



**Northeast
Nuclear Energy**

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The Northeast Utilities System
June 3, 1997

Docket Nos. 50-245

50-336

50-423

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U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

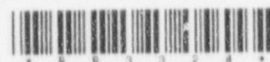
Millstone Nuclear Power Station, Units 1, 2, and 3
Annual Reporting of Changes to the Quality Assurance Program
Proposed Revision 19 to the Northeast Utilities
Quality Assurance Program Topical Report - Millstone Nuclear Power Station

- Reference: (1) D.M. Goebel and T.C. Feigenbaum letter to the NRC, "Haddam Neck Plant Quality Assurance Program," dated February 20, 1997
(2) T.C. Feigenbaum letter to the NRC, "Haddam Neck Plant Proposed Revision 1 to the Quality Assurance Program," dated April 25, 1997
(3) USNRC Letter to the Northeast Nuclear Energy Company, "10 CFR 50.54 Quality Assurance Program Change," dated August 7, 1996
(4) T.C. Feigenbaum letter to the NRC, "Haddam Neck Plant, Millstone Nuclear Power Station, Units 1, 2, and 3; Annual Reporting of Changes to the Quality Assurance Program; Proposed Revision 19 to the Northeast Utilities Quality Assurance Program Topical Report," dated June 10, 1996

In accordance with 10 CFR 50.54 (a) (3), transmitted herewith is Revision 19 of the Northeast Utilities Quality Assurance Program (NUQAP) Topical Report for your review and approval. With the decision to permanently shutdown the Haddam Neck Plant, Revision 19 makes this NUQAP Topical Report applicable to Millstone Nuclear Power Station Units 1, 2, and 3 as cited in Reference (1). The proposed Haddam Neck Plant Quality Assurance Program was submitted under Reference (2).

Reference (3) indicated that we had agreed to revise certain portions of our previous submittal of Revision 19 in order for you to complete your review. Because of our significant organization changes since receipt of Reference (3) and other changes to make Revision 19 applicable to Millstone Station only, this submittal supersedes Reference (4). However, Northeast Nuclear Energy Company (NNECO) has addressed the specific issues identified by the Staff for follow-up and resolution, and the details are provided in Attachment 1.

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Changes to the Topical Report are shown as text in bold italics. A summary of the changes is outlined in Attachment 2, which is arranged in a sequence coinciding with the Topical Report sections. Appendix E of the Topical Report identifies three new exceptions we have determined to be a reduction in a commitment:

- Exception 11 is to ANSI N45.2.13-1976 requirements for NNECO to perform an acceptance review for purchased engineering and consulting services performed under 10 CFR 50, Appendix B. In order to maintain independence of the vendors, NNECO will not perform an acceptance review of the work the vendors perform for the Independent Corrective Action Verification Program requirement of the NRC's August 14, 1996 Order.
- Exception 12 is to ANSI N45.2.3-1973 requirements for five Housekeeping Zones. NNECO has identified the ANSI Housekeeping Zone I as not being applicable to Millstone Station nuclear power plants during their operations phase. In addition, as an alternative to the ANSI Zones II - V, NNECO has established a program for the Millstone Station nuclear power plants with a minimum of two housekeeping zones with foreign material exclusion (FME) procedures defining controls and countermeasures to meet ANSI Zones II, III, IV and V requirements.
- Exception 13 modifies NNECO's commitment to Regulatory Guide (RG) 1.70, Revision 3, November 1978. RG 1.70, Revision 3 states that the PSAR should include a listing of QA program procedures or instructions that implement the QA program for each major activity, and identify which criteria of Appendix B to 10 CFR 50 that are implemented by each procedure. In the past, the NUQAP Topical Report had contained this listing as Appendix C, "List of Typical Quality Assurance Related Procedures." Appendix C of the proposed Revision 19 no longer contains such a list. Indices currently maintained in accordance with QA Program requirements identify the procedures that implement the Quality Assurance Program for Millstone Power Station and which, by title and originating organization, indicate the applicable 10 CFR 50, Appendix B criterion being implemented. This provides an alternative to maintaining a redundant list as an appendix in the NUQAP Topical Report.

The proposed Revision 19 describes certain reporting relationships of the Regulatory Compliance and Regulatory Affairs personnel. These organizational changes will be fully implemented by June 30, 1997.⁽¹⁾

In summary, the changes included in Revision 19 of the NUQAP Topical Report upgrade our Quality Assurance Program for Millstone Station Units 1, 2, and 3, which continues to meet the criteria of 10 CFR 50, Appendix B.

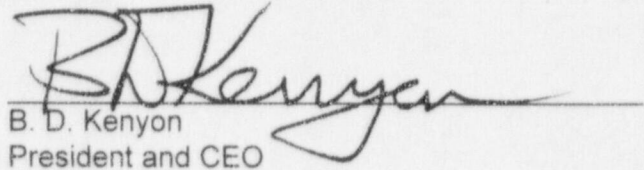
Please note that the draft NUQAP Topical Report is shown as Revision 19 without a date. This draft will be issued as Revision 19 and dated the same as the effective date of NRC Staff approval.

Should the Staff have any questions regarding this submittal, please contact Mr. W. J. Temple at (860) 437-5904.

