BOSTON EDISON
Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

10CFR50.54(a)(3)

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BECo 92-067
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Docket 50-293

Proposed Changes to the Boston Edison Quality Assurance Manual

Boston Edison Company (BECo) proposes the attached changes to the Quality Assurance Program for Pilgrim Nuclear Power Station. The changes eliminate requirements contained in the Boston Edison Quality Assurance Manual (BEQAM) concerning the involvement of the Quality Assurance Department as a line function review. The attachments provide information required by 10CFR Part 50.54 (a)(3)(ii) whenever changes are proposed that require NRC approval.

The proposed changes eliminate from the BEQAM internal impositions that are not 10CFR Part 50, Appendix B requirements. Operation of Pilgrim in accordance with these proposed changes will have no adverse affect on BECo quality-related activities.

R. A. Anderson

GGW/clc/becoqam

Attachment A: Description of Proposed Changes to the Boston Edison Quality Assurance Manual (BEQAM)
B: Affected Pages of the BEQAM

cc: See Next Page

Add: QA BRANCH

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ATTACHMENT A

Description of Proposed Changes to the
Boston Edison Quality Assurance Manual (BEQAM)

SECTION 2 "QUALITY ASSURANCE PROGRAM"

Proposed changes to Section 2 clarify and consolidate the control of QA Program Related Procedures in Section 5.

- Identification of Changes:

  The statement discussing the review and approval of procedures by the Quality Assurance Department in paragraph 2.5.3 has been removed. The removal of the acronym "QAD" in paragraph 2.5.5. is not considered a part of the reduction in commitments.

- Reason for Changes:

  A discussion of detailed procedure control is inappropriate for Section 2 and redundant to the purpose of such controls established in Section 5. The deleted statement in Section 2 did not provide a complete description of the requirements that are located in Section 5 and, taken by itself, could be misleading.

- Basis for Satisfying Appendix B:

  The requirements for control of QA Program related procedures are provided in BEQAM Section 5.

SECTION 3 "DESIGN CONTROL"

Proposed changes to Section 3 eliminates the QAD in-line review of plant design changes and modifications designated as quality category Q.

- Identification of Changes:

  The statement in paragraph 3.2.2 discussing required reviews of plant design changes and modifications before implementation is revised to delete "QAD (quality category Q changes and modifications only)" from the in-line review. The change to paragraph 3.2.3 is not considered a reduction in commitments.

- Reason for Changes:

  The General section (Section 3.2) of Design Control established a requirement for an in-line review by the QAD before implementation of "Q category" design changes.

Specific details for performing the review were not included in Section 3. The review was implemented as a programmatic overview of the application of governing Design Control procedures during the preparation and review of category Q design changes. This type of review duplicated reviews for which divisional and departmental engineering management are responsible.

This design change overview function conflicts with the QAD charter for performing independent audits and surveillances as required by Section 18 of the BEQAM. Design control audits performed by the QAD in accordance with Section 18 on a scheduled periodic basis provide an in-depth overview of programmatic controls and the application of these controls throughout the engineering and design process. This ensures concerns or problems will be identified in a timely manner and necessary corrections to the system can be affected.

Removing QAD from the in-line review process will not affect the quality of the design control program. As discussed, the overview of all activities affecting quality through both functions discussed above will continue to provide the necessary monitoring and control.

- Basis for Satisfying Appendix B:

  This proposed change does not impact the design control process as required by Section 3.3 nor does it reduce the design control requirements of ANSI N45.2.11 as committed to in Section 3.2.1 of the BEQAM. Section 18, Audits, will continue to ensure effective implementation of the design control program.

SECTION 5 "INSTRUCTIONS, PROCEDURES, AND DRAWINGS"

Proposed changes to Section 5 clarify the definition of QA Program-related procedures and reduce the level of detailed procedure control presented in this section by redefining the bounds of QAD involvement.

- Identification of Changes:

  Changes to Paragraph 5.2.1 clarify the definition of QA Program-related procedures as being only those Nuclear Organization Procedures (NOPs) and Departmental Procedures that establish the methods required for detailed implementation of QA programmatic requirements. Because the clarification of the definition also encompasses the intent of statements in paragraph 5.2.5, the entire paragraph 5.2.5 is deleted to eliminate redundancy. Also, the statement delineating the use of the "Index of QA Program-Related Procedures to 10CFR50, Appendix B Criteria" is deleted and replaced with a statement requiring the QAD to identify QA Program-related procedures.

