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

NO-00-0383

November 15, 2000

TO: Northeast Utilities Quality Assurance Program Topical Report Controlled  
Copyholders

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

SUBJECT: NUQAP Topical Report Revision 22, Change 2  
(Document No. MP-02-OST-BAP01)

Enclosed is a corrected copy of Northeast Utilities Quality Assurance Program (NUQAP) Revision 22, Change 2, which modified the Independent Safety Engineering Group (ISEG), as described in Appendix F, from a unit 3 group consisting of 4 individuals to a site-wide ISEG consisting of 5 individuals. This change was submitted to the NRC on September 14, 2000, and is being implemented based on NRC correspondence to R. G. Lizotte, NNECO, dated November 13, 2000, which included an NRC SER (TAC NOS. MA9995 and MA9996; NU letter # A15377.) The change package distributed on November 15, 2000, failed to incorporate recent title changes made to the NUQAP as Revision 21, Change 1, to implement the process based organization. The attached copy incorporates both the NRC approved change and Change 1 (which was not a reduction in commitment, thus did not require NRC approval.)

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

Change 2 changes are in ***bold and italics*** with a revision bar in the right margin. The footer of the affected section includes a reference to Change 2. Please note the attached copy has corrected process based titles.

Please leave the summary of changes document that was distributed in the front of your manual. The summary of changes does not need to be replaced due to the fact that the ISEG change was the only change incorporated as part of Change 2. (The other changes were title changes made under Change 1, and were referenced on that summary of changes.) Please note the effective date of the change is **November 15, 2000**.

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

Enclosure:

Change 2 to the Northeast Utilities Quality Assurance Program Topical Report Revision 22.  
(Corrected with proper process based titles.)

/dsb

### Summary of Changes to NUQAP Rev. 22 Incorporated as Change 2

<u>Section</u>	<u>Summary Description of Changes</u>	<u>Reference</u>
Appendix F	Modifies Appendix F, Administrative Controls, to change the Independent Safety Engineering Group (ISEG) from a unit 3 group consisting of 4 individuals to a site-wide ISEG consisting of 5 individuals. This change was submitted to the NRC as a reduction in commitment to NUREG 0737 on September 14, 2000, and is being implemented in accordance with the "sixty-day rule."	Request 00-05

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)

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.

***The ISEG shall report organizationally to a director (or higher) who is not in the direct chain of command of power production. The ISEG is directly involved in meeting the requirements of NUREG-0737 for item I.B.1.2 for Millstone Units 2 and 3. The ISEG is independent of PORC and NSAB.***

Composition

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

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

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

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 Process Owner - Oversight.

\*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 Master Process Owner (MPO) - Operate the Asset 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 Master Process Owner (MPO) - Operate the Asset. 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 Master Process Owner - Operate the Asset.

## 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 Master Process Owner - Operate the Asset 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 Master Process Owner - Operate the Asset 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 Master Process Owner - Operate the Asset; however, the Master Process Owner - Operate the Asset 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:

Member:	Director - Unit 1 Operations
Member:	Master Process Owner- Operate the Asset
Member:	Process Owner - Operations Millstone 2
Member:	Process Owner - Operations Millstone 3
Member:	Process Owner - Radiological Protection
Member:	Master Process Owner - Support 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 Unit 2/3 PORC
Member:	Designated Member of Oversight

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

## 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 Oversight. NSAB audits shall be performed at least once per 24 months in accordance with administrative procedures and shall encompass:

- a. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions;
- b. The training and qualifications of the unit staff;
- c. The implementation of all programs required by 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 Master Process Owner, designated Process Owner, 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 Process Owner or Master Process Owner 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 Process Owner 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 Process Owner 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 Master Process Owner, Process Owner or Senior Vice President and CNO - Millstone or- Vice President - Generation 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 Process Owner or Master Process Owner.

## **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 (REMODOCM) 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 (REMOCM) and the Process Control Program.

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