(1) J. K. Thayer letter to USNRC, "Commitment Changes," dated May 1, 1997.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY


B. D. Kenyon
President and CEO

Attachments (3)

1. Response to NRC Staff Questions Regarding Previous Revision 19 Submittal
2. Summary of Changes in Revision 19
3. Proposed Revision 19 to the NUQAP Topical Report

cc: H. J. Miller, Region I Administrator
W. D. Travers, Ph.D., Director, Special Projects Office
P. F. McKee, Deputy Director, Licensing and Oversight, Special Projects Office
S. Dembek, NRC Project Manager, Millstone Unit 1
T.A. Easlick, Senior Resident Inspector, Millstone Unit 1
D.G. McDonald, Jr., NRC Senior Project Manager, Millstone Unit 2
D.P. Beaulieu, Senior Resident Inspector, Millstone Unit 2
J.W. Andersen, NRC Project Manager, Millstone Unit 3
A.C. Cerne, Senior Resident Inspector, Millstone Unit 3

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Attachment 1

Millstone Nuclear Power Station, Units 1, 2, and 3
Annual Reporting of Changes to the Quality Assurance Program
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Quality Assurance Program Topical Report - Millstone Nuclear Power Station
Response to NRC Staff Questions Regarding Previous Revision 19 Submittal

June 1997

Response to NRC Staff Questions Regarding Previous Revision 19 Submittal

In a letter dated August 7, 1996,⁽²⁾ the NRC Staff documented a telephone conference between the Staff and Northeast Utilities. The Staff indicated that NU agreed to revise certain portions of the NUQAP Topical Report Revision 19 submittal, specifically to address four issues identified by the Staff which required resolution. The four issues are restated below, with an accompanying response.

1. QAP 1.0 was revised to indicate the proposed Nuclear Group organization including the management structure, responsibilities, and department duties. As a result of this revision, Section 1.4.8, which described the specific responsibilities of the Director – Quality and Assessment (currently the Director – Nuclear Quality Performance) was eliminated. In eliminating this functional description, the responsibilities associated with preparation and issuance of the NUQAP Topical Report and the verification of the implementation of its requirements through planned program audits, surveillance, and inspections are no longer specifically addressed. Additionally, the ANSI 18.7 requirements regarding QA organizational independence and the authority to identify nonconforming conditions has been deleted. Given the significance of these safety oversight functions and activities, please describe the basis for eliminating this section.

Response – Applicable Revision 18 roles and responsibilities for the Vice President of Nuclear Oversight have been described in sections 1.3.1 and 1.4.1 of the new Revision 19.

2. Figure 1.2 indicates that the Sr. V.P., Nuclear Safety & Oversight reports to the Executive V.P. and Chief Nuclear Officer. This figure also depicts that the chairman of the Nuclear Safety Assessment Board (NSAB) reports to the Executive V.P. and Chief Nuclear Officer. Given that the same individual occupies both of these positions please describe how the appropriate independence is achieved with respect to NSAB's responsibility to perform reviews and oversight of the audits performed by Nuclear Quality Performance.

Response – The Vice President of Nuclear Oversight is no longer the NSAB Chairman. Figure 1.0 and Section 1.4 of the new Revision 19 identify the Vice President of Nuclear Oversight as reporting directly to the President and CEO. The NSAB also reports directly to the President and CEO. However, the chairman of the NSAB is currently the Director of Nuclear Engineering, who also reports through the Recovery Officer for Nuclear Engineering and Support. This ensures that appropriate independence is maintained in oversight of the audit function.

(2) USNRC Letter to the Northeast Nuclear Energy Company, "10 CFR 50.54 Quality Assurance Program Change," dated August 7, 1996.

3. Section 16.2.1 deleted the terminology "engineering evaluation" based on the premise that it is synonymous with the term "review." However, these terms are not defined in the NUQAP Topical Report. Please describe the basis for the assertion that these are equivalent terms.

Response – "Engineering evaluation" was retained in Section 16.2.1.

4. Given that the MEPL program defines the basis for establishing Category I SSCs, why isn't the controlling Specification SP-ST-ME-944 listed in QAP Appendix C (List of Typical QA Related Procedures)?

Response – Appendix C is deleted in the new Revision 19, so no action is reflected on this issue. The basis for the deletion of Appendix C and the alternative for the identification of procedures which implement the QA Program is provided in Attachment 2 of this letter.

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Attachment 2

Millstone Nuclear Power Station, Units 1, 2, and 3
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Summary of Changes in Revision 19

June 1997

Summary of Changes in Revision 19

GENERAL

This summary identifies changes to NUQAP Revision 18 through Change 2 for which NU has received NRC approval. The program changes of Revision 19 have been developed to:

- Make this NUQAP applicable to only Millstone Power Station by excluding all reference to Connecticut Yankee (Haddam Neck Plant) and its operating company, Connecticut Yankee Atomic Power Company (CYAPCO);
- Identify the Millstone Power Station Organization responsible for quality activities;
- Delete information/reference to construction and pre-operational phases throughout;
- Achieve more editorial consistency throughout.

To facilitate NRC review, the changes except for typographical errors and minor editorial changes are represented in ***bold italics***. The changes and deletions are described below.

DESCRIPTION OF GENERAL CHANGES MADE THROUGHOUT THE NUQAP

1. Applicable program responsibilities previously assigned to Northeast Utilities Service Company(NUSCO)/Nuclear Plant Operating Companies (NUPOC) are now assigned to Northeast Nuclear Energy Company (NNECO) and reference is made to the "Millstone Power Station", "Millstone Station", or "Station" as necessary for program description in the operations phase.
2. The NU Nuclear Organization for Millstone Power Station indicating the new organization names and titles are identified. For example, "Quality and Assessment Services" has been changed to the "Nuclear Oversight"; "Director - Quality and Assessment Services" to "Vice President - Nuclear Oversight"; "Procurement Quality Services" to "Nuclear Materials and Document Management", and the "Executive Vice President - Nuclear" to "President and Chief Executive Officer - NU Nuclear Group".
3. The role of the Yankee Atomic Electric Company (YAEC) as contracted to Nuclear Materials and Document Management (NMDM) for the offsite auditing, surveillance, and inspection of vendors is identified.
4. The responsibilities of Nuclear Materials and Document Management and Nuclear Oversight for verifying onsite and offsite vendor activities is clarified and the performance of audits, surveillances, and inspections is described as being performed "as appropriate" to indicate that the appropriate type and number of independent verification mechanisms are used to verify compliance with requirements and to make consistent within the NUQAP. For example, revised wording in QAP 6.2.4 is:

"The Nuclear Oversight Department performs audits, surveillances, and inspections, as appropriate, of NUSCO/NNECO Departments and onsite vendors utilized to perform quality activities to verify they are effectively complying with this NUQAP and the vendor

quality assurance program requirements, respectively, for control of procedures and instructions."