  Changes to Paragraph 5.2.4 removed the step-by-step instructions for the QAD processing of NOPs and departmental procedures once a determination of QA Program-related procedures has been established. The paragraph retained those requirements for the review of new NOPs and departmental procedures and the review of revisions to, or retirements of, previously identified QA Program-related procedures. The word "permanent" was added to those departmental procedures for which the review is applicable.

Changes to paragraphs 5.2.2, 5.2.6, and the re-numbering of paragraph 5.2.3 to 5.2.5 are not considered a part of the reductions in commitments.

- Reason for Changes:

QA Program-related procedures were defined in paragraph 5.2.1 as any procedure required to implement the BEQAM. This definition did not provide the necessary guidance to separate procedures establishing BEQAM program controls from procedures providing detailed instructions for the daily administration and operations of PNPS. The intent of this requirement was to ensure the QAD review of only those programmatic documents that established the requirements for controlling the development of more detailed procedures to ensure that, in accordance with 10CFR, Appendix B, Section 5, "activities affecting quality were prescribed by documented instructions . . . ." As a result, the definition in paragraph 5.2.1 was expanded to clarify this purpose by defining QA Program-related procedures. The need for providing exceptions to these reviews in paragraph 5.2.5 was eliminated. The entire 5.2.5 paragraph is deleted, and the existing paragraph 5.2.3 is re-numbered 5.2.5.

Paragraph 5.2.4 provided additional requirements for the determination of QA Program-related procedures by delineating specific steps for reviewing NOPs and Department Procedures to establish which procedures were actually QA Program related. The interpretation of these requirements evolved into unnecessary reviews of lower tier documents that were already being controlled by higher tier QA Program-related procedures. Detailed review and approval steps are more appropriately delineated and currently exist in the QA Program-related NOP controlling QA documents. The requirement for the QAD review of new NOPs and Departmental Procedures was retained in paragraph 5.2 4. The word "permanent" was added to the term Departmental Procedures to recognize a unique subset of PNPS Departmental Procedures (i.e., Temporary Procedures) that are developed and controlled via a higher level QA Program-related procedure and, therefore, do not require a specific review for impact on the QA program. The requirement to review revisions to, or retirements of, previously identified QA Program-related procedures was also retained. These requirements are restated in the new paragraph 5.2.2.

Reference to an "Index of QA Program Related Procedures to 10CFR50 Appendix B Criteria" in paragraph 5.2.4 was deleted and replaced with the paragraph 5.2.1 requirement for the QAD to identify QA Program-related procedures. The level of detail necessary for the QAD to comply with this requirement is more appropriately incorporated into the QA Program NOP.

A proposed change in paragraph 5.2.4 involves the deletion of the requirement to review a category of major revisions to those procedures not designated as QA Program related. This requires unnecessary review of revisions to those procedures. Since QA Program-related procedures establish the required QA controls for all lower tier procedures that govern activities affecting quality, it is unnecessary to review revisions to these documents for impact on the QA Program.

- Basis for Satisfying Appendix B:

  Section 5 of Appendix B requires, in part, that: "Activities affecting quality shall be prescribed by documented instructions, procedures or drawings . . . .". Commitments to these requirements have not been changed.

SECTION 15 "NON-CONFORMING MATERIAL, PARTS, AND COMPONENTS"

Proposed changes to Section 15 eliminate a redundant in-line QAD review of Non-Conforming Report (NCR) dispositions involving "accept," "repair," or "rework" involving special processes.

- Identification of Change:

  The proposed change to Paragraph 15.2.6a deletes the QAD in-line review and approval of "accept" and "repair" NCR dispositions provided by the Nuclear Engineering Department (NED). The change also deletes 15.2.6c requiring the QAD in-line review and approval of "rework" and "repair" NCR dispositions incorporating the use of a special process.

  Changes to paragraphs 15.2.1a, 15.2.4, 15.2.4a, 15.2.6, and 15.2.6b are not considered reduction in commitment.

- Reason for Change:

  After identification and documentation of a nonconforming condition, the Station Organization is responsible for evaluating the nonconformance and providing an appropriate disposition for this condition in accordance with the criteria set forth in Section 15. After this, NED is required to provide documented evaluation and justification for all "accept" and "repair" dispositions and to approve the disposition. This evaluation, review, and approval are commensurate with design control activities (Section 3) and may result in a design change, controlled by Section 3. The QAD in-line review and approval of these two disposition categories is a programmatic overview of the application of paragraph 15.2.6a as it applies to the design control process. This overview duplicates NED review requirements imposed by the design control process.

