ORGANIZATION

1.0 PURPOSE

This section describes the Nuclear Organization and other organizational units of Boston Edison Company (BECo) involved in the operation of Pilgrim Nuclear Power Station (PNPS). In addition, it describes the responsibilities governed by the Quality Assurance Program.

1.1 Organization

The BECo Nuclear Organization is depicted in Figure No. II-1-1, and the BECo Nuclear Quality Assurance Organization is depicted in Figure No. II-1-2. The organization for Pilgrim Nuclear Power Station is further detailed in the Technical Specifications. Changes in Boston Edison's Nuclear Organization are reported to the Nuclear Regulatory Commission in accordance with the Technical Specification requirements. Quality related activities associated with the operational phase of nuclear power plants are performed primarily by the Nuclear Organization. These operational phase activities are governed by the requirements established in the Boston Edison Quality Assurance Manual (BEQAM) for Operation of Nuclear Power Plants. Other Departments within Boston Edison that are subject to certain requirements of the BEQAM are:

(a) Purchasing Department

(b) Stores Department

(c) Engineering, Planning and Research Department, Testing and Standards Section

Boston Edison has established the following committees which perform quality related functions:

Nuclear Safety Review and Audit Committee (NSRAC)

Operations Review Committee (ORC)

The makeup, qualifications, and responsibilities of these committees are described in the Technical Specifications for the nuclear power plant and/or in Committee charters. NSRAC members are appointed by the Senior Vice President (Nuclear).

The corporate organization is more fully described in Boston Edison's Bulletin Book, Section A. Revisions or additions to the Bulletin Book are controlled by the Chief Executive Officer of Boston Edison Company.

1.2 Key Management Responsibilities and Authority

1.2.1 Executive Office

The Chief Executive Officer is the Chairman of the Board of Directors. He is subject to the direction of the Board, and he supervises the administration of the business and affairs of the corporation. He is a member of the Executive Committee of the Board of Directors.

The President has such powers and duties as may from time to time be prescribed by the Board of Directors or the Chief Executive Officer. During the absence or inability of the CEO, the President shall possess all the powers and performs all the duties of the CEO. The President is also a member of the Executive Committee of the Board of Directors.

The Senior Vice President is a senior corporate officer responsible for the administration and conduct of Company business relating to specific areas as assigned within the Executive Office.

1.2.2 Senior Vice President - Nuclear

The Board of Directors has designated a Senior Vice President as the corporate officer with responsibility and authority to manage and direct the Nuclear Organization. He is responsible for all activities related to the operation of PNPS and reports to the Chief Executive Officer. He is responsible to establish overall policies and to assure effective implementation of those policies. Boston Edison has established a Quality Assurance Program to implement the requirements in Appendix B to 10 CFR Part 50 and the Senior Vice President is assigned responsibility for assuring that the Program is aggressively implemented. He has delegated responsibilities and authorities to accomplish required activities according to his written policies.

The Senior Vice President - Nuclear is designated as the officer to whom defects and non-compliances relating to nuclear safety hazards are to be reported and is designated as the officer responsible for notifying NRC of defects and non-compliances when required by 10 CFR Part 21. The assignment of corporate responsibilities for implementation of 10 CFR Part 21 is more fully described in Boston Edison Company's Bulletin Book, Bulletin B-2.

The following Vice President, Directors, and Managers report to the Senior Vice President:

(1) Vice President-Nuclear Engineering and Quality Assurance

(2) Director of Nuclear Operations

(3) Director, Nuclear Operations Review

(4) Director, Outage Management

(5) Planning, Scheduling and Cost Control Management

1.2.3 Director of Nuclear Operations

The Director of Nuclear Operations is responsible for all activities related to operation and maintenance of PNPS. He is responsible for establishing procedures and controls to aasure that requirements of the BEQAM are effectively implemented by Departments within his organization.

The Director of Nuclear Operations is responsible to develop, maintain and control interdepartmental Nuclear Operations Procedures (NOP'S). The QA Manager reviews each NOP to assure that the described quality-related activities meet the requirements of the BEQAM.

The following departments report to the Director of Nuclear Operations:

(1) Nuclear Operations Department

(2) Nuclear Operations Support Department

(3) Nuclear Management Services Department

(4) Nuclear Training Department

1.2.4 Vice President-Nuclear Engineering and Quality Assurance

The Vice President-Nuclear Engineering and Quality Assurance is responsible for all activities related to engineering and design for PNPS, including design changes and plant modifications. He is also responsible to oversee implementation of those quality assurance and quality control activities assigned to the Quality Assurance Department by the Senior Vice President (Nuclear).

The following departments report to the Vice President-Nuclear Engineering and Quality Assurance:

(1) Nuclear Engineering Department

(2) Quality Assurance Department

1.2.5 Quality-Related Responsibilities Common to All Department Managers and Directors

Each of the Department Managers and Directors identified have certain quality-related responsibilities in common, as follows:

- Provide and implement policies and procedures for all quality-related activities which fulfill the requirements of this manual; ensure policies and procedures applicable to quality-related activities are approved by the QAD.

- Choose qualified, competent personnel to maintain a staff adequate to perform all quality-related activities. Identify indoctrination and training needs and ensure they are fulfilled; coordinate training with the Nuclear Training Department. Evaluate the performance of personnel and take required actions.

- Provide the means and conditions (e.g., facilities, tools, supplies, etc.) to allow personnel to carry out quality-related activities within the constraints of corporate budget controls.

- Ensure coordination of activities across the interfaces with other departments and organizations.

- Be cognizant and maintain departmental awareness of applicable regulatory requirements, as well as BECo commitments and related industry codes and standards.

- Recognize, obtain, evaluate, and act upon feedback information, from internal and external sources, to improve management controls and personnel performance. Apprise upper management of activities and potential and actual problems. Communicate and resolve problems with other departments. Take corrective action when it is warranted, including measures to prevent problem recurrence.

The functional roles and responsibilities of departments and organizational units that implement the QA program are more fully described in Nuclear Operations Procedures, department procedures, or charters approved by appropriate levels of management.

1.2.6 Director of Outage Management

The Director of Outage Management is responsible to coordinate planning and to direct scheduled plant outages necessary to maintain, modify, and refuel the plant.

1.2.7 Planning, Scheduling and Cost Control (PS&CC) Manager

The PS&CC Manager is responsible for planning, scheduling, and cost control services and for coordinating procurement interfaces between the Nuclear Organization and the Purchasing Department.

1.2.8 Nuclear Operations Department (NOD)

The Pilgrim Station Manager is head of the Nuclear Operations Department and is responsible for the overall safe, reliable, and economic operation of PNPS in accordance with corporate policies and regulatory requirements.

1.2.9 Nuclear Operations Support Department (NOSD)

The Nuclear Operations Support Department is responsible for certain on-site activities which support the Pilgrim Station Manager and the Vice President-Nuclear Operations.

1.2.10 Nuclear Management Services Department (NMSD)

The Nuclear Management Services Department is responsible for certain on and off-site activities which support the Pilgrim Station Manager and the Vice President-Nuclear Operations. The Department is responsible for maintenance and control of the Facility Operating License and the PNPS Final Safety Analysis Report, and for Records Management/Document Control activities for the Nuclear Organization.

1.2.11 Nuclear Training Department (NTD)

The Nuclear Training Department is responsible to establish and corrdinate implementation of a training program for all Boston Edison personnel who perform quality-related activities. This overall program shall indoctrinate all personnel in the Boston Edison Quality Assurance Program for PNPS and other management controls, and provide suitable training to permit personnel to perform their assigned activities. It includes special qualification training and certification activities, as required. Training responsibilities assigned to other managers are carried out within the framework established by this program.