Similar wording revision was made relating to the performance of offsite vendor audits, surveillances, and inspections.

5. The term "Quality Activities" was redefined and substituted for recurring words, (e.g., design, construction, testing, operation, refueling, maintenance and modification) since these activities are included in this new definition.

6. Other global editorial changes include:

- Defined and used "vendor" for engineer-constructors, contractors, suppliers, engineering service organizations, etc.; for example, the phrase "engineer-constructors, contractors, suppliers and engineering service organizations utilized by NUSCO/NUPOC in the design, construction, testing, operation, maintenance, and modification to ensure" was changed to "vendors utilized to perform quality activities for the Station nuclear power plants";
- Deleted words used to describe procedures, (e.g., "documented", "approved", "implementing", and "established") which are redundant to the term "procedure" as described in the NUQAP and used the word "applicable" where necessary;
- Deleted reference to the construction and pre-operational phases terminology (e.g., the term "Engineer-Constructor" was deleted from the NUQAP text and from the "Glossary of Terms") to reflect the current "operating" status of the Millstone Station nuclear power plants;
- Referred to the NUQAP Topical Report as the "NUQAP";
- Used "purchase order/contract" vice "procurement documents" where more appropriate;
- Included the title of the QAP Section number referenced in other QAP Sections;
- Substituted "fabrication" and "fabricated" for "manufacturing" and "manufactured";
- Changed "Project Engineer" to "Responsible Engineer";
- Added "ANSI" and "IEEE" as applicable before "standards" when relating to program commitments, where applicable.

DESCRIPTION OF OTHER CHANGES BY NUQAP TOPICAL REPORT SECTION

TABLE OF CONTENTS

- Deleted Revision 18 Appendix C, "List of Typical Quality Assurance Related Procedures" and re-letter existing Revision 18 Appendices D, E, and F to C, D, and E, respectively (Basis for Appendix C deletion is provided in new Program Exception 13);

- Added "IEEE" to Revision 19 Appendix C list of applicable standards due to addition of new Regulatory Guide 1.152 endorsed IEEE standard.

ABSTRACT

- Paragraph 1: Added "fabrication" and "refueling" activities to make consistent with QAP 2.0 verbiage;
- Paragraph 4: Revised to correspond to wording of paragraph 3 of the Policy Statement.

POLICY STATEMENT

- Paragraph 1: Added new first sentence on quality assurance objectives, added "fabrication", and "refueling" activities to make consistent with QAP 2.0 verbiage;
- Paragraph 2: Deleted words "which are referenced herein" since Revision 18 Appendix C, "List of Typical Quality Assurance Related Procedures" has been deleted from this revision (Basis for Appendix C deletion is provided in new Program Exception 13);
- Paragraph 3: Revised NUQAP applicability statement to more closely align with 10 CFR 50 Appendix B terminology; clarified applicability to materials, equipment, parts, consumables, and services designated as "Category I"; and changed "Environmental Equipment Qualification" to "Electrical Equipment Qualification";
- Paragraph 4: Revised to identify President and Chief Executive Officer - NU Nuclear Group and Vice President - Nuclear Oversight for NUQAP responsibilities; added Recovery Officers as having responsibility for implementing their portion of the NUQAP to reflect current recovery organization.

INTRODUCTION

- Paragraph 1, item 2: Revised to correspond to the applicable words in paragraph 3 of the Policy Statement.

NUQAP 1.0 - ORGANIZATION

Sections 1.1 - INTRODUCTION

- Revised to contain organizational information necessary for Millstone Power Station QA Program description.

Section 1.2 - GENERAL

- Section 1.2.1: Deleted; no longer applicable to Millstone Power Station organization;
- Section 1.2.2: Re-numbered to 1.2.1 and revised to describe President and CEO responsibility for the Millstone Power Station NUQAP and identify that QA Program responsibilities are identified in Nuclear Group Procedures;

- Section 1.2.2.1: Re-numbered to 1.2.1.1, edited and combined into single paragraph;
- Section 1.2.2.2: Re-numbered to 1.2.1.2 and revised to remove unnecessary detail which is provided in QAP 2.0;
- New Section 1.2.1.3: Added words that the President and CEO resolves all NUQAP implementation issues not resolved at lower levels of the nuclear organization;
- Section 1.2.2.3: Deleted; information redundant to information contained in new Section 1.4;
- Section 1.2.3: Deleted this organizational information as not necessary to be described in the NUQAP for Millstone Power Station since, as stated in the section, these services are provided as requested by the Nuclear Group in support of quality activities.

Section 1.3 - RESPONSIBILITIES

- Section 1.3.3: Added words to clearly state that personnel performing or verifying activities affecting quality shall have direct access to such management as necessary to perform this function as required by 10 CFR 50, Appendix B;
- New Section 1.3.5: Added words that vendors may be delegated QA functions to correspond to verbiage contained in QAP 2.0.

Section 1.4 - PARTICIPATING GROUPS - MILLSTONE POWER STATION

- Changed to "PARTICIPATING GROUPS - MILLSTONE POWER STATION" and rewritten to reflect new organization for Millstone Power Station; assigned applicable responsibilities and functions of the QAS Director in Revision 18 Sections 1.3.1 and 1.4.6 to the Vice President - Nuclear Oversight, who now fulfills this role.

Section 1.5 - OTHER NU PARTICIPATING GROUPS

- Deleted description of these NU Groups as not necessary to be described in the NUQAP for Millstone Power Station since, as stated in this Revision 18 section, these services are provided as requested by the Nuclear Group in support of quality activities.

Organization Chart, Figures 1.1 - 1.6

- Revised figures to reflect the Millstone Power Station Organization.