- Basis for Satisfying Appendix B:

  This change does not impact the NCR process controls as required by Appendix B and as described in Section 15 of the BEQAM.

  The QAD retains final responsibility for assuring NCR dispositions are implemented and inspected for acceptability of rework and repair actions on installed nonconforming items.

  Removing the QAD from the in-line review process will not affect the quality of the control of nonconforming items. Retention of current QA requirements involving design control and final QAD responsibility for NCRs will continue to provide the necessary control of the NCR system.

ATTACHMENT B

PROPOSED CHANGES TO THE BOSTON EDISON QUALITY ASSURANCE MANUAL

(Affected Pages are Marked by Change Bars.)

QUALITY ASSURANCE PROGRAM

2.1 PURPOSE

This section establishes requirements for the Boston Edison Quality Assurance Program for operation of PNPS, the applicability of the program, and the indoctrination and training program to ensure its proper implementation and effectiveness.

2.2 POLICY

A Statement of Policy, which was signed by the Chief Executive Officer, establishes the overall quality assurance policy of the Boston Edison Company (BECo). This statement sets the goal of safe and reliable operation of PNPS; commits the Company to a quality assurance program designed to ensure compliance with regulatory requirements, company commitments, and established practices for efficient plant operation; and requires every person involved in quality assurance program related activities to comply with the provisions of the program. Employees should refer to Boston Edison Company Corporate Policy P-22 for specific details of this corporate quality assurance policy.

2.3 PROGRAM REQUIREMENTS

2.3.1 The Boston Edison Quality Assurance Manual (BEQAM) for Operation of Nuclear Power Plants establishes the Quality Assurance Program applicable to operation of Pilgrim Nuclear Power Station. The requirements in the BEQAM were established to comply with the requirements of Title 10, Code Federal Regulations, Part 50, (10 CFR 50), Appendix B, "Quality Assurance Criteria for Nuclear Power Plants" and are structured in accordance with its eighteen criteria.

This program requires implementing procedures to be written. These procedures may be prepared as Nuclear Organization Procedures (NOPs), Department Procedures, or Division procedures/instructions. Specific assignment of responsibilities for executing and controlling activities related to the program are identified in these procedures.

QA Program related procedures are indexed according to 10CFR50, Appendix B criteria and listed in the "Index of QA Program Related Procedures to 10CFR50 Appendix B Criteria" and are also indexed according to ANSI N18.7-1976 requirements and listed in the "Index of Procedures to ANSI N18.7 Criteria."

Operational phase activities falling within the scope of the QA Program categorically include: designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operation, maintaining, repairing, refueling, training, and modifying.

Changes to the BEQAM are controlled in accordance with the requirements of 10CFR50.54(a).

Operational phase activities are also controlled in accordance with the requirements of the Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station and 10CFR50.59 requirements.

2.3.2 This QA Program conforms to the following NRC Regulatory Guides and associated ANSI Standards to the extent that they are applicable to operational phase activities:

Regulatory Guide 1.8 Rev. 1-R, 1975 (ANSI N18.1-1971)	Personnel Selection and Training
Regulatory Guide 1.33, Rev.2 1978 (ANSI N18.7-1976/ANS 3.2)	QA Program Requirements (Operational)
Regulatory Guide 1.64 Rev. 1, 1975 (ANSI N45.2.11-1974)	QA Program Requirements for the Design of Nuclear Power Plants
Regulatory Guide 1.88 Rev. 2, 1976 (ANSI N45.2.9-1974)	Collection, Storage and Maintenance of Nuclear Plant Quality Assurance Records
Regulatory Guide 1.123 Rev. 1, 1977 (ANSI N45.2.13-1976)	QA Requirements for Control of Procurement of Equipment, Materials, and Services for Nuclear Power Plants
Regulatory Control 1.144 Rev. 1, 1980 (ANSI N45.2.12-1977)	QA Program Auditing Requirements for Nuclear Power Plants
ANSI N45.2.16 (IEEE Std. 498-1975)	Requirements for the Calibration and Control of Measuring and Test Equipment used in the Construction and Maintenance of Nuclear Power Generating Stations
Regulatory Guide 1.146 1980 (ANSI N45.2.23-1978)	Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants
egulatory Guide 1.58 Rev. 1 (9/80) (ANSI N45.2.6-1978 and ANSI-SNT-TC-1A-1975)	Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel

2.3.3 Certain plant modification work can be expected to be comparable in nature and extent to related activities during the initial design and construction of the plant. The requirements of this manual and the current implementing procedures may need to be supplemented or replaced for such work. The Quality Assurance Department Manager will review upcoming modification work and shall determine whether a Project Quality Plan is needed for a specific modification.

