objective evidence for conformance to the procurement document requirements such as certifications, stress reports, etc.”

In order to maintain the independence requirement of the NRC's August 14, 1996 Order, NNECO will not perform an acceptance review of the work produced by the vendors contracted to conduct the Independent Corrective Action Verification Program. This work will be performed in accordance with the vendor's own approved, 10 CFR 50 Appendix B Quality Assurance Program.

12. Deleted.

13. Regulatory Guide 1.70 Revision 3, November 1978 Section 17.1.2.4 states in part: “The PSAR should include a listing of QA program procedures or instructions that will be used to implement the QA program for each major activity such as design, procurement, construction, etc. The procedure list should identify which criteria of Appendix B to 10 CFR 50 are implemented by each procedure”.

NU has developed an alternative to this requirement where procedure indices are maintained which identify the procedures that implement the Quality Assurance Program for Millstone Power Station and which, by title and originating organization, indicate the Appendix B to 10 CFR 50 criterion being implemented.

14. ***ANSI N18.7-1976, Paragraph 5.2.15, “Review, Approval, and Control of Procedures,” states in part: “Plant procedures shall be reviewed by an individual knowledgeable in the area affected by the procedure no less frequently than every two years to determine if changes are necessary or desirable.”***

***NU implements administrative and programmatic controls that ensure procedures are maintained current in accordance with 10CFR50, Appendix B, thus meeting the intent of the biennial review.***

***NU implements administrative controls to perform biennial reviews of non-routine procedures such as EOP's, AOP's, E-Plan, Security and other procedures that may be dictated by an event.***

***Programmatic controls specify conditions when the mandatory review of plant procedures apply, and include a requirement to review applicable procedures following an accident or transient and following any modification to a system.***

***NU utilizes a pre-job briefing practice to ensure that personnel are aware of what is to be accomplished and what procedures will be used prior to beginning a job. In addition, the Procedure Compliance Policy requires that the job be stopped and the procedure be revised or the situation resolved prior to work continuing if procedures cannot be implemented as written.***

***Additionally, NU Quality Assurance Program requires the review of a representative sample of plant procedures as part of routine audits and surveillances to ensure that existing administrative controls for procedure verification, review and revision are effective in maintaining the quality of plant procedures. Significant procedural deficiencies are identified and corrected through the Station Corrective Action Program. The Station Self-Assessment Program also periodically reviews selected procedures and identifies deficiencies and improvements through the Corrective Action Program.***

APPENDIX F  
NORTHEAST UTILITIES QUALITY ASSURANCE PROGRAM (NUQAP)  
TOPICAL REPORT - MILLSTONE POWER STATION

ADMINISTRATIVE CONTROLS<sup>1</sup>

NOTE:

1. **“Technical Specification”** numbers refer to the unit specific **Unit 2/3** Technical Specifications **only**.

INDEPENDENT SAFETY ENGINEERING GROUP (ISEG) - Unit 3 Only

Function

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.

Composition

The ISEG shall be composed of at least four full-time personnel located on site to perform the functions described above for Millstone Unit 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.

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 safety evaluations will be made to the **Director - Nuclear Oversight and Regulatory Affairs [Director-NORA]**.

\*Not responsible for sign-off function

## REVIEW AND AUDIT

### **Unit 2/3 Plant Operations Review Committee (Unit 2/3 PORC)**

#### **Function**

**The Unit 2/3 PORC shall function to advise the Station Director on all matters related to nuclear safety.**

#### **Composition**

**The Unit 2/3 PORC 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  
Health Physics  
Chemistry  
Work Planning  
Quality Assurance**

**Each Unit 2/3 PORC 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 Unit 2/3 PORC shall be appointed in writing by the Station Director. The Unit 2/3 PORC Chairperson and two Vice Chairpersons of the Unit 2/3 PORC shall be drawn from the selected Unit 2/3 PORC members and be appointed in writing by the Station Director.**

## **Alternates**

*The Unit 2/3 PORC Chairperson shall appoint designated alternates for each member in writing to serve on a temporary basis. Each alternate shall meet the minimum qualifications described above for Unit 2/3 PORC members, and shall have the same area of expertise as the member he/she is replacing.*