NUQAP 2.0 - QUALITY ASSURANCE PROGRAM

Section 2.1 - General Requirements

- Paragraph 1: Revised to identify that exceptions to Revision 19 Appendix C are included in Revision 19 Appendix E; deleted last sentence as redundant to the two new NUQAP applicability paragraphs 3 and 4 described below;

- Paragraph 2: Revised to reflect NUQAP applicability as stated in the NUQAP Policy Statement;
- Added new paragraph 3 to reflect NUQAP applicability to other quality programs as stated in the NUQAP Policy Statement;
- Added new paragraph 4 to identify the Materials, Equipment, and Parts List (MEPL) Program provides instructions to identify safety-related or augmented quality items and activities;
- Paragraph 7: Edited and added "examination results" as an example training results sessions that are documented "as applicable";
- Paragraph 8: Edited to clearly distinguish between Nuclear Oversight audits, surveillances, and inspections and NSAB reviews; changed "audit" team to "review" team since this review is not an "audit" as described in the NUQAP; added words "annual NUQAP Management Review" to clearly define the source of the annual program review; and substituted "been delegated" for "designated" to be consistent with 10 CFR 50, Appendix B terminology relating to delegation of quality functions to vendors.

Section 2.2.1 - Goals and Objectives

- Paragraph 1: Deleted unnecessary reference to the NUQAP Policy Statement;
- Item c: Changed "responsible" to "qualified" as requisite to perform quality activities;
- Item e: Deleted item as unnecessary as a program goal since it is evident that poor quality causes schedule delays and high costs due to rework.

Section 2.2.2 - Program Documentation

- Paragraph 4: Clarified that the departments which implement part of a procedure initiated by another department concur with the procedure; deleted reference to Revision 18 Appendix C which has been deleted with this revision (Basis for Appendix C deletion is provided in new Program Exception 13), and identified that Nuclear Oversight reviews other department quality procedures as defined in QAP 5.0;
- Paragraph 5: Clarifies that the Vice Presidents, Recovery Officers, and Directors as responsible for NUQAP implementation to be consistent with previous NUQAP verbiage.

Section 2.2.3 - Structures, Systems, and Components

- Paragraph 1: Made minor editorial changes; changed "safety" to "safety-related" to make consistent with the Policy Statement;

Section 2.2.4 - Participating Organizations

- Paragraph 2, item a): Clarified that Nuclear Oversight has "administrative" control of the NUQAP Topical Report;

- Paragraph 2, Item b): Clarified that Nuclear Oversight is responsible for assuring issuance of the NUQAP since it does not make actual distribution;
- Paragraph 3: Added the word "approved" before vendors to clarify the context of the paragraph as pertaining to "approved" vendors;
- Paragraph 5: Added words to indicate that Yankee Atomic Electric Company (YAEC) has been contracted to perform the vendor audit function;
- Paragraph 6: Added second sentence to indicate vendors can be contracted to perform work under their QA Program or directly under this NUQAP.

Section 2.2.5 - Indoctrination and Training

- Paragraph 1: Changed "Nuclear Oversight Department" to "each NUSCO/NNECO Department" which includes the Nuclear Oversight Department as responsible for assuring training of personnel;
- Paragraph 3, item a: Deleted "implementing NUSCO/NNECO" as redundant with the previous paragraph;
- Paragraph 3, item a: Added "examination results" as an example of "results" that are documented;
- Paragraph 4: Deleted "(including Quality and Assessment Services)" since Nuclear Oversight is included in "Departments" as defined in the NUQAP.

Section 2.2.6 - Management Participation

- Paragraph 1: Edited to indicate Vice Presidents, Recovery Officers, and Directors are responsible for these activities in their organizations;
- Paragraph 2: Deleted the word "audit" since the review is not an audit as described in this NUQAP but a "review" performed in accordance with a Nuclear Group Procedure; changed "group" to "team" to be consistent with QAP 1.0;
- Paragraph 5: Clarified that the vendor management reviews their Quality Assurance Program and not this NUQAP.

QAP 3.0 DESIGN CONTROL:

Section 3.1 - General Requirements

- Paragraph 1: Changed to reflect the Director - Engineering as having this responsibility; moved to be new paragraph 2 to be consistent with other NUQAP Sections;
- Paragraph 2: Changed to be new paragraph 1 and added word "quality" before structures, systems, and components to be consistent within QAP 3.0;

- Paragraph 3: Revised to indicate that the administration of the design control program lies with Engineering Programs, that jurisdictional boundaries for design control program implementation is set forth in Nuclear Group Procedures, and that the Unit Director - Engineering retains responsibility for program implementation for the unit.

Section 3.2 - Implementation

- Paragraph 1: Revised to indicate that the Director - Engineering of each nuclear unit is responsible for final engineering decisions and design control for the unit; combined last two sentences to remove redundancy.

Section 3.2.1 - Design Process

- Paragraph 2: Added "Procedure and" before "instructions" in the third sentence to make consistent with remainder of QAP 3.0; deleted "All" before "materials" in the fourth sentence as redundant to items "essential" to the quality function;
- Paragraph 4: Deleted "plant" and "in-service" as redundant.

Section 3.2.2 - Design Change Control

- Paragraph 1: Edited to clarify sentence 1; added "as amended by applicable design or licensing basis changes" to last sentence to clearly define this configuration management requirement;
- Paragraph 2: Clarified to indicate NNECO can perform this review.
- Paragraph 3: Deleted reference to the "Environmental Review Board" and its review of "environmental questions" since this board no longer exists (This function is now performed by Environmental Services - Nuclear as defined in procedures); clarified that NSAB reviews safety evaluations associated with design changes and not all design changes as could be inferred by current wording; added words to indicate that NRC review and license amendment issue are necessary for implementation of a proposed design change with an unreviewed safety question to preclude potential inference that the NSAB has final authority for implementation;
- Last Paragraph: Added words to indicate notification is also made prior to implementation.

Section 3.2.3 - Design Interface Control

- Paragraphs 1 and 2: Deleted since these were related to pre-operational phase;
- Paragraph 3: Revised to indicate that design interface controls for modifications are provided through procedures and instructions.