When needed, the Project Quality Plan is developed before modification work begins at the plant. The Project Quality Plan is prepared with appropriate input assistance from other managers. It describes the activities included in the work, and identifies requirements which differ from, or are in addition to, the requirements in this manual. It identifies participating organizations and their interfaces, and the governing procedures which implement the QA Program. Each Project Quality Plan is approved by the Quality Assurance Department Manager.

2.3.4 The following Regulatory Guides and Standards, in addition to those listed in paragraph 2.3.2, contain requirements which will be applied to those construction related activities associated with major modifications during the operational phase that are comparable in nature and extent to related activities occurring during initial plant design and construction:

Regulatory Guide 1.28 Rev. 2, 1979 (ANSI N45.2-1977)	QA Program Requirements (Design and Construction)
Regulatory Guide 1.30 Rev. 0, 1973 (ANSI N45.2.4-1972)	QA Requirements for the Installation, Inspection and Testing of Instrumentation and Electric Equipment
Regulatory Guide 1.37 Rev. 0, 1973 (ANSI N45.2.1-1973)	QA Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants
Regulatory Guide 1.38 Rev. 2, 1977 (ANSI N45.2.2-1972)	QA Requirements for Packaging Shipping, Receiving, Storage and Handling of Items for Water-Cooled Nuclear Power Plants
Regulatory Guide 1.39 Rev. 2, 1977 (ANSI N45.2.3-1973)	Housekeeping Requirements for Water-Cooled Nuclear Power Plants

Regulatory Guide 1.54 Rev. 0, 1973 (ANSI N101.4-1972)	QA Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants
Regulatory Guide 1.55 Rev. 0, 1973	Concrete Placement in Category I Structures
Regulatory Guide 1.74 Rev. 0, 1973 (ANSI N45.2.10-1973)	QA Terms and Definitions
Regulatory Guide 1.94 Rev. 1, 1976 (ANSI N45.2.5-1974)	QA Requirements for Installation, Inspection and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants
Regulatory Guide 1.116 Rev. 0-R, 1977 (ANSI N45.2.8-1975)	Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems

2.4 PROGRAM APPLICATION

2.4.1 The BEQAM is applied to activities affecting structures, systems, and components which have been designated safety related because they prevent or mitigate the consequences of postulated accidents which could cause undue risk to the health or safety of the public. Structures, systems, and components which are designated as safety related are identified on the Q-List (in Section II).

2.4.2 In addition, the Q-List includes (in Section IV) other structures, systems, and components for which the Vice President, Nuclear Operations/Station Director, the Vice President, Nuclear Engineering and the Quality Assurance Department Manager have agreed to use the management controls and implementing procedures of this QA Program for the control of selected work activities.

2.4.3 The BEQAM is also applied to activities affecting fire protection systems and equipment required to limit fire damage to safety related structures, systems, and components so that the capability to safely shut down the plant is ensured. Applicable fire protection systems and equipment are identified on the Fire Protection List, Specification M-504.

2.4.4 The BEQAM is also applied to activities affecting the processing, packaging, and shipping of radioactive material to ensure compliance with applicable regulations. The BEQAM fulfills the quality assurance requirements specified in 10CFR71.101 and 10 CFR20.311. The BEQAM does not apply to the design and fabrication of shipping casks under 10CFR71.

2.4.5 Those structures, systems, components, and related activities to which the BEQAM applies, as identified in Paragraphs 2.4.1 through 2.4.4, are commonly referred to as "Q items". Related activities are referred to as "Q services" and include: engineering, consultant assistance, procedure development, software development, use of contract personnel, and other operational phase activities described in Paragraph 2.3.1. A "Q service" may be performed by BECo personnel, or by a supplier either at BECo or at the supplier's facility.

2.4.6 Provisions have been made for establishing and maintaining the Q-List and the Fire Protection List under the control of the Nuclear Engineering Manager. The list of items and services to be procured as "Q" for he processing, packaging, and shipping of radioactive material are under the control of the Radwaste and Chemistry Section Manager; this list is contained in Nuclear Organization Procedure (NOP) 87RC1.

2.4.7 To the extent necessary to ensure the quality of procured Q items and Q services, suppliers and subsuppliers are required to provide quality assurance programs which implement the pertinent provisions of 10CRF50, Appendix B. Specification of this requirement and evaluation of supplier quality assurance programs are covered in Section 4.

