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July 3, 2001

Re: Indian Point Unit No.2  
Docket No. 50-247  
NL 01-090

US Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Mail Station O-P1-17  
Washington, D.C. 20555-0001

Subject: Quality Assurance Program Description Revision 16

Pursuant to 10 CFR 50.54, submitted as Attachment I is Revision 16 to Con Edison's Quality Assurance Program Description (QAPD) for Indian Point Unit No. 2. Revision 16 supercedes Revision 15, which was submitted on December 16, 1999. The revision reflects the organization as of June 2001 and the assignment of responsibilities. The specific changes made to the pages are also highlighted in bold italic text and are annotated with footnotes. The footnotes explain the change from Revision 15 and reference the 50.54(a) analysis approving the change.

Additionally, this letter serves to notify the NRC that Con Edison is utilizing optical disk record storage media in accordance with Generic Letter 88-18 and 10CFR50.4(b)(7).

The QAPD changes have been evaluated in accordance with 10 CFR 50.54(a)(3). None of the changes reduce the commitments in the program description previously accepted by the NRC.

There were six (6) major categories of changes.

#### 1. Organizational Changes

The majority of the changes are Organization revisions. The revision reflects the organization as of June 2001 and the assignment of responsibilities. These were evaluated to assure that persons and organizations performing QA functions continue to have the requisite authority and organizational freedom per 50.54(a)(3)(vi). These changes include the following:

QAPDrev15-003 rev0 "Nuclear Safety & Licensing Moving to Nuclear QA"  
QAPDrev15-004 rev0 "Reintroduction of Chief Nuclear Engineer Position"  
QAPDrev15-005 rev0 "Nuclear Projects Moving to Maintenance"  
QAPDrev15-006 rev0 "T&P and ISI Reorganization"  
QAPDrev15-007 rev0 "Planning Groups to Work Control"  
QAPDrev15-016 rev0 "Re-Organization of Nuclear Engineering"

2004

QAPDrev15-018 rev0 “Nuclear Engineering Establishment of the Project Organization”  
QAPDrev15-019 rev0 “Clarification of NFSC Role”

## 2. Introduction of Descriptive Text for Generic Organization Position Titles

QAPD Section 3.2 has been extensively reformatted for clarity, to introduce descriptive text for generic organization position titles indicating functional relationships, authorities and responsibilities per 10 CFR 50.54(a)(3)(iii) and to provide continuity of the descriptive text supporting the organization charts.

## 3. Plant Record Storage on Optical Disks

In accordance with NRC Generic Letter 88-18 “Plant Record Storage on Optical Disks” we have upgraded QAPD section 5.2.12 “Plant Records Management” to reflect our use of the optical disk record storage media. The appropriate supporting QA program documents specified by the NRC Generic Letter 88-18, have been developed and implemented.

## 4. Introduction of Continuous Audit Process

The QAPD Appendix B “Review and Audit Program” and the supporting QAPD sections have been revised to describe our updated QA oversight process that continues to fully satisfy our QA regulatory commitments to Regulatory Guide 1.144, “Auditing of Quality Assurance Programs for Nuclear Power Plants,” January 1979, as modified by our Table A. These changes include the following:

QAPDrev15-008 rev0 “Continuous Audit Process”

QAPDrev15-012 rev0 “Change Audit Periodicity to N18.7 Two Year Cycle Consistent with IP Unit No. 3 per 10 CFR 50.54(a)(ii)”

## 5. Engineering Change Process

QAPDrev15-013 rev 0 revised portions of QAPD section 5.2.7.2 “Modifications” addressing the engineering change process. In accordance with 10 CFR 50.54(a)(3)(v) this change also eliminated the QAPD text that duplicated the language of the quality assurance standard ANSI N45.2.11 “Quality Assurance Requirements for the Design of Nuclear Power Plants,” 1974. The description of the change process was replaced by a reference to a QA program document that addresses Regulatory Guide 1.64 “Quality Assurance Requirements for the Design of Nuclear Power Plants” Revision 2 as modified by the QAPD Tables A & B.

## 6. Inclusion of CI-240-1 Supplemental QA Programs into QAPD

Appendix C “Supplements” has been added to the QAPD under QAPDrev15-009 rev 0. This change reflects a consolidation of licensing basis quality related documents into the QAPD. These documents previously were contained in a Con Edison Corporate Instruction CI-240-1 “Quality Assurance Program for Operating Nuclear Plants.” The supplements reflected the application of our QA Program to “Radioactive Material Packages,” to our “Fire Protection Program” and our “Meteorological Monitoring Program.”