1.2.12 Nuclear Engineering Department (NED)

The Nuclear Engineering Department is responsible for engineering and design activities and construction associated with plant design changes and modifications, including safety evaluations required by 10CFR50.59. It is also responsible for all engineering evaluations (e.g., studies, analyses, reviews) to support PNPS operation, maintenance, and refueling. These responsibilities include establishment and maintenance of a system to incorporate approved design changes into engineering documents.

1.2.13 Quality Assurance Department (QAD)

The Senior Vice President (Nuclear) has delegated authority and responsibility for directing and administering the Quality Assurance Program to the Manager of the Quality Assurance Department. Specifically, the Quality Assurance Department is accountable for:

- Establishing, maintaining, and assuring the implementation of a Quality Assurance Program, which effectively complies with 10CFR50, Appendix B, Nuclear Organization's policies.

- Providing feedback to responsible management on compliance to and effectiveness of the Quality Assurance Program; in addition, making an oral report to the Chief Executive Officer approximately every 6 months, and providing summary reports of internal audits (Section 18) and trend analysis reports (Section 16) to the CEO.

- Establishing, maintaining, and implementing an effective quality control function for the Nuclear Organizations.

- Assuring that all operational phase activities falling within the scope of the QA Program are prescribed by and implemented according to detailed, approved procedures, and that these procedures provide effective management controls.

- Preparation, revision, and control of the Boston Edison Quality Assurance Manual (BEQAM), which is the primary quality assurance document.

In order to implement these responsibilities, the Quality Assurance Manager is provided with "Stop Work" authority whereby he can suspend any quality related activity or process which may, in his opinion, adversely affect the safe operation of Pilgrim Nuclear Power Station.

QAD personnel have sufficient authority and organizational freedom to identify quality problems; initiate, recommend, or provide solutions through designated channels; and verify implementation of solutions. The QA Manager and his subordinates communicate directly with cognizant Department Managers and responsible personnel for the identification and resolution of deficiencies.

The QAD Manager is responsible for the review, evaluation and approval of selected contractor, supplier, and engineering service organization quality assurance programs prior to the issuance of BECo Purchase Orders/Contracts. After award of BECo Purchase Orders/Contracts, he is responsible for performance of audits and source/surveillance inspections, as appropriate, at contractor, supplier, and engineering service organization facilities to assure compliance with BECo Purchase Order/Contract requirements.

The Quality Assurance Manager is responsible to review all procurement requirements, including technical and quality assurance requirements of specifications, preliminary procurement documents, and supplier exception/deviations, to ensure proper consideration and incorporation of quality assurance and quality control requirements.

The QAD is responsible to establish and maintain the Inservice Inspection and Test Program required by ASME Section XI and the PNPS Technical Specifications.

1.2.14 Purchasing Department

The Purchasing Department is responsible to coordinate procurement of items and services required for PNPS including approval of commercial conditions associated with procurement activities. The Purchasing Department is not authorized to change technical and quality assurance requirements specified by the department requesting procurement action. The Purchasing Department is responsible to implement procedural controls according to requirements established in the BEQAM.

1.2.15 Stores Department

The Stores Department is responsible to coordinate preparation of purchase orders for material based on approved preliminary procurement documents and is also responsible to receive, store, and control purchased material before it is released to PNPS. The Stores Department is not authorized to change technical and quality assurance requirements specified by the department requesting the procurement action. The Stores Department is responsible to implement procedural controls according to requirements established in the BEQAM.

1.2.16 Engineering, Planning and Research Department, Testing and Standards Division

The Testing and Standards Division is responsible to direct and coordinate the activities within the Testing and Standards Section and to implement the requirements of the BEQAM related thereto.