## **Meeting Frequency**

*The Unit 2/3 PORC shall meet at least once per calendar month and as convened by the Chairperson.*

## **Quorum**

*A quorum of the Unit 2/3 PORC shall consist of the Chairperson, or a Vice Chairperson, and four members or designated alternates. However, no more than two alternates may vote at any one time.*

## **Responsibilities**

*The Unit 2/3 PORC shall be responsible for:*

- a. Review of: (1) all procedures, except common site procedures, required by Technical Specification 6.8 and changes thereto, 2) all programs, except common site programs required by Technical Specification 6.8 and changes thereto, and (3) any other proposed procedures, programs or changes thereto as determined by the Station Director to affect nuclear safety. Procedures and programs required by Technical Specification 6.8 that are designated for review and approval by the Station Qualified Reviewer Program do not require Unit 2/3 PORC review.*
- b. Review of all proposed tests and experiments that affect nuclear safety;*
- c. Review of all proposed changes to Sections 1.0-5.0 of the Technical Specifications;*
- d. Review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety;*
- e. Investigation of all violations of the Technical Specifications, including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence, to the Senior Vice President and CNO - Millstone and to the Chairperson of the Nuclear Safety Assessment Board;*
- f. Review of all REPORTABLE EVENTS;*
- g. Review of facility operations to detect potential safety hazards;*

- h. Performance of special reviews, investigations, or analyses and reports thereon as requested by the Chairperson of the Nuclear Safety Assessment Board.*
- i. Render determinations in writing if any item considered under (a) through (d) above, as appropriate and as provided by 10CFR50.59 or 10CFR50.92, constitutes an unreviewed safety question, or requires a significant hazards consideration determination.*
- j. Review of Unit Turbine Overspeed Protection Maintenance and Testing Program and revision thereto.*
- k. Review of the Fire Protection Program and implementing procedures.*

**Authority**

*The Unit 2/3 PORC shall:*

- a. Recommend to the Station Director written approval or disapproval of items considered under Responsibilities (a) through (d) above.*
- b. Provide immediate written notification to the Senior Vice President and CNO - Millstone and the Chairperson of the Nuclear Safety Assessment Board of disagreement between the Unit 2/3 PORC and the Station Director; however, the Station Director shall have responsibility for resolution of such disagreements pursuant to Technical Specification 6.1.1.*

**Records**

*The Unit 2/3 PORC shall maintain written minutes of each meeting and copies shall be provided to the Senior Vice President and CNO - Millstone and Chairperson of the Nuclear Safety Assessment Board.*

Site Operations Review Committee (SORC)

**Function**

The SORC shall function to advise the Senior Vice President and CNO - Millstone on all matters related to nuclear safety of the entire Millstone Station Site.

**Composition**

The SORC shall be composed of the:

Chairperson:	Senior Vice President and CNO Millstone
Member:	Director - <b>Unit 1</b> Operations
Member:	<b>Unit 2 Designated Manager</b> [See note below]
Member:	<b>Unit 3 Designated Manager</b> [See note below]
Member:	<b>Manager - Radiation Protection and Waste Services</b>

Member: **Director - Site Services**  
Member: Designated Member of Unit 1 PORC  
Member: Designated Member of **Unit 2/3** PORC  
Member: Designated Member of **Unit 2/3** PORC  
Member: Designated Member of Nuclear Oversight

NOTE: The positions of "Unit 2 Designated Manager" and "Unit 3 Designated Manager" shall be filled by any two of the following: Station Director, Assistant Station Director - Safety, Manager- Operations (Millstone 2), Manager - Operations (Unit 3).

***The senior individual among the Director - Unit 1 Operations, Unit 2 Designated Manager, and Unit 3 Designated Manager in attendance shall be the Vice-Chairperson.***

#### Alternates:

Alternate members shall be appointed in writing by the SORC Chairperson to serve on a temporary basis; however, no more than two alternates shall participate in SORC activities at one time.

#### Meeting Frequency

The SORC shall meet at least once per six months and as convened by the SORC Chairperson.

#### Quorum

A quorum of the SORC shall consist of the Chairperson or Vice Chairperson and five members including alternates.