Other changes:

QAPDrev15-001 rev 0 "10 CFR 50.54(x) Changes to Procedures"

QAPDrev15-002 rev 1 "Deletion of Steam Generator Replacement Project (SGRP) QA program with Conclusion of the Project"

QAPDrev15-010 rev 0 "Changes to EOP Format Requirements to Reflect Licensing Basis Commitments"

QAPDrev15-014 rev 0 "Changes in 10 CFR 50.59"

QAPDrev15-015 rev 0 "Clarify Station Nuclear Safety Committee (SNSC) review responsibilities of procedures"

QAPDrev15-017 rev 0 "Clarify Responsibility for Review of Equipment Malfunctions"

The remaining QA Program changes involved administrative improvements and clarifications, spelling corrections, punctuation or editorial items per 50.54(a)(3).

No new regulatory commitments are being made by Con Edison in this correspondence.

Should you or your staff have any questions regarding this matter please contact Mr. John McCann, Department Manager, Nuclear Safety and Licensing at 914-734-5074.

Sincerely,



Attachments

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
CONSOLIDATED EDISON COMPANY ) Docket No. 50-247  
OF NEW YORK, INC. )  
(Indian Point Station, Unit No. 2) )

CERTIFICATION FOR  
QUALITY ASSURANCE PROGRAM DESCRIPTION REVISION 16

I, A. Alan Blind, am a Vice President of Consolidated Edison Company of New York, Inc. ("Con Edison"). Revision 16 to the Quality Assurance Program Description for Indian Point Unit No. 2 was prepared pursuant to the requirements of 10CFR§50.54 and 10CFR§50.71(e). I believe the contents thereof to be true and accurate based upon my personal knowledge or upon information received from others which I believe to be reliable, and that said contents reasonably present changes to the Quality Assurance Program Description made since the previous submittal pursuant to Commission requirements or made under the provision of 10CFR§50.54 and other applicable regulations with more specific criteria for accomplishing such changes but not previously submitted to the Commission.

Revision 16 to the Quality Assurance Program Description was prepared by Con Edison and has received a broad review within Con Edison. Based on these efforts, I believe that Revision 16 to the Quality Assurance Program Description accurately presents changes made to the Quality Assurance Program since the previous revision and no more than six months prior to the date of this submittal. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

BY: A. Alan Blind  
A. Alan Blind  
Vice President -  
Nuclear Power

Subscribed and sworn to  
before me this 3<sup>rd</sup> day of  
July, 2001.

ERISILIA A. AMANNA (Review)  
Notary Public

**ERISILIA A. AMANNA**  
Notary Public, State of New York  
No. 01AM6036669  
Qualified in Westchester County  
Commission Expires March 20, 2002

ATTACHMENT 1  
QUALITY ASSURANCE PROGRAM DESCRIPTION REVISION 16

**ATTACHMENT I**

**Quality Assurance Program Description  
Revision 16**

**Consolidated Edison Company of New York, Inc.  
Indian Point Unit No. 2  
Docket No. 50-247  
July 2001**

This Quality Assurance Program description generally follows the format of ANSI N18.7-1976 including the sequential identification of its Sections, except that Section 1 "Scope" and Section 2 "Definition" are not included. Consequently, this description begins with Section 3.0.

Revision 16, July 2001

**QUALITY ASSURANCE PROGRAM**

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<sup>1</sup> Administrative Change to incorporate Con Edison Instruction CI-240-1, QA Program Supplements reflecting historical License Commitments into the Indian Point Unit 2 QAPD

<sup>2</sup> Typo to correct incomplete incorporation of rev 14 change from Generation to Nuclear Engineering.

## FOREWORD

The following Quality Assurance Program conforms to the requirements of 10CFR50, Appendix B. Additionally, Con Edison commits to having a Quality Assurance Program complying with the Regulatory Position in the following Regulatory Guides as modified by Table A and Table B.