BOSTON EDISON COMPANY
NUCLEAR ORGANIZATION

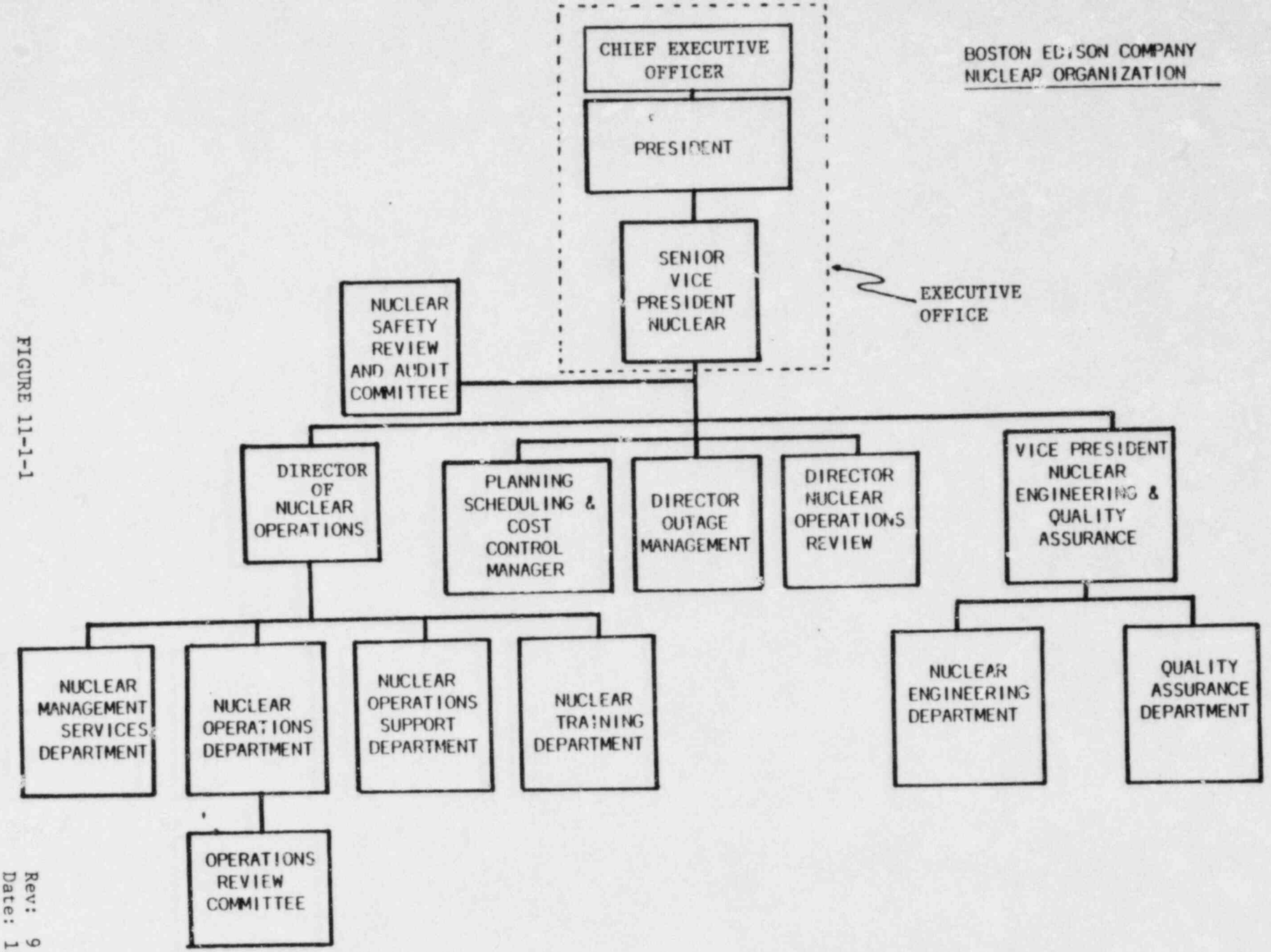

FIGURE 11-1-1

Rev: 9
Date: 12/30/83

Organization Chart - NUCLEAR QUALITY ASSURANCE

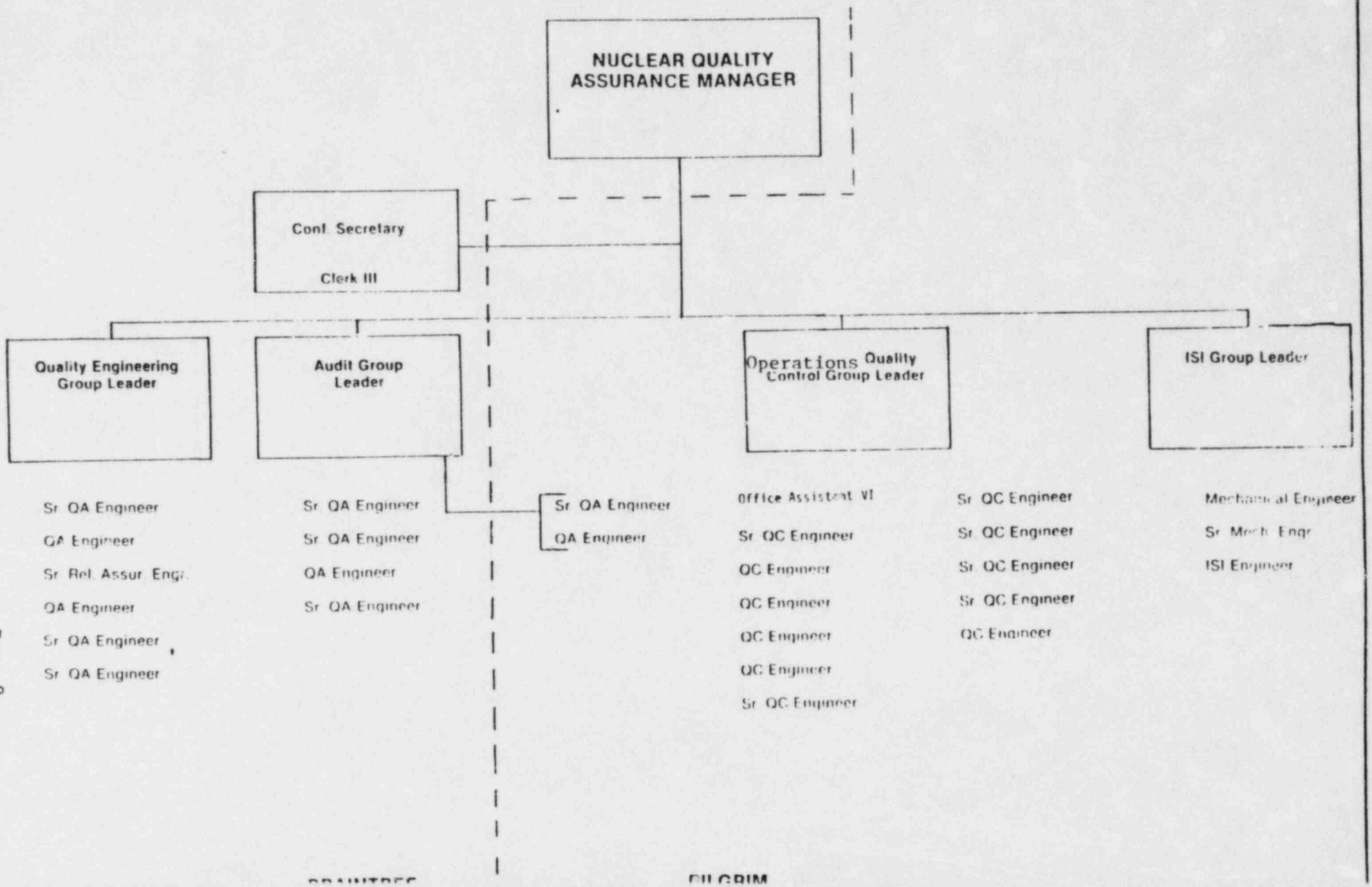

FIGURE II-1-2

Rev: 9
Date: 12/30/83

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 President, 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 Bulletin B-5 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 Operations Procedures (NOP's), Department Procedures, or Group procedures/instructions. Specific assignment of responsibilities for executing and controlling activities related to the program are identified in these procedures.

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

Changes to the BEQAM are controlled in accordance with the requirements of 10 CFR 50.54(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 10 CFR 50.59 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. IR, 1975 (ANSI N18.1-1971/ANS3.1)	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

Regulatory Guide 1.58 Rev. 1 (9/80) (ANSI N45.2.6-1978 and ASNT-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 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 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 Sections II and III).

2.4.2 In addition, the Q-List includes (in Section IV) other structures, systems, and components for which the Director of Nuclear Operations and the Vice President-Nuclear Engineering and Quality Assurance 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 In accordance with the requirements of 10 CFR 71.51, the BEQAM is also applied to Boston Edison activities, including procurement activities, related to delivery of licensed material to a carrier for transport under the license provisions of 10 CFR 71.12. Applicable shipping containers or transport packages are identified on the 10 CFR 71.12 Licensed Shipping Container List.

2.4.5 Those structures, systems, and components and related activities to which this BEQAM applies, as identified above, are commonly referred to as "Q".

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.

2.4.7 Provisions have been made for establishing and maintaining the 10 CFR 71.12 Licensed Shipping Container List under the control of the Pilgrim Station Manager.

2.4.8 To the extent necessary to ensure the quality procured items and services, suppliers and subsuppliers are required to provide quality assurance programs which implement the pertinent provisions of 10 CFR 50, Appendix B. Specification of this requirement and evaluation of supplier quality assurance programs by the QAD are covered in Section 4.

2.5 PROGRAM CONTROL

2.5.1 The Quality Assurance Manager is responsible for establishing and maintaining the BEQAM and for assuring the implementation of a Quality Assurance Program which effectively complies with 10 CFR 50, 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 10 CFR 50.54(a). The resulting Change Requests are approved for implementation by both the Vice President - Nuclear Engineering and Quality Assurance and the Director of Nuclear Operations after approval by the Quality Assurance Manager.

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. Review and approval by the QA Department is required to assure compliance with BEQAM requirements and for ensuring that such procedures are approved by the QAD prior to use.

2.5.4 The Nuclear Training Department is responsible to establish and coordinate implementation of a training program for all Boston Edison nuclear personnel who perform quality-related activities. This overall program shall indoctrinate all personnel in the Boston Edison Quality Assurance Program for PNPS and other management controls, and provide suitable training to permit personnel to perform their assigned activities. It includes special qualification training and certification activities, as required. Training responsibilities assigned to other managers are carried out within the framework established by this program.

Department Managers and Directors are responsible for assuring that their personnel are adequately trained and proficient in the use of department procedures approved by the Quality Assurance Manager and that training is performed and scheduled in compliance with the requirements of the Boston Edison Training Program.

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 a QAD 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.

Periodic trend analysis of identified conditions adverse to quality is performed by QAD to determine if significant adverse trends exist, and to initiate appropriate corrective action.