2.5 PROGRAM CONTROL

2.5.1 The Quality Assurance Department Manager is responsible for establishing and maintaining the BEQAM and for assuring the implementation of a Quality Assurance Program which effectively complies with 10CFR50, Appendix B, applicable codes and standards, and corporate policies.

2.5.2 Proposed revisions to the Boston Edison Quality Assurance Manual are prepared by BECo personnel based on predetermined need and NRC regulatory requirements and guides using a Boston Edison Quality Assurance Manual Change Request, Exhibit II-2-1.

The Quality Assurance Department is responsible to review each Change Request to verify conformance with QA Program requirements and to control BEQAM changes in accordance with the requirements of 10CFR50.54(a). The resulting Change Requests are approved for implementation by both the Vice President, Nuclear Engineering and the Vice President, Nuclear Operations/Station Director after approval by the Quality Assurance Department Manager.

The effective date of each change to the BEQAM shall agree with the issue date as closely as practical. It shall be determined by the Vice President, Nuclear Engineering, the Vice President, Nuclear Operations/Station Director and the Quality Assurance Department Manager. Sufficient time between change approval and the effective date shall be given to allow the NuOrg to prepare

for implementation (e.g., procedures, training); this time depends on the complexity of the BEQAM change.

When a change to the management controls described by the BEQAM is warranted on a temporary basis (one-time or short-term), this change may be made using Exhibit II-2-2 and approved by the Plant Department Manager, Nuclear Engineering Manager, and the Quality Assurance Department Manager. Exhibit II-2-2 shall be clearly labeled as a Temporary Change and have an expiration date, as agreed upon by the approvers. A Temporary Change need not be issued as a revision to this manual, but a copy of the approved Exhibit II-2-2 shall be distributed to each holder of a controlled BEQAM. It may be discarded upon expiration.

Holders of controlled Boston Edison Quality Assurance Manuals are responsible for insertion of the latest revisions in their assigned manuals, and are required to sign and return the revision transmittal form thereby acknowledging receipt.

2.5.3 The Quality Assurance Program is implemented using procedures prepared and controlled according to BEQAM Section 5.

2.5.4 The training of personnel in the Boston Edison Quality Assurance Program for the PNPS and other management controls shall be included in applicable indoctrination and training programs. Training shall be provided to assure that suitable proficiency, including special qualification and certification activities, is achieved and maintained.

2.5.5 Implementation of an aggressive Quality Assurance Program is essential to achieve the goal of continued safe and reliable operation of the Pilgrim Nuclear Power Station. Each person involved in quality related activities concerning design, construction, preoperational testing, operation and maintenance of PNPS is responsible for attaining quality in his/her work and for compliance with the requirements of the applicable quality assurance approved procedures. Each person is also responsible for promptly reporting to his/her supervisor whenever a noncompliance with an approved procedure occurs and whenever a potential unsafe condition is recognized.

2.5.6 Audits are conducted by QAD on a regularly scheduled basis to assure compliance with established BEQAM requirements, and the results of these audits are reported to responsible management personnel.

Surveillance monitoring of PNPS operational phase activities is conducted by QAD on a planned and scheduled basis to assure compliance to QA program and procedure requirements, and to assess the effectiveness of performance.

If a difference of opinion arises between Quality Assurance personnel and those of another department, resolution is first

attempted by the Quality Assurance Department Manager and the other cognizant manager. If a solution acceptable to the QAD Manager cannot be obtained, the matter shall be promptly referred by the QAD Manager to the Organization Head for resolution. If a resolution acceptable to the QAD Manager is not obtained after it has been referred to the Organization Head the matter shall be promptly referred by the QAD Manager to the Senior Vice President, Nuclear and, if necessary, to the CEO for resolution.

2.5.7 The scope, implementation, and effectiveness of the Boston Edison Quality Assurance Program is assessed at least biennially, the results are reported to the NSRAC and to upper management (directors and above).

2.5.8 Conditions adverse to quality are evaluated for significance according to criteria contained in Sections 16 of this manual. Significant trends adverse to quality are identified by trend analysis. The Plant Department performs periodic trend analysis of conditions adverse to quality to identify adverse trends. Significant conditions adverse to quality and adverse trends are dispositioned according to Sections 16 and 18.