### NRC Regulatory Guides

- |       |  |
|-------|--|
| 1.8   | "Personnel Selection and Training," Revision 1, September 1975   |
| 1.29  | "Seismic Design Classifications," Revision 3, September 1978   |
| 1.30  | "Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electrical Equipment," August 11 1972  |
| 1.33  | "Quality Assurance Program Requirements (Operation)," Revision 2, February 1978  |
| 1.37  | "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants", March 1973  |
| 1.38  | "Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water-Cooled Nuclear Power Plants," Revision 2, May 1977                                       |
| 1.39  | "Housekeeping Requirements for Water-Cooled Nuclear Power Plants," Revision 2, September 1977  |
| 1.54  | "Quality Assurance Requirements for Protective Coatings Applied to Water Cooled Nuclear Power Plants," June 1973   |
| 1.58  | "Qualification of Nuclear Power Plant Inspection, Examination, and Testing Personnel," Revision 1, September, 1980   |
| 1.64  | "Quality Assurance Requirements for the Design of Nuclear Power Plants," Revision 2, June 1976   |
| 1.74  | "Quality Assurance Terms and Definitions," February 1974   |
| 1.88  | "Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records," Revision 2, October 1976   |
| 1.94  | "Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel during the Construction Phase of Nuclear Power Plants," Revision 1, April 1976 |
| 1.116 | "Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and Systems," Revision O-R, June, 1976   |
| 1.123 | "Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants," Revision 1, July 1977  |
| 1.144 | "Auditing of Quality Assurance Programs for Nuclear Power Plants," January 1979  |
| 1.146 | "Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants," August 1980   |

Many ANSI standards endorsed by these Regulatory Guides give quality assurance programmatic control for the design and or construction phases of nuclear power plants. Accordingly, Con Edison has, where practicable, adapted these standards' requirements and guidelines to the operations phase of its nuclear power plants and has developed provisions for certain operations phase conditions not addressed in these standards. Where any discrepancies exist between this program description and the requirements and guidelines of the above Regulatory Guides, the requirements and guidelines of the ANSI Standards and associated Regulatory Guides shall prevail as modified by Table A and Table B

## QUALITY ASSURANCE PROGRAM

### 3.0 Owner Organization

#### 3.1 General

Con Edison owns nuclear units Indian Point No. 1 and No. 2. Unit No. 2 is in operation. This program of administrative controls and quality assurance applies to the operation of Indian Point Unit No. 2, including those activities conducted on the Unit No. 1 site that are necessary to support Unit No. 2 operation. This program is in effect at all times to assure that operational phase activities are carried out without undue risk to the health and safety of the public.

This program is documented through corporate instructions and administrative procedures developed by participating organizations and provide control of activities affecting the quality of structures, systems, and components of the nuclear plants and their operation consistent with their importance to safety.

The determination of which systems, structures and components affect safety is in accordance with 10 CFR 50 Appendix B and includes those

- o which comprise or are necessary to ensure the integrity of the reactor coolant pressure boundary
- o which ensure the capability to shutdown the reactor and maintain it in a safe shutdown condition
- o whose failure could result in conservatively calculated offsite doses that exceed 0.5 Rem to the whole body or its equivalent to any part of the body; *or*
- o structures whose failure could reduce the functioning of plant features within the above categories to an unacceptable safety level.

Those structures, systems, and components are those that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public and are designated as Con Edison Class "A". Activities affecting quality are documented within a document control system which assures that instructions, procedures and drawings are reviewed and approved for release by authorized individuals.

"Class A" items include environmentally qualified (EQ) equipment, which are those items located in a harsh environment and, which are in compliance with 10 CFR 50.49, the DOR Guidelines, and/or NUREG-0588.

The EQ equipment is identified on an electronic database, which is updated by an EQ System Engineer. The electronic database is accessible by organizations such as Nuclear Power, Nuclear Engineering and Nuclear Quality Assurance.

### 3.2 Assignment of Authority & Responsibility<sup>3</sup>

The Senior Vice President Nuclear Operations is the Chief Nuclear Officer of Consolidated Edison Company of New York (Con Edison) and reports directly to the President of Con Edison. The Senior Vice President, Nuclear Operations of Con Edison has directed that all personnel involved in activities associated with the safety of the nuclear power plants participate in the quality assurance program.