If a difference of opinion arises between Quality Assurance personnel and those of another department, resolution is first attempted by the Quality Assurance Manager and the other cognizant manager. If a solution acceptable to the QA Manager cannot be obtained, the matter shall be promptly referred by the QA Manager to the Vice President-Nuclear Engineering and Quality Assurance for resolution. If a resolution acceptable to the QA Manager is not obtained after it has been referred to the Vice President, the matter shall be promptly referred by the QA Manager to the Senior Vice President (Nuclear) and, if necessary, to the President, 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 (vice presidents 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. Significant conditions adverse to quality are dispositioned according to Sections 16 and 18.

BOSTON EDISON

QUALITY ASSURANCE MANUAL

CHANGE REQUEST

VOLUME____ SECTION____ PARAGRAPH NO._____ PAGE NO._____ REV. NO.____

REVISION (Exact Wording)

PURPOSE OF REVISION

ORIGINATOR DATE

APPROVAL SIGNATURES:

QUALITY ASSURANCE MANAGER DATE

VICE PRESIDENT-NUCLEAR ENGINEERING & QA DATE

DIRECTOR OF NUCLEAR OPERATIONS DATE

PROCUREMENT DOCUMENT CONTROL

4.1 PURPOSE

This section establishes the requirements for preparation, review, approval and control of procurement documents for items and services to assure applicable technical requirements and quality assurance requirements are included and that spare or replacement parts are subject to controls at least equivalent to those used for the original equipment.

4.2 PROCUREMENT PROCESS

4.2.1 Preliminary procurement documents prepared for equipment, parts and services shall include appropriate technical requirements, and QAD-approved quality assurance requirements. In addition, these documents shall specify when quality category Q applies and identify any other specific or special requirements; in particular, storage level, shelf life, and storage maintenance requirements. Additional information to be provided should include as appropriate:

a) Applicable Specifications and Drawings
b) Regulatory Requirements
c) Component Identification Requirements (including Q List No.)
d) Applicable Codes and Standards
e) Test and Inspection Requirements
f) Documentation Requirements (See Paragraph 4.2.2)
g) Special packaging, shipping, and handling requirements.
h) Installation, Operating and Maintenance manuals, including Preventive Maintenance Instructions
i) Suggested Suppliers based on QAD's Approved Suppliers List

4.2.2 The originator of the preliminary procurement documents shall identify any documentation required to be submitted by the supplier, including documentation to be submitted to BECo. for review and approval and documentation to be submitted for acceptance of the items or service. Required documentation shall also include documents to be provided to BECo. for records retention purposes.

For quality category Q items and services, supplier documentation for acceptance may be a Certificate of Conformance, unless requirements of the applicable Codes and Standards preclude this option (i.e., more specific documentation is called for). If a Certificate of Conformance is required, the procurement documents shall also specify that the Certificate of Conformance must meet the requirements given in Exhibit II-4-1. In addition, the originator shall determine if additional documentation is required from the supplier to support the Certificate of Conformance; and identify any such documentation in the procurement documents.

4.2.3 Preliminary procurement documents shall be reviewed to ensure proper identification of items and inclusion of appropriate technical requirements for items and/or services being procured. This review shall verify the quality category and the completeness of the requirements.

4.2.4 Preliminary procurement documents for all items and services shall be submitted to QAD for review to ensure inclusion of appropriate quality assurance requirements.

4.2.4.1 If the preliminary procurement documents require the supplier to submit a Certificate of Conformance, and BECo QA/QC will not perform source inspection (off-site), surveillance inspection (on-site), or audits, the QA reviewer shall identify acceptance inspections or tests by BECo, QQC which will verify the validity of the supplier's certificate and the effectiveness of his certification system.

4.2.5 The procurement documents for spare or replacement parts are subject to controls at least equivalent to those applied for original equipment.

4.3 PURCHASE ORDERS/CONTRACTS

4.3.1 The procurement documents (Purchase Order and accompanying documents) shall be issued according to corporate policies and procedures and shall contain all the technical requirements and QA requirements specified by the Nuclear Organization. Added technical or quality assurance requirements and any changes to the issue Purchase Order/ Contract are subject to the same review, and approval as the original preliminary procurement documents.

4.4 SUPPLIER QUALITY ASSURANCE PROGRAM EVALUATION AND APPROVAL

4.4.1 Evaluation of the Quality Assurance Programs of potential suppliers of Q items and services shall be performed by QAD or by others when authorized by the QA Manager. For fire protection systems and components, evidence of UL or FM approval will be accepted in lieu of supplier evaluation. An evaluation includes review of the supplier's QA Program Description and a survey of his implementation of that program before the supplier initiates any activities affected by the program under a BECo PO. The supplier's QA Program Description is reviewed to ensure inclusion of pertinent requirements of the BEQAM and 10 CFR 50, Appendix B. The evaluation must be completed and the supplier approved by QAD. The names of approved suppliers are placed on the BECo QA-Approved Suppliers List which is maintained by QAD.

4.4.2 Q items and services may be procured from a supplier whose quality assurance program has not been fully approved by BECo Quality Assurance. BECo Purchase Orders/Contracts to such a supplier must, however contain detailed supplementary quality assurance requirements to ensure the items and services meet the Purchase Order/Contract requirements. These additional quality requirements are intended to address the reasons for non-approval of the supplier, and may impose specific actions by the supplier or by BECo. The preliminary procurement documents are reviewed by QAD to assure additional actions are identified as necessary to provide the required assurance the quality standards have been met, and to permit planning for QAD actions, such as source inspection and augmented receipt inspection.

4.4.3 Certain Q items and services may be procured from a supplier without BECo Quality Assurance approval of the supplier's quality assurance program. Such items and services shall be designated "commercial quality control items". NED shall evaluate candidate items and services and justify the conclusion that, with no reliance on supplier quality assurance activities, BECo can establish the nonconformance of the item or service to the physical and functional requirements it must meet in use. The detailed requirements for BECo activities and acceptance criteria to assure the item or service meets the specified technical requirements must accompany the Purchase Order/Contract for internal BECo use. Such activities may include source and receipt inspection and physical and functional testing. The preliminary procurement documents are reviewed by QAD to assure BECo actions are identified which will assure the acceptance criteria are met and to permit planning for QAD actions. Items and services designated "commercial quality control items" are identified by NED in the Q-List Manual, Section V, or the Fire Protection List, Specification M-504.

4.5 DEVIATION REQUESTS FROM BECo PURCHASE ORDER/CONTRACT REQUIREMENTS

4.5.1 When a Deviation Request is submitted by a supplier to BECo Purchasing, the cognizant BECo Purchasing Agent shall forward the Deviation Request to the Nuclear Organization for initial action. The Deviation Request, after it is approved/disapproved by the cognizant BECo Manager and reviewed by QA, is returned to the BECo Purchasing Department which notifies the supplier. The BECo Purchasing Department issues a change to the Purchase Order/Contract based on approved procurement documents revised to reflect the approved Deviation Request.

Requirements for a Certificate of Conformance

When a Certificate of Conformance is required by the procurement documents to be submitted by the Supplier, it shall:

1. Identify the purchased item or services by BECo's purchase order number.

2. Identify the specific procurement requirements met by the item or service, either by verbatim quotation of the requirements, or by specific reference to the document(s), and location(s) with the document(s), where the requirements are specified. The requirements identified must include any changes, waivers, or deviations, approved by BECo, which apply to the item or service.

3. Identify any procurement requirements that have not been met, and refer to the document(s) which record BECo's approval of the disposition of such nonconformances.

4. Be attested to by the person responsible for assuring the quality of the item or service, as described in the supplier's BECo - approved Quality Assurance Manual.