RTYPE: A2.23

QUALITY ASSURANCE MANUAL

CHANGE REQUEST NO. _____

VOLUME _____ SECTION _____ PARAGRAPH NO. _____ PAGE NO. _____ REV. NO. ___

REVISION (exact wording)

PURPOSE OF REVISION

_____
EFFECTIVE DATE

_____
ORIGINATOR DATE

APPROVAL SIGNATURES

_____
QUALITY ASSURANCE DEPARTMENT MANAGER DATE

_____
VICE PRESIDENT, NUCLEAR ENGINEERING DATE

_____
VICE PRESIDENT, DATE
NUCLEAR OPERATIONS/STATION DIRECTOR

EXHIBIT II-2-1

Rev. 34
Date:

RTYPE: A2.23

QUALITY ASSURANCE MANUAL

TEMPORARY CHANGE REQUEST NO. _____

VOLUME _____ SECTION _____ PARAGRAPH NO. _____ PAGE NO. _____ REV. NO. _____

TEMPORARY CHANGE (exact wording)

PURPOSE OF TEMPORARY CHANGE

_____
EFFECTIVE DATE

_____
ORIGINATOR DATE

APPROVAL SIGNATURES

_____
QUALITY ASSURANCE DEPARTMENT MANAGER DATE

_____
NUCLEAR ENGINEERING DEPT. MANAGER DATE

_____
PLANT DEPARTMENT MANAGER DATE

DESIGN CONTROL

3.1 PURPOSE

This section establishes the requirements for the control of design activities to assure that appropriate quality standards are specified and design reviews are accomplished in a planned and orderly manner.

3.2 GENERAL

3.2.1 Engineering and design activities associated with plant design changes and modifications of nuclear safety related structures, systems, and components are accomplished according to ANSI N45.2.11-1974 as amended by Regulatory Guide 1.64, Rev. 1.

3.2.2 Before implementation, plant design changes and modifications are reviewed by responsible NED, ORC, and station personnel, and safety evaluations are performed for design changes to assure compliance with 10CFR50.59. If the Operations Review Committee (ORC) determines that an unreviewed safety item is involved, the Nuclear Safety Review and Audit Committee (NSRAC) reviews, and Nuclear Regulatory Commission (NRC) approval is required through NED prior to performing the change. Approved design changes and modifications are implemented by the the Station Organization with technical guidance provided by NED.

3.2.3 Quality category Q services related to plant design, design changes, and modifications are procured according to Sections 4 and 7 of this Manual.

3.3 DESIGN CHANGE PROCESS

3.3.1 A Plant Design Change (PDC) is used by BECo personnel to obtain authorization for and to implement plant design changes and modifications to systems, structures, and components at the station. Subsequent changes to an approved PDC package are made using Field Revision Notices (FRNs).

3.3.2 The cognizant personnel within the BECo Nuclear Organization, or approved supplier of engineering services, who are responsible for the engineering design inputs and design verifications perform their functions according to written procedures to assure the following:

3.3.2.1 Design documents are identified and controlled, and revisions thereto are reviewed, approved, collected, stored, and controlled in a systematic manner.

3.3.2.2 The individuals or groups responsible for design reviews and other design verification activities and their authority and responsibilities are identified and design interfaces are controlled.

3.3.2.3 Plant design changes and modifications are reviewed, approved, and controlled to assure compliance with 10CFR50.59.

3.3.2.4 Applicable regulatory requirements and design bases are correctly translated into specifications, drawings, written procedures, and instructions.

3.3.2.5 Appropriate standards for quality are specified in design documents and deviations and changes from such standards are controlled.

3.3.2.6 Suitable design controls are used in applying principles of reactor physics and in making seismic, stress, thermal, hydraulic, radiation, and accident analyses.

3.3.2.7 Design changes and revisions to design documents are appropriately controlled to assure compatibility of materials; accessibility for in-service inspection, maintenance, and repair; and delineation of acceptance criteria for inspections and tests.

3.3.2.8 Methods for verifying design changes, such as design reviews, alternative calculations, and qualification testing are properly chosen and followed; the most adverse design conditions are specified for test programs used to verify the adequacy of designs.

3.3.2.9 Individuals or groups responsible for design verification meet the requirements for independence prescribed in Regulatory Guide 1.64, Rev. 1.

3.3.2.10 Design documents, including drawings and specifications and approved revisions thereto, are controlled and distributed to responsible individuals in the user organization in a timely manner, to preclude inadvertent use of superseded material.

3.3.2.11 Errors and deficiencies that adversely affect safety related structures, systems, and components in the design process are documented and appropriate corrective action is taken.

3.3.2.12 Standard, off-the-shelf commercial or previously approved materials, parts, and equipment essential to the safety functions of structures, systems and components are reviewed for suitability of application.