Section 3.2.4 - Independent Design Verification

- Paragraph 1: Added wording from approved Revision 19 Program Exception 4 to indicate when an originator's supervisor may perform the independent design review to clearly identify

these requirements in this section; revised to indicate the unit Director-Engineering as responsible for design adequacy;

- Paragraph 3: Deleted "NUSCO/NUPOC"; this is a NNECO responsibility for Millstone Power Station;
- Last Paragraph: Changed "NUSCO" to "NNECO" and added the words "for the Station nuclear power plants"; changed "adequately generated" to "technically correct" to clarify this requirement.

4.0 - PROCUREMENT DOCUMENT CONTROL

Section 4.1 - General Requirements

- Paragraph 1: Edited first sentence to make wording more consistent with other QAP "General Requirements" sections.

Section 4.2.1 - Program

- Paragraph 2: Deleted "NUSCO/NUPOC"; changed "purchase requisitions" to "requests for materials, equipment, parts, and services" in sentence 1 since purchasing is initiated by Material Requests using the Material Information and Management System (MIMS); clarified the procurement engineering function; added clarification that once material technical and quality requirements are in MIMS, additional procurement engineering evaluations are not required;
- Paragraph 5: Revised first sentence to make consistent with the rest of QAP 4.0 with respect to the "procurement engineering";
- Paragraph 5, new subparagraph a: Changed to "adequate technical requirements are specified" to be consistent with similar words in QAP 4.0, and re-lettered existing subparagraphs "a" and "b" to "b" and "c", respectively;
- Original paragraph 5, subparagraph c: Deleted since preparation, review, and approval of a "Material Request" to meet NUQAP requirements is automated through the MIMS approval process and the other determinations identified in the section ensure that the technical and quality assurance requirements are met.

Section 4.2.3 - Selection of Procurement Sources

- Paragraph 1: Revised to more clearly reflect how procurement sources are selected in the current operations environment, to better reflect the ANSI N45.2.13-1976 wording, and to reflect that approvals leading to a purchase order issue is an automated process under the Materials Information Management System (MIMS);
- Paragraph 3: Added words to indicate acceptance inspections and tests are to be performed prior to "installation in the plant or prior to the point when the installation is declared operational" to clarify the requirement and make consistent with similar wording in the QAP 3.2.4.

5.0 - PROCEDURES, INSTRUCTIONS, AND DRAWINGS

Section 5.2 - Implementation

- Sentence 1: Deleted "such as those listed in Appendix C" (since the Revision 18 Appendix C identified is deleted with this revision with its basis for deletion is provided in new Program Exception 13); added words "other department" quality procedures "which implement this NUQAP as described in Section 5.2.1 below". Although this revision deletes Revision 18, Appendix C, it does not delete the requirement for identification and Nuclear Oversight review of existing quality procedures and any new/revised quality procedures developed to implement the program as currently required under existing guidance documents.
- Sentence 3: Deleted wording that Nuclear Oversight receives controlled copies of quality procedures such as those listed in Revision 18 Appendix C as unnecessary for describing program requirements for procedure review by Nuclear Oversight and to reflect establishment of controlled document libraries at the site.

Section 5.2.1 - Procedures and Instructions

- Paragraph 2: Changed the "Director of Maintenance Services" to "cognizant Director" since any Director can contract for quality services;
- Paragraph 3: Changed NUPOC to "NNECO" and "plant" to "Millstone Power Station and Nuclear Unit" to reflect NUQAP applicability to Millstone Power Station only; deleted "such as those listed in Appendix C" when referring to procedures reviewed and concurred with by Nuclear Oversight since this appendix is being deleted in Revision 19 (Basis for Appendix C deletion is provided in new Program Exception 13); added wording to describe that program requirements for procedures requiring Nuclear Oversight review and their identification are contained in quality procedures:

"The criteria for documents requiring Nuclear Oversight review and concurrence and their identification are defined in quality procedures to assure:

1. Administrative procedures and manuals comply with this NUQAP and applicable Appendix C regulatory guides and endorsed ANSI/IEEE standards.
2. Work procedures and work documents used to perform quality activities have the necessary quality assurance controls as described in QAP 10.0, "Inspection".

Section 5.2.2 - Drawings

- Paragraph 1, sentence: Revised the second sentence to remove unnecessary specificity regarding supervisory review which is specified in procedures and to read: "Review and approval of new drawings and modifications to existing drawings are described in NNECO procedures".

Section 5.2.3 - Acceptance Criteria

- Last Paragraph: Changed the examples of activities to which acceptance criteria were applicable to more general "applicable quality activities".

6.0 - DOCUMENT CONTROL

Section 6.1 - General Requirements

- Paragraph 1: Deleted reference to 10 CFR 50, Appendix B as redundant to Revision 19 Appendix C which identifies 10 CFR 50, Appendix B as a program commitment.

Section 6.2.1 - Responsibility

- Paragraph 1: Added new items "g. Calculations"; "h. Engineering Record Correspondence"; "i. Design Basis Documentation (DBD)" and re-lettered existing items "g"- "i" to "j"- "o"; changed "requests" to "records" in new item "i." (old "j").

Section 7.0 - CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

Section 7.1 - General Requirements

- Edited to be more consistent with other "General Requirements" sections.

Section 7.2 - Implementation

- Paragraph 1: Deleted as unnecessary with the description of "supplier" and "vendor" as synonymous and identified as such in the Glossary Of Terms.

Section 7.2.1 - Vendor Qualifications

- Paragraph 2: Deleted "NU" and added "providing quality material, equipment, parts, and services" to clarify the purpose of the evaluation;
- Paragraph 3, sentence 1: Changed "maintains" to "is responsible for ensuring that "documented evidence is maintained" to reflect contracting of vendor audit function to Yankee Atomic Electric Company (YAEC) and retention of such records by YAEC.

Section 7.2.2 - Source Inspection

- New paragraph 4: Added to identify the vendor source inspection has been contracted to Yankee Atomic Electric Company (YAEC).

Section 7.2.3 - Receipt Inspection

- Paragraph 1, Sentence 2: Added gas turbine fuel and Millstone Power Station Unit No. 3 bulk hydrogen/nitrogen to Nuclear Materials and Document Management receipt inspection exceptions;
- Paragraph 2, item b: Changed "item" to "item's critical characteristics"; changed "purchase" to "procurement".