The supplier's Quality Assurance Manual, as approved by BECo's QA Department, shall describe the system to control Certificates of Conformance, including a procedure for completing the certificates which meets the above requirements, and a procedure for review and approval of certificates.

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 Operations Procedures (NOP's), issued by the VP-Nuclear Operations, and Department Procedures, issued by each Department Manager. Procedures required to implement the BEQAM II are called quality assurance program related. The QAD shall establish and maintain a controlled document, "BECo Procedures which Implement the BEQAM II and ANSI 18.7-1976," which shall identify these quality assurance program related procedures.

5.2.2 Each quality-related activity shall be governed by an appropriate combination of procedures, instructions, and drawings. Requirements pertaining to drawings, including sketches, diagrams, schematics, and similar terms, are in Section 3. Detailed instructions may be provided in various ways controlled by quality assurance program related NOP's or Department Procedures. This appropriate combination of procedures, instructions, and drawings shall be identified in the work authorizing documents and, in all cases, the management controls specified in approved NOP's and Department Procedures shall be implemented.

5.2.3 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.

5.2.4 Every new NOP and Department Procedure, unless exempted by Paragraph 5.2.5, shall be submitted to the Quality Assurance Manager to determine if the procedure is quality assurance program related. If so, the Quality Assurance Department shall review the procedure and all subsequent revisions to assure the requirements of the Boston Edison Quality Assurance Manual are met. After review, the Quality Assurance Manager shall approve. If the procedure is determined to be not quality assurance program related, review by QAD and approval by the Quality Assurance Manager is not required, and the procedure will be so marked by QAD. However, any major revisions (additions) to such a procedure will require the revised procedure to be submitted to the Quality Assurance Manager for review to determine if the revision makes the procedure quality assurance program related.

5.2.5 For PNPS Procedures, all of the procedures in Section 1 of the PNPS Procedures Manual and selected Section 3 procedures shall be reviewed by the Quality Assurance Department and approved by the Quality Assurance Manager. The applicable procedures in Section 3 are listed in Exhibit II-5-1. Although all of the PNPS Procedures in Sections 2-8 are quality assurance program related, only the selected procedures, which describe the overall implementation of the quality assurance program at PNPS will be reviewed by the QAD and approved by the Quality Assurance Manager.

5.2.6 Changes to procedures are reviewed, approved, controlled, and distributed in the same manner as the original issue.

5.2.7 All maintenance and modification activities affecting Station structures, systems and components are controlled by the Maintenance Request system. All Maintenance Requests are reviewed by the Quality Assurance Department to assure that appropriate requirements are specified for quality related activities and to incorporate appropriate quality control hold points.

5.3 SUPPLIER PROCEDURES

5.3.1 When the procurement documents require the supplier to submit procedures for BECo approval, the department which originated the procurement documents 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, procedures for quality assurance and quality control activities shall be reviewed by the QAD.

VOLUME III

QUALITY ASSURANCE PROGRAM RELATED STATION MAINTENANCE AND CALIBRATION PROCEDURES

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CONTROL OF PURCHASED MATERIAL, EQUIPMENT, AND SERVICE

7.1 PURPOSE

This section establishes the requirements for control of purchased material and equipment (hereafter called items) and services to assure conformance to specified technical and quality assurance requirements. Measures to obtain objective evidence of quality furnished by suppliers include supplier evaluation and selection, audits and inspections at the source, and inspections and tests upon receipt.

7.2 GENERAL REQUIREMENTS

7.2.1 The quality of purchased items and services is assured by an appropriate combination of supplier and BECo activities which is decided during preparation and review of procurement documents as specified by the requirements of Section 4. When quality assurance activities by the supplier are specified, including provision of documentation, the BECo QAD evaluates the supplier's quality assurance program and its implementation to ensure the pertinent provisions of 10 CFR 50, Appendix B will be met by the supplier. Quality assurance activities by BECo include, as a mimimum, acceptance of the item or service upon receipt or completion; methods include final inspection at the source, receipt inspection, review of supplier-provided documentation, and tests. Other quality assurance activities by BECo may include audits, surveillance inspections, in-process inspections, witnessing supplier activities, and review of supplier documents, such as engineering doucments and procedures, before use.

7.2.2 The QAD maintains an Approved Suppliers List (QA-ASL) which identifies suppliers for whom QAD has evaluated and approved as satisfactory quality assurance programs and implementation. This list permits the use of certain suppliers on an ongoing basis. The QAD reviews supplier documentation of his quality assurance program and performs,or obtains evidence of, a survey which assures its implementation. At least annually, QAD performs an evaluation of a supplier's quality performance, and at least triennially, re-surveys or audits the supplier to continue the approved status. Supplier surveys may be by BECo or by others under contract to BECo for this service, or obtained via the Coordinating Agency for Supplier Evaluation (CASE). In addition, ASME Certificates are used as evidence of supplier quality assurance program implementation, for the items and services covered by the certificates.

7.2.3 Certain items used in fire protection systems, which are UL or FM approved, are purchased without the supplier evaluation described above. In general, receipt inspection and test upon receipt are performed to accept these items.

7.2.4 Certain items designated "commercial quality control items" in accordance with Section 4, may be purchased with assurance of quality by receipt inspection and selective testing. These "commercial quality control items" are identified in the Q-List Manual, Section V, and the Fire Protection List, found in Specification M-504. Requirements for such items include pre-established receipt inspection criteria supplemented by test requirements, when applicable. Suppliers of such items are not relied upon to implement any quality assurance program requirements.

7.2.5 Certain services performed by suppliers at PNPS or in other BECo facilities may be performed according to BECo's Qa Program. Suppliers of such services are governed by BECo procedures and BECo quality assurance requirements.

7.2.6 Nonconformance to procurement requirements or BECo approved supplier documents, which is identified by the supplier or by BECo source/surveillance inspection, and which consists of one or more of the following, must be submitted with technical justification to BECo for approval of recommended disposition as provided for in Section 15:

(1) Technical or material requirements are violated.

(2) Supplier documents approved by BECo are violated.

(3) Nonconformance cannot be corrected by continuation of the original manufacturing process or by rework.

(4) The item does not conform to the original requirements even though it can be restored to a condition in which its capability to function is unimpaired.

7.3 SUPPLIER EVALUATION AND SELECTION

7.3.1 Supplier evaluation and selection is an integrated action which involves Nuclear Organization Departments, Purchasing, and QAD. This cooperative effort ensures that items and services are purchased from qualified suppliers, i.e., suppliers capable to provide items and services which meet technical, quality, and commercial requirements.

7.3.2 The department which originates the procurement and identifies the technical requirements is responsible to determine the capability of the selected supplier to meet the technical requirements.

7.3.3 The QAD is responsible to determine the capability of the selected supplier to meet the quality assurance requirements imposed, if any.

7.4 SUPPLIER AUDITS

When warranted by the complexity or duration of the supplier's activities, the QAD performs audits of the supplier's quality assurance program implementation and effectiveness, according to Section 18.

7.5 SOURCE INSPECTION

7.5.1 Source inspection includes surveillance inspection, in-process inspection (hold points), witnessing supplier's activities (often requiring notification points), and final inspection (hold point). QAD determines what source inspection is necessary, based on the nature, complexity, and importance of supplier activities, and performs it to ensure procurement document requirements are met and purchased items and services are acceptable.

7.5.2 Specific hold points and notification points are included in procurement document requirements.

7.5.3 Surveillance inspections are performed by QAD if conformance with the requirements of the procurement documents for a particular item cannot be determined when the item is received or when known problems exist during the procurement phase. The purpose of such surveillance is to provide a selective review of the implementation of the supplier's quality assurance program or of the conformance of his product to requirements of the procurement documents. Quality Assurance determines the degree of supplier surveillance inspection to be performed.