INSTRUCTIONS, PROCEDURES, AND DRAWINGS

5.1 PURPOSE

This section establishes the requirements to assure that activities affecting the quality of safety-related systems, structures, and components are delineated, controlled, and implemented through use of written instructions, procedures, or drawings.

5.2 BECo QUALITY ASSURANCE PROGRAM-RELATED PROCEDURES

5.2.1 The requirements of this QA Program shall be implemented by Nuclear Organization Procedures (NOPs) issued by the Sr. VP--Nuclear, and department procedures issued by each Department Manager. Those NOPs and departmental procedures which establish the administrative methods required for detailed implementation of the QA programmatic requirements shall be identified by the Quality Assurance Department (QAD) as QA program-related procedures.

5.2.2 Each new NOP or permanent department procedure shall be reviewed by the QAD to determine if the procedure is QA program related. Revisions to or retirements of QA program-related procedures are reviewed and approved by the QAD.

5.2.3 All quality-related activities shall be controlled by the applicable procedures, instructions, or drawings. The use of uncontrolled documents in lieu of the procedural processes (such as memos in lieu of procedures) is forbidden. Detailed instructions are controlled by QA program-related NOPs or department procedures. Additional requirements pertaining to drawings, sketches, diagrams and schematics are provided in Section 3.

5.2.4 Work authorizing documents shall identify the applicable procedures, instructions, and drawings. Management controls specified in NOPs or department procedures (such as reviews, approvals, numbering, retrievability, records retention, independent verification, etc.) shall be implemented for all related activities.

5.2.5 Procedures, instructions, and drawings shall include appropriate quantitative and qualitative acceptance criteria, appropriate methods for documenting or recording data obtained during the performance of the activity, appropriate requirements for equipment and instrumentation to be used, and suitable control for environmental conditions.

5.2.6 Changes to procedures, instructions, and drawings are reviewed, approved, controlled, and distributed in the same manner as the original issue with the following exception: the Operations

Review Committee (ORC) may designate a PNPS procedure as "ORC Review Not Required." Subsequent ORC review and approval are not required for minor revisions (as defined in PNPS procedures). The ORC shall review and approve any major revision, including additions, to such a procedure to determine if the revision changes its "ORC Review Not Required" status.

Use of a process other than that specified in the approved procedure is a change to the procedure. All such changes shall be approved prior to implementation.

5.2.7 All maintenance and modification activities affecting station structures, systems, and components are controlled by the Maintenance Request system. All quality category Q Maintenance Requests, and non-Q MRs affecting ASME pressure retaining components, are reviewed by the QAD to assure that appropriate requirements are specified for quality related activities and to incorporate appropriate quality control hold points.

5.3 SUPPLIER PROCEDURES

When the procurement documents require the supplier to submit procedures for BECo approval, the Materials & Component Engineering Section shall ensure the appropriate reviews and approvals are obtained. Reviews and approvals are required from those departments which would review and approve similar BECo procedures. In particular, supplier procedures which include quality control inspection, nondestructive examination or Inservice Inspection activities shall be reviewed by the QAD.

NONCONFORMING MATERIAL, PARTS OR COMPONENTS

15.1 PURPOSE

This section establishes the requirements and methods used within the Boston Edison Company to document and control nonconforming materials, parts, and components to prevent their inadvertent installation or use. Included are requirements and methods to identify and segregate nonconforming items, provide for their disposition, and notify affected organizations.

15.2 REQUIREMENTS

15.2.1 All Quality Category Q materials, parts, or components which do not conform to specified requirements shall be documented as follows:

15.2.1a All nonconforming materials, parts, or components identified by QAD as a result of required installation inspections, and other inspections shall be documented on Nonconformance Reports (NCRs).

All nonconforming materials, parts, or components identified by the Materials & Component Engineering Section (M&CES) as a result of required receipt inspections shall be documented on a Stores Claim. If a nonconforming item on a Stores Claim is withdrawn for use, the M&CES shall initiate an NCR.

Nonconforming items identified on an NCR or items for which a Stores Claim has been initiated shall be clearly identified with a Nonconformance Tag or Stores Claim tag.

15.2.1b Nonconforming materials, parts, or components identified during operation, maintenance, or surveillance testing are documented and reported via a Problem Report (PR). Documentation in the Control Room Log and on Shift Turnover Sheets, and tagging, shall be performed as appropriate to ensure effective control.

15.2.1c Nonconforming materials, parts, or components noted by QAD during auditing or surveillance monitoring shall be recorded on PRs.