Section 7.2.4 - Vendor Furnished Records

- Paragraph 2: Added words "for nuclear grade purchases" to clarify the applicability of documentation requirements;
- Paragraph 3: Added "and other appropriate department" to indicate other departments may be required to review such documentation as identified in the procurement documents;
- Last paragraph: Changed "work observations" to "inspections" and added words "as appropriate to verify compliance with this requirement" to make consistent with other NUQAP wording relating to these oversight activities.

8.0 - IDENTIFICATION AND CONTROL OF MATERIALS, PARTS, AND COMPONENTS

8.1 - General Requirements

- Paragraph 1: Edited and made into paragraph 2;
- Paragraph 2: Changed to paragraph 1; changed "equipment" to "parts" to make paragraph wording consistent; deleted unnecessary reference to 10 CFR 50, Appendix B which is specified in Revision 19 Appendix C as a program commitment.

8.2 - Implementation

- Paragraph 1, items "a" and "d": Changed "procurement documents" to "purchase orders, contracts" since these documents and others listed constitute "procurement documents" as defined in the NUQAP;
- Paragraphs 2, 3, and 4: Changed "equipment" to "parts" to make consistent with other sections;
- Paragraph 3: Combined the last two sentences and deleted "permanent" before "identification" and specific reference to serial number application as redundant to revised wording for applying the necessary identification in accordance with applicable procedures to ensure proper identification and traceability.

9.0 - CONTROL OF SPECIAL PROCESSES

9.2.2 - Personnel Qualification and Certification

- Changed "NUSCO/NUPOC" to "Millstone Power Station NU" and added "for assuring" since Nuclear Oversight does not directly perform all required training for Millstone Power Station NDE personnel.

10.0 - INSPECTION

10.1 - General Requirements

- Edited to make more consistent with other "General Requirements" sections; deleted "in accordance with the Quality Assurance Program (NUQAP)" as redundant.

10.2.1 - Inspection Responsibilities

- Paragraph 1, sentence 1: Deleted "system turnover" as it relates to the pre-operational phase; added "to assure quality requirements are met" to clarify requirement for when inspection is required;
- Paragraph 3: Clarified the Nuclear Oversight role in the inspection of maintenance and modification activities and that the criteria for when such inspection is required and for the preparation of inspection plans shall be identified in Nuclear Oversight procedures;
- Paragraph 3; item b: Added "for adequacy of inspection and mandatory hold points" to reflect similar wording in Section 10.2.5.

10.2.2 - Inspection Plans

- Paragraph 3: Deleted as redundant to revised wording in QAP 10.0;
- Paragraph 4: Changed "Job Packages" to "work procedures, work documents" for consistency in section wording.

10.2.3 - Inspection Personnel and Inspection Document Access

- Deleted paragraph lettering for consistency with other sections of QAP 10.0
- Paragraph 2, sentence 1: added "considerations" after "schedule";
- Paragraph 2, sentence 2: Changed to make consistent with QAP 7.0 and indicate departments other than Nuclear Oversight may contract for inspection services; to clearly define the responsibility for review of certification for acceptance for contracted personnel certifications; and to indicate that Nuclear Oversight will perform audits and surveillances as appropriate to verify compliance with requirements for assuring contracted personnel are properly certified;

- Add new paragraph 3: Added to clearly distinguish between the review of contracted personnel/equipment certification and Nuclear Oversight review and concurrence with onsite vendor quality control inspection plans/procedures in accordance with QAP 5.0.

10.2.4 - Inspection Procedures

- Deleted paragraph lettering and changed paragraph 1 numbering to lettering to make consistent with other sections of QAP 10.0.

10.2.5 - Mandatory Hold and Notification Points

- Added new sentence: "Mandatory hold points are identified to ensure attributes critical to achieve quality requirements at work completion have been verified." to indicate general criteria for the use of mandatory hold points;
- Clarified that Nuclear Materials and Document Management and Nuclear Oversight are responsible for the review and concurrence for adequacy of inspection for offsite and onsite activities.

11.0 - TEST CONTROL

11.1 - General Requirements

- Paragraph 1: Deleted reference to 10 CFR 50 Appendix B as redundant to Revision 19 Appendix C which identifies 10 CFR 50, Appendix B as a program commitment;
- Paragraph 3: Added "reworks" to include this in the maintenance activities following which retests are required, and added "as required to verify performance will be satisfactory during operation" to reiterate the purpose of the retest.

11.2.1 - Test Program

- Paragraph 1: Added "rework" and "preventive maintenance" and the words: "when required" to clarify that when retest is required it is performed in accordance with original design/acceptable alternatives;
- Paragraph 1; new last sentence: Added to clarify and make consistent with "Glossary of Terms" regarding retest when original test results are invalidated to indicate that, for this situation, retest may or may not be required based upon evaluation of the condition and the need for retest;
- Paragraphs 3: Changed "observations" to "verification activities" and added to last sentence, "until forwarded to the Station Nuclear Records Facility in accordance with applicable procedures", to clarify that such records are ultimately transferred to Station Nuclear Records;
- Paragraph 4: Added to last sentence, "until forwarded to the Station Nuclear Records Facility in accordance with applicable procedures", to clarify that such records are ultimately transferred to Station Nuclear Records.

11.2.2 - Test Procedure Preparation and Test Performance

- Subparagraph d: Changed to read: "Hold, notification, and inspection points as required and data collection points" to clarify that not all these points are used in every test as implied by the words "as a minimum" in sentence 2 of paragraph 1.

11.2.3 - Test Equipment

- Paragraphs 1 and 2: Deleted words relating to the operating phase and combined into new paragraph 1.

11.2.4 - Evaluation of Test Results

- Paragraph 1 and 2: Changed "organization" to "vendor"; added "when delegated" to sentence 2.