7.5.4 Source inspections may not be necessary when the quality of the item can be verified by review of supplier documents, or inspection or test upon receipt. Results of source inspections are documented and maintained by BECo.

7.6 RECEIPT AND INSPECTION AND TESTS

7.6.1 Upon receipt at PNPS, purchased items are separated from already processed items until performance of receipt inspection.

7.6.2 Except for nuclear fuel assemblies, the QAD performs receipt inspections. The NOD performs receipt inspection for nuclear fuel assemblies. Receipt inspection is done according to the requirements of the BECo Purchase Order/Contract and pre-established inspection instructions.

Documentary evidence that items conform to procurement requirements shall be available at the PNPS site before installation and/or use of such items to assure that:

(1) The item is properly identified and that its identification corresponds with the documentation received.

(2) Stated packaging and shipping requirements have been maintained.

(3) All procurement requirements have been met.

(4) Documentation records are acceptable in accordance with predetermined inspection instructions.

7.6.3 After identification per Section 8, accepted items are located in a controlled storage area.

7.6.4 When document deficiencies or nonconforming items are identified, items are held in a segregated area, and identified and handled according to Section 15.

7.6.5 A written record of the results of receipt inspection and the disposition of received items is maintained as part of the permanent plant records. All items issued bear a conformance tag and have documentation to support their acceptability. If traceability is lost or the documentation review is unsatisfactory, an item becomes subject to the controls established for nonconforming items.

7.6.6 Acceptance of items may require testing by BECo or by another qualified supplier. Tests are controlled according to Section 11.

INSPECTION

10.1 PURPOSE

This section establishes requirements for inspection activities related to operation, maintenance, modification, replacement, additions, alterations and refueling of systems, structures and components to assure compliance with associated instructions, procedures and drawings.

10.2 INSTALLATION INSPECTIONS

10.2.1 Installation inspections are required at PNPS to assure that work associated with maintenance, modification, and refueling of safety related systems, structures and components is properly performed.

10.2.2 Installations inspections are performed at PNPS by QAD personnel, other qualified individuals designated by QAD, or contractors having a BECo accepted QA Program. Individuals assigned to perform installation inspections shall not be directly involved in the performance of the work being inspected and shall have the qualifications necessary to perform the inspection.

10.2.3 Installation inspection results should indicate, as appropriate, the inspection procedure used, the applicable accept/reject criteria, any qualitative and quantitative data obtained during the inspection, the inspection status, identification of the inspector, date the inspection was performed and any other information pertinent to the inspection.

10.2.4 Installation Inspection Reports and associated documentation including copies of the Maintenance Requests are maintained in the Quality Assurance Department File.

10.3 INSERVICE INSPECTIONS

Inservice inspections are performed under the cognizance of QAD in accordance with Section XI, ASME Boiler and Pressure Vessel Code, and the PNPS Technical Specifications.

10.4 INSPECTION CONTROLS

Controls exercised during inspection assure that:

10.4.1 When direct inspection is either impossible or not feasible, indirect control shall be provided by monitoring processing, operational tests, methods, equipment and personnel.

10.4.2 Procedures for maintenance, modification, and/or alterations are reviewed by QAD personnel to determine the need for independent installation inspections and incorporation of "hold points".

10.4.3 Inspection procedures or instructions are available with necessary drawings and specifications before inspection activities are performed. Inspection controls require that objective acceptance criteria, prerequisites for performing inspections, limiting conditions, and special equipment requirements be prescribed as appropriate to the inspection activity.

10.4.4 Test and measuring equipment is calibrated within required limits, according to Section 12.

10.4.5 Test and inspection results are recorded, evaluated and retained in accordance with the requirements of Section 17.

TEST CONTROL

11.1 PURPOSE

This section establishes the requirements for testing systems, structures and components to assure that they will perform satisfactorily during operation of PNPS.

11.2 GENERAL REQUIREMENTS

The Boston Edison Company has overall responsibility for test activities performed on safety related structures, systems, and components during operation, surveillance, maintenance, and modification activities.

Tests are performed to verify that plant behavior conforms to design criteria, to assure that failure and substandard performance are identified and controlled, and to demonstrate satisfactory performance after plant modification and maintenance activities.

Documentation of test activities are maintained by BECo in accordance with requirements of Section 17. Deficiencies identified during tests are controlled in accordance with requirements of Section 15. Tests performed are classified as Proof Tests, Post Work Tests, and Surveillance Tests and controlled as described below.

11.3 PROOF TESTS

11.3.1 The originator of procurement documents specifies appropriate requirements for proof tests associated with the purchase of material, equipment and parts.

11.3.2 QAD assures that selected proof tests are witnessed at supplier facilities, or are selectively witnessed at PNPS when those proof tests are not performed at supplier facilities. Proof tests are witnessed by qualified personnel using approved procedures or checklists.

11.3.3 Proof Test Data Reports, submitted by suppliers, are reviewed by QAD during receipt inspection of material, equipment, and parts at PNPS and are considered a requirement for satisfactory acceptance of the material, equipment, and parts at receipt inspection.

11.3.4 Deficiencies identified during proof testing are controlled according to Section 15.

11.4 POST WORK TESTS

11.4.1 Post Work Tests are performed at PNPS after satisfactory completion of installation inspections associated with maintenance, modification and refueling of systems, structures, and components.

11.4.2 Post-Work Tests are performed by qualified personnel in accordance with written, approved test procedures. These procedures identify all test prerequisites and environmental conditions which must be satisfied before performance of the Post Work Test. The Watch Engineer, or his designee, reviews and approves the post-work test data results and signs off and approves the test data sheets.

11.4.3 Deficiencies identified during the performance of Post Work Tests are controlled according to Section 15.

11.5 PERIODIC SURVEILLANCE TESTS

11.5.1 Periodic surveillance tests are tests required by the Technical Specifications or other commitments which are performed to demonstrate that systems, structures and components perform satisfactorily during operation of the nuclear power plant.

11.5.2 All periodic surveillance tests are identified on a Master Surveillance Test List which is controlled by NOD. This Master Surveillance Test List identifies the type of test activity, frequency interval and cognizant NOD Manager responsible for performing the periodic surveillance tests. Special handling tools and equipment are included in the scope of periodic surveillance tests to assure that they are adequately maintained.

11.5.3 Periodic surveillance tests are conducted by qualified personnel according to written, approved test procedures. Personnel assure that equipment and instrumentation utilized in performing the periodic surveillance tests is calibrated within the specified interval. These procedures identify all test prerequisites and environmental conditions which must be satisfied before the performance of the periodic surveillance tests.

11.5.4 The NOD Manager is responsible to assure that surveillance tests are performed when required, test results are evaluated, and test requirements are satisfied.

11.5.5 Deficiencies identified during the performance of periodic surveillance tests are controlled according to Section 15.

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.

This section also establishes requirements and methods to document and control conditions adverse to quality other than nonconforming items (hardware). Such conditions include deficiencies noted by QAD during audits, reviews, and inspections; and program, procedure, and documentation problems identified by any BECo personnel for any activity governed by this QA Program. Conditions noted during normal, in-process review or monitoring before final approval/acceptance of a document or activity are considered part of the process, and are not subject to the reporting requirements herein. However, problems identified after completion of the specified process shall be included.

15.2 REQUIREMENTS

15.2.1 All 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 at receipt inspection or installation inspection shall be documented on Nonconformance Reports (NCR) except as noted in b. below.