15.2.2 Nonconformances shall be evaluated for significance in accordance with Section 16.

15.2.3 A Supplier Finding Report (SFR) is issued to report and resolve conditions adverse to quality which are identified during a supplier audit, supplier survey, or source inspection of a supplier. The SFR shall be processed according to Section 7.

15.2.4 Installed nonconforming items shall be identified on an NCR, and the status of the affected system, component, or structure shall be controlled to prevent inadvertent use of the nonconforming item. Any installed nonconforming item shall be declared inoperable (as defined by the PNPS Technical Specifications) until:

1. The NCR disposition is approved and implemented and the implementation verified by QAD and the Nonconformance Tag removed; or

2. A technical evaluation that demonstrates the nonconforming system/component is capable of performing its intended safety function has been performed, documented and approved.

15.2.5 Nonconforming items not installed shall be identified on an NCR or Stores Claim, as applicable. The items shall be physically segregated from conforming items and controlled to prevent installation or inadvertent use.

When physical segregation is not practical, for example with large items which are stored in place, suitable means, such as roping off the area, shall be used to clearly indicate the nonconforming status.

15.2.6 Nonconforming items which, because of their makeup and intended use, cannot readily be returned to a conforming state (such as chemicals, weld rod, concrete, etc.) shall not be released for installation. If the nonconformance can be corrected after installation, the item may be released for installation if authorized by the Plant Manager. Technical justification for the installation, including the limits on examination, testing, or inspection activities that can be performed on the structure, system, or component with the nonconforming item installed, shall be prepared and made part of the NCR documentation.

15.2.6a To prevent the inadvertent installation and use of a tagged nonconforming item, the Plant Manager shall ensure that the work control processes shall prohibit the closure of the work document until the Nonconformance Tag is cleared and removed.

15.2.6b Nonconformance Tags shall only be removed after satisfactory resolution of the NCR. For installed

nonconforming items, Nonconformance Tags are removed only by QAD personnel. If the nonconforming item is not installed, the M&CES removes the Nonconformance Tag. Stores Claim tags are removed by Stores.

15.2.7 The Quality Assurance Department shall keep records of all unresolved NCRs for installed nonconformances and monitor Station activities to assure that:

1. Tags have not been removed or altered on items still classified as nonconforming.

2. Unauthorized personnel have not modified the segregation or use requirements on tags.

3. Activities have not been conducted that violate requirements specified on tags or in this program.

The M&CES shall meet the above requirements for unresolved NCRs for nonconforming items which are not installed.

15.2.8 Nonconforming items identified on a PR shall be further identified and the status of the system controlled by appropriate log entries, shift turnover information, and tags. PNPS Technical Specifications shall govern operation.

15.2.9 All nonconforming items identified on an NCR shall be dispositioned for acceptance (use-as-is), rejection (scrap, salvage, or return-to-vendor), repair, or rework according to appropriate department procedures. Repaired and reworked items shall be re-inspected for acceptability using the original criteria. Equivalent criteria may be used if reconciliation to the original criteria has been justified by the cognizant engineering group. All rework or repair shall be performed using approved procedures. All dispositions of nonconforming items shall be properly documented.

15.2.9a If the nonconforming item was installed in the plant when the nonconformance was identified, the Station Organization is responsible for the evaluation and disposition of the NCR. The Nuclear Engineering Department personnel shall approve and document their evaluations of and justifications for "accept" and "repair" dispositions.

15.2.9b If the nonconformance was identified on a Stores Claim, and the NCR was written when the nonconforming item was withdrawn for use, the M&CES is responsible for the evaluation and disposition of the NCR. The M&CES shall also approve "accept" and "repair" dispositions, and document on the NCR the supporting evaluations and justification.

15.2.9c The Quality Assurance Department is responsible for assuring NCR dispositions are implemented and inspected for acceptability of rework and repair actions on installed nonconforming items. The M&CES has this responsibility for nonconforming items which are not installed.

15.2.10 When required by Purchase Order or contract, a supplier working under its own BECo approved QA Program shall submit nonconformances with the disposition "accept as is" or "repair" to BECo for approval.

If the supplier is working on site, the Nuclear Engineering Department shall review the supplier's disposition and its justification, and shall notify the supplier of BECo's approval.

If the supplier is working off site, the M&CES shall review the supplier's disposition and its justification, and shall notify the supplier of BECo's approval.

15.2.11 All nonconforming items identified on a PR shall be reviewed and a disposition provided according to appropriate procedures. The Maintenance Request (MR) process shall provide the necessary controls to ensure PNPS Technical Specifications are met. Actions taken shall be recorded on the PR with reference to the related MRs.