12.0 - CONTROL OF MEASURING AND TESTING EQUIPMENT

12.1 - General Requirements

12.2.1 - Calibration Program (Added new Title)

- Paragraph 1: Added word "temporarily" before installed to clearly discriminate M&TE from permanently installed instrumentation used in testing which is "maintained in calibration at regular intervals in accordance with established surveillance and/or preventative maintenance procedures" as stated in QAP 11.2.3 b;
- Paragraph 2: Changed first sentence to qualify the documentation retained; added program requirements when using information in electronic form;
- Paragraph 3: Edited to indicate M&TE procedures are reviewed and approved by PORC/SORC or through the Station Qualified Reviewer Program as defined in applicable procedures, clarified that Nuclear Materials and Document Management or the appropriate M&TE Custodian as defined in the purchase order as responsible for verifying that calibrated equipment conforms to procurement documents;
- Paragraph 4: Edited and transferred PORC/SORC procedure review wording to paragraph 3; deleted last 2 sentences as redundant to the stated requirements for Department Heads/Job Supervisors being responsible to implement the M&TE program "in accordance with the requirements of applicable procedures".

12.2.2- Calibration Standards

- Paragraph 1: Changed last sentence to read: "Measuring and test equipment shall be permanently marked or tagged with a unique identification number and the date calibrated and next calibration date indicated on the M&TE" to clarify the identification requirements;
- Last paragraph: Edited and transferred to 12.2.1 - Program.

12.2.3 - "Out of Tolerance" Control

- Sentence 2: Added word "timely" to indicate program requirements for timely review and resolution of the impact of M&TE found to be in this condition.

13.0 - HANDLING, STORAGE, AND SHIPPING

13.1 - General Requirements

- Edited to be consistent with other "General Requirements" sections; deleted "in accordance with approved procedures, instructions, and procurement documents" as redundant to wording of Section 13.2.1.
- 13.2.1 - General
- Made minor editorial changes and included "General Changes" described above.

14.0 - INSPECTION, TEST, AND OPERATING STATUS

14.2.1 - General

- Paragraph 2: Added nuclear fuel assemblies, diesel/gas turbine fuel, and bulk hydrogen/nitrogen as exceptions for which Nuclear Materials and Document Management is not responsible for maintaining traceability of conformance to procurement requirements and identifying responsible organizations.

14.2.2 - Status Identification and Control

- Paragraph 1, last sentence: Changed to read: "The status of all items requiring calibration is recorded and maintained in accordance with applicable procedures" to make more consistent with other NUQAP wording relating to calibration program requirements.

15.0 - NONCONFORMING MATERIALS, PARTS, COMPONENTS, OR SERVICES

15.1 - General Requirements

- Edited to make consistent with other "General Requirements" sections.

15.2.1 - Program

- Paragraph 1, sentence 2: Changed to include related wording in the "General Requirements" section and to indicate that the means to identify conditions adverse to quality at Millstone Power Station is available to all NU personnel and vendors assigned to the Station and other personnel involved with Station quality activities.

15.2.2 - Documentation

- Paragraph 1, sentences 2 and 3: Deleted from this section, edited or transferred to new Section 15.2.4, "Recurrence Control";
- Paragraph 3: Edited and transferred this paragraph to Section 15.2.3 since these words are more appropriate in this section and are integral to the evaluation and disposition process.

15.2.3 - Evaluation and Disposition

- Paragraph 1: Included engineering evaluation wording from Section 15.2.2; added words to indicate that nonconformances are evaluated for impact on quality structures, systems, and component operability in accordance with procedures;
- Paragraph 2, item c: Added "condition" after "nonconforming".

New 15.2.4 - Recurrence Control

- Established to extract trending requirements from Section 15.2.2 and clarify that trend analysis results documenting program/procedure problems are reported as part of the Station Corrective Action Program per QAP 16.0.

16.0 - CORRECTIVE ACTION

16.1 - General Requirements

- Deleted "for NUSCO/NUPOC and their contractors" as redundant to 16.2.1; added "reporting to appropriate levels of management and" to the last sentence to reflect this 10 CFR 50, Appendix B requirement for significant conditions adverse to quality; added "adverse to quality" after "significant condition".

16.2.1 - Program

- Sentence 1: Added "and correction" to include this activity in program requirements;
- Sentence 2: Changed to indicate that the means to identify conditions adverse to quality at Millstone Power Station is available to all NU personnel and vendors assigned to the station and other personnel involved with Station quality activities.

16.2.2 - Corrective Action and Follow-up

- Added new sentence 2 to clearly indicate that the Vice Presidents and Recovery Officers are responsible for the implementation of the corrective action program within their organization; changed "within NUSCO/NUPOC" to "of the nuclear organization".

16.2.3 - Recurrence Control

- Paragraph 3: Clarified that the trend analysis of adverse conditions is performed by the same organization having responsibility for controlling the problem reporting document.

17.0 - QUALITY ASSURANCE RECORDS

17.1 - General Requirements

- Deleted last sentence as redundant to revised sentence 1 wording and revised wording in paragraph 1 of Section 17.2.

17.2 - Implementation

- Paragraph 1: Added "(e.g., duration, location)" to sentence 1 to support deletion of same words from section 17.1; deleted "and Instructions" to have consistent reference to "procedures" in QAP 17.0;
- Paragraph 3, sentence 1: Added "quality assurance" before "records".

17.3 - Retention

- Paragraph 2: Added "Quality assurance" before "records"; changed "Plant Records" to "Document Services".

18.0 - AUDITS

18.1 - General Requirements

- Paragraph 1: Added "and to determine the effectiveness of the program" to reflect relevant 10 CFR 50, Appendix B wording;
- Paragraph 2: Changed "and" to "or" to reflect 10 CFR 50, Appendix B wording.