A Document Deficiency Notice (DDN) shall be used when documentation is found to be incomplete, incorrect, or inadequate during receipt inspection, thereby making it indeterminate that the item conforms to specified requirements. If an item with an open DDN is withdrawn for use, an NCR shall be initiated.

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

15.2.1b Nonconforming materials, parts, or components

identified during operation, maintenance, or surveillance testing are documented and reported via a Failure and Malfunction Report (F&MR).

Documentation in the Control Room Log and on Shift Turnover Sheets, and tagging, shall be performed as appropriate to ensure effective control.

15.2.2 Other conditions adverse to quality shall be documented as follows:

15.2.2a. Deficiencies identified by QAD shall be identified on Deficiency Reports (DR), which shall be processed according to Section 18.

15.2.2b. All other problems shall be identified on F&MR's.

15.2.3 Nonconforming items identified on an NCR shall be physically segregated from conforming items and controlled to prevent inadvertent installation or use. Installed nonconforming items shall be identified and the status of the system shall be controlled to prevent inadvertent installation or use. Installed nonconforming items shall be identified and the status of the system shall be controlled to prevent inadvertent use. Any system, component, or structure may not be declared operable in accordance with the definition of the PNPS Technical Specifications until the NCR disposition is approved, implemented, and verified by QAD, and the Nonconformance Tag is removed.

15.2.3a. Tagged nonconforming items not yet installed shall be placed in a segregated and controlled storage area designated for this purpose.

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.

15.2.3b. 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. 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.

The Maintenance Request process shall provide the necessary controls, including review by the Quality Assurance Department, to prevent inadvertent installation and inadvertent use of the structure, system, or component before the Nonconformance Tag is removed.

15.2.3c Nonconformance Tags shall only be removed by Quality Assurance personnel, and only after satisfactory resolution of the NCR or DDN

15.2.3d. The Quality Assurance Department shall keep records of all unresolved 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.

15.2.4 Nonconforming items identified on an F&MR 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.

15.2.5 All nonconforming items identified on an NCR shall be reviewed 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 or equivalent criteria. All rework or repair shall be performed using approved procedures. All dispositions of nonconforming items shall be properly documented.

15.2.5a. The Nuclear Engineering and Nuclear Operations Departments, as appropriate, are responsible for the evaluation and disposition of identified nonconformances. The Nuclear Engineering Department must approve and document their evaluation of and justification for "accept" or "repair" dispositions; and the Quality Assurance Department must approve "accept" or "repair" dispositions which affect the quality assurance requirements associated with the nonconforming item.

15.2.5b. When required by Purchase Order, or contract suppliers working under their own BECo approved QA Programs shall submit nonconformances with the disposition "accept as is" or "repair" to BECo for approval. The cognizant NED discipline group shall review the supplier's disposition and its justification; this review and approval may be documented directly on the supplier's report. NED shall assign a BECo control number to each such report. As an alternative, NED may request QAD to issue a BECo NCR to cover the report. NED shall notify the supplier of BECo's approval.

15.2.5c. The Quality Assurance Department is responsible for assuring NCR dispositions are implemented and inspected for acceptability of rework and repair actions.

15.2.6 All nonconforming items identified on an F&MR shall be reviewed and a disposition provided according to appropriate NOD 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 F&MR with reference to the related MR's.

15.2.7 Except for hardware nonconformances, discussed above, conditions identified on F&MR's shall be reviewed by the originating department to determine what immediate corrective action is necessary or to verify that immediate corrective action was taken; the required action or action taken shall be documented on the F&MR. Further F&MR review is described in Section 16.

CORRECTIVE ACTION

16.1 PURPOSE

This section establishes the requirements to be met by the Boston Edison Company to identify, document, and correct items or conditions adverse to quality and to ensure these items or conditions are evaluated to determine causes and appropriate action is taken to prevent recurrence. Conditions adverse to quality include failures, malfunctions, deficiencies, defective material and equipment, abnormal occurrences, and nonconformances.

In addition, the corrective action program ensures that the Pilgrim Nuclear Power Station operates in a safe and reliable manner, minimizes down-time, and optimizes the use of available resources by providing for a team effort in resolving problems. The preventive action portion of the program provides a cost-effective way of reducing the frequency and severity of problems.

16.2 REQUIREMENTS

16.2.1 All Nuclear Organization personnel shall perform their normal activities in a manner which will avoid or minimize quality-related problems by adhering to approved procedures, instructions, and work methods.

16.2.2 Each Vice President, Manager, or Director is responsible for the effective implementation of the BECo corrective action program within his organization.

16.2.2a. Each Department shall continually assess its operations to assure that mechanisms are in place to identify deviations from specified requirements or conditions adverse to quality which might result in potential problems.

16.2.2b Each Manager, Assistant or Deputy Manager, Group Leader, or Supervisor will ensure that all affected personnel within the Department/Group are fully aware of the corrective action program and of the Department implementing procedures. When necessary, personnel shall be trained (or retrained) in proper procedures and work methods.

16.2.3 It is the responsibility of all Nuclear Organization personnel to make sure that any incipient, suspected, or actual conditions adverse to quality, such as failures, malfunctions, deficiencies, defective material and equipment, and nonconformances are promptly identified.

16.2.3a. All identified items or conditions adverse to quality will be documented and reported in accordance with Section 15 and the appropriate procedures.

16.2.3b. All Technical Specifications or FSAR deviations shall be promptly evaluated and reported to the NRC, as appropriate, in accordance with procedures.

16.2.3c. The Nuclear Safety Review and Audit Committee (NSRAC) shall review reported conditions adverse to quality as required by the PNPS Technical Specifications.

16.2.4 All identified conditions adverse to quality shall be corrected and reported to appropriate levels of management. Section 15 provides requirements for disposition of nonconformances reported on NCRs and F&MRs, and for resolution of other conditions reported on F&MRs. Section 18 contains requirements for resolution of deficiencies reported by QAD on DRs. In addition:

16.2.4a. Each Manager is responsible for taking prompt and effective corrective action to satisfactorily resolve any items or conditions adverse to quality discovered within or assigned for action to the Department.

16.2.4b. Corrective action(s) in response to reported problems will be described in writing, and procedures shall provide for appropriate review and approval before the action is taken.

16.2.4c. Logs shall be maintained by each Department to sufficiently account for reported conditions and the corrective action(s) taken.

16.2.4d. Appropriate reports of status will be submitted to the cognizant Managers and Vice Presidents on a regular and timely basis. In any case, this interval will not exceed six months.

16.2.5 All resolved items or conditions will be further evaluated by the department which originated the NCR, F&MR, or DR.

16.2.5a. For those conditions adverse to quality deemed significant during the evaluation process, immediate action will be taken to determine the cause(s) and appropriate preventive action(s).

The term "significant" applies to a condition adverse to quality which warrants further evaluation for cause(s) and requires management attention/action because it represents:

- a breakdown in any portion of the Quality Assurance Program conducted in accordance with the requirements of Appendix B to 10CFR50;

- a deficiency in design such that the design does not conform to the criteria and bases stated in the final safety analysis report;

- damage to a structure, system, or component which will require extensive evaluation, extensive redesign, or extensive repair to meet the criteria and bases stated in the final safety analysis report, or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety function;

- a deviation from performance specifications or design drawings which will require extensive evaluation, extensive redesign, or extensive repair to establish the adequacy of structure, system, or component to meet the criteria and bases stated in the final safety analysis report or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety function;

- the failure or malfunction of, or use of nonconforming material in a structure, system, or component which will require extensive evaluation, extensive redesign, or extensive repair to establish the adequacy of a structure, system, or component to meet the criteria and bases stated in the safety analysis report or to otherwise establish the adequacy of the structure, system, or component to perform its intended safety function.