#### Responsibilities

The SORC shall be responsible for:

- a. Review of 1) all common site procedures required by Unit 2/3 **Technical** Specification 6.8 and changes thereto, 2) all common site programs, required by **Unit 2/3 Technical** Specification 6.8 and changes thereto, 3) any other proposed procedures, programs, or changes thereto as determined by the designated officer [Senior Vice President and CNO - Millstone] to affect site nuclear safety. Common site programs and procedures required by **Unit 2/3 Technical** Specification 6.8 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 "Section 6.0 "Administrative Controls" of the Technical Specifications.
- c. Performance of special reviews and investigations and reports as requested by the Chairperson of the Nuclear Safety Assessment Board.
- d. Not used.
- e. Not used.
- f. Review of all common site proposed tests and experiments that affect nuclear safety.

- g. Review of all common site proposed changes or modifications to systems or equipment that affect nuclear safety.
- h. Render determinations in writing or meeting minutes if any item considered under (a) through (g) above, as appropriate and as provided by 10CFR50.59 or 10CFR50.92, constitutes an unreviewed safety question or requires a significant hazards consideration determination.
- i. Review of the common site fire protection program and implementing procedures.

#### Authority

The SORC shall:

- a. Recommend to the Senior Vice President and CNO - Millstone written approval or disapproval in meeting minutes of items considered under Responsibilities (a) through (i) above.
- b. Provide immediate written notification or meeting minutes to the President and Chief Executive Officer (CEO) and the Chairperson of the Nuclear Safety Assessment Board of disagreement between the SORC and the Senior Vice President and CNO - Millstone; however, the Senior Vice President and CNO - Millstone shall have responsibility for resolution of such disagreements pursuant to Technical Specification 6.1.1.

#### Records

The SORC shall maintain written minutes of each meeting and copies shall be provided to the Senior Vice President and CNO - Millstone and Chairperson of the Nuclear Safety Assessment Board.

#### 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 **Senior Vice President and CNO - Millstone** on matters related to nuclear safety and notify the **Senior Vice President and CNO - Millstone** within 24 hours of a safety significant disagreement between the NSAB and the organization or function being reviewed.

#### Composition

The **Senior Vice President and CNO - 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 **Senior Vice President and CNO - 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 the same Northeast Utilities' 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 safety evaluations for changes to procedures, equipment, or systems, and tests or experiments completed under the provisions of 10 CFR 50.59, to verify that such actions did not constitute an unreviewed safety question as defined in 10 CFR 50.59;
- b. Proposed changes to procedures, equipment, or systems that involve an unreviewed safety question as defined in 10 CFR 50.59;
- c. Proposed tests or experiments that involve an unreviewed safety question 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 and CNO - Millstone** within 30 days following completion of the review.

#### Audit Program Responsibilities

The NSAB audit program shall be the responsibility of the Nuclear Oversight Department. NSAB audits shall be performed at least once per 24 months in accordance with administrative procedures [Nuclear Group 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 Specification 6.8;
- 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 **Senior Vice President and CNO - Millstone**.

#### 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, or Senior Vice President and CNO - Millstone** may establish a Station Qualified Reviewer Program whereby required reviews of designated procedures or classes of procedures required by **Unit 2/3 PORC**, Responsibilities item (a), and SORC, Responsibilities item (a) are performed by Station Qualified Reviewers and approved by designated managers [**Responsible Individual(s) for the procedure(s)**]. These reviews are in lieu of reviews by the **Unit 2/3 PORC** or SORC. However, procedures which require a 10CFR50.59 evaluation must be reviewed by the **Unit 2/3 PORC** or 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. Provide for cross-disciplinary review of procedures, programs, and changes thereto when organizations other than the preparing organization are affected by the procedure, program, or change.
- c. Ensure cross-disciplinary reviews are performed by a Qualified Reviewer(s) in affected disciplines, or by other persons designated by cognizant Managers or Directors as having specific expertise required to assess a particular procedure, program, or change. Cross-disciplinary reviewers may function as a committee.
- d. Provide for a screening of designated procedures, programs and changes thereto to determine if an evaluation should be performed in accordance with the provisions of 10CFR50.59 to verify that an unreviewed safety question does not exist. This screening will be performed by personnel trained and qualified in performing 10CFR50.59 evaluations.
- e. Provide for written recommendation by the Qualified Reviewer(s) to the responsible Manager for approval or disapproval of procedures and programs considered under **Unit 2/3 PORC**, Responsibilities item (a) and SORC, Responsibilities item (a), and that the procedure or program was screened by a qualified individual and found not to require a 10 CFR 50.59 evaluation.

