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Northeast
Utilities System

Memo

NO-99-0279

December 22, 1999

TO: Northeast Utilities Quality Assurance Program Topical Report Controlled Copyholders

FROM: D. S. Bruce *D. S. Bruce*

SUBJECT: NUQAP Topical Report Revision 21, Change 8
(Document No. MP-02-OST-BAP01)

Enclosed is NUQAP Revision 21, Change 8, which combines the Units 2 and 3 Plant Operations Review Committees (PORC)) and their related roles and responsibilities into one PORC. The combined PORC is called the "Unit 2/3 PORC." The function of the Unit 2/3 PORC remains the same, to advise the Station Director on matters related to nuclear safety. Additional editorial changes were made to clarify various statements and eliminate [bracketed] references to Technical Specification sections that were deleted under License Amendments 239 (Unit 2) and 173 (Unit 3), NUQAP Change 16.

Please replace the entire contents of the existing Quality Assurance Program, Appendix F, with the enclosed section.

Change 8 changes are in ***bold and italics*** with a revision bar in the right margin. The footer of the affected section will include a reference to Change 8.

Please insert the summary of changes document in the front of your manual. Please note the effective date of the change is **December 23, 1999**.

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

Attachments:

1. Summary of changes incorporated as part of Revision 21, Change 8.

Enclosure:

Change 8 to the Northeast Utilities Quality Assurance Program Topical Report Revision 21.

Summary of Changes to NUQAP Rev. 21 Incorporated as Change 8

<u>Section</u>	<u>Summary Description of Changes</u>	<u>Reference</u>
Appendix F	Combines the Units 2 and 3 Plant Operations Review Committees (PORC) and their related roles and responsibilities into one PORC. The combined PORC is called the "Unit 2/3 PORC." The function of the Unit 2/3 PORC remains the same, to advise the Station Director on matters related to nuclear safety. Additional editorial changes were made to clarify various statements and eliminate [bracketed] references to Technical Specification sections that were deleted under License Amendments 239 (Unit 2) and 173 (Unit 3), NUQAP Change 16.	Request 99-20

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

ADMINISTRATIVE CONTROLS¹

NOTE:

"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 Vice President-Nuclear Oversight. **and Regulatory Affairs** [VP-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 - Unit 1 Operations
Member:	Unit 2 Designated Manager [See note below]
Member:	Unit 3 Designated Manager [See note below]
Member:	Manager - Radiation Protection and Waste Services

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 *Technical Specification 6.8* and changes thereto, 2) all common site programs, required by *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 *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 designated officer [Senior Vice President and CNO - Millstone] and Chairperson of the Nuclear Safety Assessment Board.

Nuclear Safety Assessment Board (NSA/B)

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;

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 designated senior officer [Senior Vice President and CNO - Millstone] on matters related to nuclear safety and notify the designated senior officer [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 designated senior officer [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 the designated senior officer [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 designated senior officer [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 (REM/ODCM) 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.

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