- the repetitive recurrence of a deficiency not covered by the items above.

16.2.5c. The recommendations for preventive action will be forwarded to the responsible Department Manager.

16.2.6 For those items or conditions not deemed significant during the evaluation, periodic trend analysis will be performed by the QAD to identify adverse trends or recurring problems. Problems identified will be evaluated for cause(s) and recommended preventive action(s) transmitted to the responsible Department Manager.

16.2.7 Corporate policy requires that a significant condition adverse to quality is promptly reported by the responsible Department Manager to the appropriate higher levels of BECo management with a description of the condition, the apparent cause of the condition, and the immediate corrective action taken or planned. Management shall be kept informed as information is developed about cause and preventive action.

AUDITS

18.1 PURPOSE

This section establishes requirements for an auditing program to verify the implementation and to assess the effectiveness of the Boston Edison Quality Assurance Program.

18.2 PERFORMANCE OF AUDITS

18.2.1 QAD performs internal audits of all quality-related activities associated with operation of PNPS. The frequency intervals are based on the requirements of regulations, Regulatory Guides, and ANSI Standards identified in Paragraphs 2.3.2 and 2.3.4 of Section 2; audits are also done when significant changes or problems arise, and upon management request. A specific scope for each audit is prepared by the QAD before performance of the audit.

18.2.2 When suppliers perform work related to operation, maintenance, modification and refueling of PNPS, QAD may perform audits at PNPS and at the supplier's facilities to verify implementation of their quality assurance programs as determined necessary by QAD.

18.2.3 Audits required by Section 6.0 of PNPS Technical Specifications will be performed under the cognizance of the Nuclear Safety Review and Audit Committee by Quality Assurance Department personnel.

18.2.4 QAD performs audits/surveillance inspections, as necessary, to verify that corrective action resulting from identified deficiencies have been properly implemented and are effective.

18.2.5 Audits are performed by qualified personnel using checklists or marked up written procedures to effectively evaluate conformance to specified requirements. Auditors shall not have direct responsibility in the areas being audited.

18.3 REPORTING OF AUDIT FINDINGS

18.3.1 After reviewing audit findings with the cognizant manager of each organizational unit which has been audited, an audit report is prepared by QAD.

18.3.2 As a minimum, audit report shall include:

1. Description of the audit scope.

2. Identification of the auditors.

3. Persons contacted.

4. Summary of audit results including an evaluation statement of the effectiveness of the QA Program elements which were audited.

5. Details of audit findings.

6. Recommendations for correcting deficiencies or improving the QA Program, as appropriate.

18.3.3 Audit deficiencies are recorded on a Deficiency Report and are entered into the Deficiency Follow Program to be dispositioned.

18.4 DISPOSITIONING OF AUDIT DEFICIENCIES

18.4.1 Audit deficiencies recorded on Deficiency Reports shall be reviewed by QAD to determine whether a significant (see Paragraph 18.2.5b) condition adverse to quality exists.

18.4.2 A deficiency deemed to be significant is designated "immediate" and corrective action must be initiated promptly by the responsible Manager and appropriate levels of higher management notified. A response shall be submitted to the QA Manager within one week and a copy of the Deficiency Report and the response shall be forwarded to the appropriate Vice President.

18.4.3 All other Deficiency Reports require that a written response be forwarded to the QA Manager within thirty (30) days.

18.4.4 For each Deficiency Report, the official start of the time clock for the initiation, implementation, and completion of the required corrective action shall be the date of the QA Manager's signature.

18.4.5 In the event corrective action cannot be completed by the initial response due date, a schedule for corrective action completion shall be indicated on the DR. This date shall not exceed 90 days from the DR issue date unless a written request for extension, including justification, is submitted to, and approved by, the appropriate Vice President. Copies of the approved extension request shall be provided to the Senior VP-Nuclear and QAD Manager.

18.4.6 Should Quality Assurance not concur with actual/proposed corrective action, and be unable to obtain satisfactory resolution directly with the responsible Manager, a formal

request for a second response shall be forwarded to the appropriate Vice President. The Quality Assurance Manager may, if deemed appropriate, implement the requirements of Paragraph 2.5.6 of this Manual.

18.4.7 Upon completion of planned corrective action, the recipient of the Deficiency Report shall provide timely written notice to the QA Manager, stating the actual corrective action(s) taken and the completion date(s) thereof.

18.4.8 Quality Assurance should verify corrective action within 30 calendar days of the receipt of the notification of completion. Verification shall also assure effectiveness of corrective action.

18.4.9 For those Deficiency Reports that are issued to suppliers who are performing on-site safety-related activities in accordance with their approved QA Programs, the process in Section 18.4 shall apply. Interface shall be directly with he supplier's site manager with a copy of the Deficiency Report forwarded to the applicable BECo Manager for information only.

18.4.10 Corrective actions for deficiencies identified during inspections/audits of suppliers at their facilities are documented and resolved on a Deficiency Report, and the process defined in Section 18.4 is used, were practicable. Interface shall be directly with the supplier's QA manager.

18.4.11 The status of dispositions audit deficiencies recorded on Deficiency Reports shall be reported periodically to Department Managers and to higher levels of management.

18.5 PERFORMANCE FOR SURVEILLANCE MONITORING

18.5.1 QAD performs surveillance monitoring of Nuclear Operations Activities to assess compliance with established Quality Assurance Program requirements, written policies, procedures, instructions, directives, codes, standards, specifications, and control documents. Surveillances can be performed by direct observation or records review. Surveillances shall be planned and unplanned, selectively and randomly, and with sufficient detail to effectively monitor and report the conditions at the Pilgrim Nuclear Power Station.

18.5.2 The surveillance monitoring schedule shall be based upon the following:

- the quantity and difficulty of work/tests in progress, and the activities' importance to safety.

- changing plant operating conditions.

- trends observed during previous surveillances and other activities such as audit results, LER's, INPO reports, and reports of outside agencies such as the U.S. Nuclear Regulatory Commission.

18.5.3 Surveillance monitoring shall be performed by certified Lead Auditors using approved checklists when applicable.

18.5.4 Discrepancies noted during surveillance monitoring shall be recorded on a surveillance finding sheet and reviewed to determine whether a significant condition adverse to quality exists. If a significant condition adverse to quality exists, a Deficiency Report will be issued to document the condition and the corrective action. A surveillance report and finding sheets shall be distributed to responsible supervision.

18.5.5 Recommended corrective action shall be proposed by QAD. Final corrective action to be taken shall be concurred with by both the cognizant department manager and the QA Manager/designee. If a difference of opinion arises between Quality Assurance personnel and those of another department, resolution is first attempted by the Quality Assurance Manager and the other cognizant manager. If a solution acceptable to the QA Manager cannot be obtained, the matter shall be promptly referred by the QA Manager to the appropriate upper levels of management.

18.5.6 Quality Assurance shall verify that timely corrective action has been taken by cognizant departments. Verification shall be accomplished by re-monitoring of the deficient areas.

18.5.7 The Quality Assurance Department shall prepare and distribute to management Quarterly Reports of the Surveillance Program to summarize surveillance results and to assess problem trends and effectiveness of corrective actions.

18.6 RECORDS/REPORTS OF AUDITS

18.6.1 QA audit records, reports and associated documentation pertinent to the audits are maintained in the QAD file and the Nuclear Records Management System.