If the responsible manager determines that a new program, procedure, or change thereto requires a 10 CFR 50.59 evaluation, that Manager will ensure the required evaluation is performed to determine if the new procedure, program, or change involves an unreviewed safety question. The new procedure, program, or change will then be forwarded with the 10 CFR 50.59 evaluation to **Unit 2/3 PORC** or SORC for review.

Personnel recommended to be Station Qualified Reviewers shall be designated in writing by the **designated manager or Senior Vice President and CNO - Millstone or- Vice President - Nuclear Operations** for each procedure, program, or class of procedure or program within the scope of the Station Qualified Reviewer Program.

Temporary procedure changes shall be made in accordance with Specification 6.8.3 with the exception that changes to procedures for which reviews are assigned to Qualified Reviewers will be reviewed and approved as described in Responsibilities (a) through (e) 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 Department Manager.

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

The Senior Vice President and CNO - 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, and the Senior Vice President and CNO - Millstone, within 14 days of the violations.

#### RECORD RETENTION - **Unit 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 **Unit 2/3 PORC**, the NSAB, and the SORC.
  - l. Records of Environmental Qualification which are covered under the provisions of Specification 6.13.
  - m. Records of reviews performed for changes made to the Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMOCM) 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 Specifications 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 Specifications 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 *Unit 2/3* PORC, the NSAB, and the SORC;
- l. Records of the service lives of all hydraulic and mechanical snubbers required by Technical Specifications 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.

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

**APPENDIX G**  
**TECHNICAL SPECIFICATION POSITION CROSS REFERENCE**

**MILLSTONE UNIT 2**

T.S. SECTION	T.S. POSITION	STATION ORGANIZATION POSITION
<b>Responsibility</b>		
6.1.1	Designated Officer Designated Manager	Sr. Vice President and CNO - Millstone Station Director
<b>Organization</b>		
6.2.1b Offsite and onsite organizations	Designated Manager	Station Director
6.2.1c Offsite and onsite organizations	Designated Officer	Sr. Vice President and CNO - Millstone
<b>Procedures</b>		
6.8.2a	Designated Manager Designated Officer Designated Senior Officer	Station Director Vice President - Nuclear Operations Sr. Vice President and CNO - Millstone
6.8.2b	Designated Manager Designated Officer	Station Director Vice President - Nuclear Operations or Sr. Vice President and CNO - Millstone
6.8.2c	Designated Manager Designated Officer	Station Director Vice President - Nuclear Operations or Sr. Vice President and CNO - Millstone
6.8.3c	Designated Manager Designated Officer	Station Director Vice President - Nuclear Operations or Sr. Vice President and CNO - Millstone
<b>Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMODCM)</b>		
6.15b	Designated Officer	Sr. Vice President and CNO - Millstone

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	Sr. Vice President and CNO - Millstone Station Director
<b>Organization</b>		
6.2.1b Offsite and onsite organizations	Designated Manager	Station Director
6.2.1c Offsite and onsite organizations	Designated Officer	Sr. Vice President and CNO - Millstone
<b>Procedures</b>		
6.8.2a	Designated Manager Designated Officer Designated Senior Officer	Station Director Vice President - Nuclear Operations Sr. Vice President and CNO - Millstone
6.8.2b	Designated Manager Designated Officer	Station Director Vice President - Nuclear Operations or Sr. Vice President and CNO - Millstone
6.8.2c	Designated Manager Designated Officer	Station Director Vice President - Nuclear Operations or Sr. Vice President and CNO - Millstone
6.8.3c	Designated Manager Designated Officer	Station Director Vice President - Nuclear Operations or Sr. Vice President and CNO - Millstone
<b>Radiological Effluent Monitoring and Offsite Dose Calculation Manual (REMDCM)</b>		
6.13b	Designated Officer	Sr. Vice President and CNO - Millstone

Notes:

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