18.2.1 - Program

- Paragraph 1: Added "Appendix B" after 10 CFR 50, changed "licensee" to "NNECO"; changed "function" to "procurement function";
- Paragraph 2: Clarified that Nuclear Oversight schedule responsibility pertains to Corporate, Station, and onsite vendor audits;
- Paragraph 3: Deleted the words "preestablished written" in sentence 1 as redundant to "plan prepared by"; changed "Auditors evaluate" to "Audits may include evaluation of" the listed activities to indicate these are the type items included in an audit scope;
- Paragraph 4: Edited to more closely follow 10 CFR 50, Appendix B wording; added words that Yankee Atomic Electric Company has been contracted to perform the vendor audit function.

18.2.2 - Reporting of Audit Results

- Changed to indicate audit results are reviewed, approved, and reported in accordance Nuclear Oversight or Yankee Atomic Electric Company procedures as applicable to distinguish between onsite and offsite vendor audits.

18.2.3 - Review of Audit Findings and 18.2.4 - Resolution of Audit Findings

Edited and combined these sections into new Section 18.2.3, "Review, Action, and Follow-Up of Audit Findings", to:

- Delete requirement for Nuclear Oversight to assign significance level to audit findings since audit findings are reported under the corrective action program document and the assignment of the significance level is the responsibility of the organization controlling the problem reporting document as established in quality procedures;
- Describe the audit report follow-up process in terms consistent with those in ANSI N45.2.12-1977, Section 4.5, "Follow-up".

Appendix A - Category I Structures Systems and Components

- New first paragraph: Added to repeat applicable QAP 2.0 wording identifying the Material, Equipment, and Parts List (MEPL) Program as providing instructions for identifying items as Category I;
- Paragraph 2: Edited to reflect 10 CFR 50, Appendix B wording;
- Consumables List: Added bulk hydrogen and nitrogen to correspond to changes indicated in QAP 7.0.

Revision 18 Appendix C - List of Typical Quality Assurance Related Procedures

- Deleted this Appendix (Basis for deletion of Appendix C is described in new Program Exception 13) and re-lettered existing Revision 18 Appendices D, E, and F to C, D, and E, respectively.

Revision 19 Appendix C - Regulatory Guide and ANSI/IEEE Standard Commitments

- Revised Regulatory Guide 1.70 to reflect appropriate applicability to Millstone Power Station Unit No. 2 and delete reference to Connecticut Yankee;
- Revised Regulatory Guide 1.152 to reflect the revision of the IEEE standard which will be applicable to the Millstone Power Station NUQAP for new modifications to digital computers in safety systems.

Revision 19 Appendix D - Glossary of Quality Assurance Terms

Terms were added, revised/edited, or deleted as required to reflect conversion of the NUQAP applicability to Millstone Power Station only, to reflect Power Station operating status, and to enhance program description consistency:

- Added Terms:
 - Approved Vendors
 - Material Request
 - Northeast Nuclear Energy Company (NNECO)
 - Quality Structures Systems and Components
 - Reportable Item
 - Responsible Engineer
 - Vendors
 - Work Procedures and Work Documents
- Revised/Edited Terms:
 - Augmented Quality
 - Category I
 - Category I, Systems, Structures and Components
 - Commercial Grade Item(CGI)
 - Department
 - Northeast Utilities
 - Northeast Utilities Service Company (NUSCO)
 - Northeast Utilities Quality Assurance Program (NUQAP)
 - Nuclear Grade
 - Procurement Documents
 - Purchased Material, Equipment and Parts
 - Purchased Services
 - Quality Activities
 - Return to Supplier
 - Safety-Related Systems and Components
 - Significant Condition
 - Special Processes
 - Surveillance
- Deleted Terms:
 - Department Measuring and Test Equipment List
 - Design Phase/Operational Phase/Preoperational Phase
 - Design Change Request (DCR)
 - Engineer-Constructor
 - Nuclear Plant Operating Company (NUPOC)
 - Operational Phase
 - Project/Plant Engineer
 - Suppliers

Revision 19 Appendix E - Program Exceptions

- Exception 1: Deleted reference to CYAPCO and associated amendment; changed "two" to "three" vaults for NNECO;
- Exception 3: Deleted word "appropriate";
- Old Exception 7 to ANSI N45.2-1977: Deleted the exception to this standard regarding the audited organization not providing a follow up report as required by the standard; re-numbered Revision 18 exceptions 8, 9, and 10 to 7, 8, and 9, respectively;
- Re-numbered Exception 7 to ANSI N18.1-1971: Revised to identify approved Unit 3 License Amendment 132 and reflect applicable amendment wording;
- Re-numbered Exception 8 to ANSI N18.1-1971: Revised to identify approved Unit 2 License Amendment 190 and reflect applicable amendment wording;
- Re-numbered Exception 9 to Regulatory Guide 1.33: Deleted reference to Connecticut Yankee (CY); deleted the last paragraph since Nuclear Oversight will perform the audit of the facility staff;
- New Exception 10: Added to identify exception to ANSI N18.1-1971 and approved Unit 1 License Amendment 83 alternative to the requirement for the Operations Manager to hold a Senior Reactor Operator's License;
- New Exception 11: Added exception to ANSI N45.2.13-1976 requirements for NNECO accepting purchased services which will not be performed in order to maintain independence of the Independent Corrective Action Verification Program requirement of the NRC's August 13, 1996 Order;
- New Exception 12: Added exception to ANSI N45.2.3-1973 requirement for five housekeeping zones. NNECO has identified the ANSI Housekeeping Zone I as not being applicable to Millstone Station nuclear power plants during their operations phase and has established a program with a minimum of two housekeeping zones with foreign material exclusion (FME) procedures defining controls and countermeasures to meet ANSI Zones II, III, IV and V requirements.
- New Exception 13: Added exception to Regulatory Guide 1.70 Revision 3, November 1978 requirement that the PSAR include a listing of procedures or instructions that implement the QA Program for each major activity (such as design, procurement, construction, etc.) together with the 10 CFR 50, Appendix B criteria implemented by each procedure. Indices identify procedures that implement the QA Program for Millstone Power Station and which, by title and originating organization, indicate the applicable Appendix B to 10 CFR 50 criterion being implemented. This provides an alternative to maintaining a list as an appendix in the NUQAP Topical Report.