Lines of authority, responsibility, and communication among the organizations participating in this program are shown in Charts A, B C and D. Chart A depicts the Corporate organization, Chart B depicts the Chief Nuclear Officer's organization and Chart C the Nuclear Power organization and Chart D the Nuclear Engineering organization. These relationships, departmental responsibilities and key personnel job descriptions are documented and updated as appropriate. Functions or responsibilities assigned to specific position titles may also be delegated in accordance with Corporate Policies. *The duties and responsibilities of the participants are described in Position Guides, procedures or manuals. Human Resources is responsible for maintaining up to date organization charts staffing and organizational responsibility documents. These duties and responsibilities are designed to assure that qualified personnel who do not perform or directly supervise the work verify the attainment of program objectives.*

The major organizations or groups participating in this program are Nuclear Power, Nuclear Quality Assurance and Oversight, Nuclear Engineering, *Central Field Services, Business Services* and the Nuclear Facilities Safety Committee. Changes to the quality assurance program, which is described herein, may be initiated by any of these organizations. Nuclear Quality Assurance coordinates overall development of this Quality Assurance Program Description and obtains concurrence of the organization(s) affected by the changes. *These changes may include the development of temporary guidance, in the form of an appendix to this document, to provide direction in unusual situations not within the scope of this document to direct operations during testing, maintenance, and modifications; to provide guidance in unusual situations not within the scope of normal programs and procedures; and to insure orderly operations for short periods when the configuration of the station organization does not support the needs of the operating organization. The Appendix shall include the duration its may be use and is processed in accordance with 10 CFR 50.54(a)(11).<sup>4</sup> Provisions in the quality assurance program also provide for development of procedures, with the approval of the Senior Vice President, Nuclear Operations, for unique situations, which differ from specified programmatic controls.<sup>5</sup> Project plans may be utilized to delegate quality functions described in this QAPD to Project Organizations. The assignment of quality functions to project organizations will be reviewed by Nuclear Quality Assurance to ensure that those performing quality functions are sufficiently independent of cost and schedule when opposed to safety considerations<sup>6</sup>. The approval of at least the Senior Vice President, Nuclear Operation is required for changes to this Quality Assurance Program Description *that require submission to the Nuclear Regulatory Commission for approval prior to implementation.**

Procedural controls provide for "waiving" of tests, inspections and *operational requirements*<sup>7</sup> previously specified by Nuclear Engineering, Nuclear Quality Assurance or Nuclear Power. These procedural controls provide authority to personnel or organizations that originally specified the test, inspection or *operational requirements*<sup>8</sup> to reevaluate their necessity and, where appropriate, to authorize a waiver.

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<sup>3</sup> Section 3.2 has been extensive reformatted for clarity and to introduce descriptive text for generic organization position titles to indicate functional relationships authorities and responsibilities per 10 CFR 50.54(a)(3)(iii), and to provide continuity of the descriptive text supporting the organization charts.

<sup>4</sup> QAPDrev15-002 rev0 change to provide authorization for use of Steam Generator Replacement Team to perform quality functions

<sup>5</sup> Editorial change to relocate sentence from section 3.2, paragraph 6 to this location in paragraph 3 and clarify sentence structure.

<sup>6</sup> QAPDrev15-018 rev0 creation of project organization to implement quality functions

<sup>7</sup> QAPDrev15-001 rev0 clarification to replace word "operations" with "operational requirement"

<sup>8</sup> QAPDrev15-001 rev0 clarification to replace word "operations" with "operational requirement"

In case of an emergency or a similar situation, procedural controls provide for possible waivers to inspections, tests or operational requirements. These conditions and controls, discussed further in item 3 of Table A, require documented authorization by *a licensed senior operator*<sup>9</sup> or in case of a declared emergency as specified in the Emergency Plan.

Disputes involving quality arising from a difference of opinion between Nuclear Quality Assurance personnel and other departments' personnel are resolved by the direct management of the personnel involved or, where necessary, by a higher level of management. Nuclear Quality Assurance, by virtue of its independence within the corporate structure, can assure that significant quality disputes receive appropriate resolution satisfactory to Nuclear Quality Assurance.

***The Senior Vice President Nuclear Operations is the Chief Nuclear Officer and has overall responsibility for the Indian Point Nuclear Power Stations Units 1 & 2. Chart B depicts the Chief Nuclear Officer's organization. The Department Manager of Quality Assurance, the Vice President Nuclear Power, the Vice President Nuclear Engineering and the General Manager of Business Services report directly to the Senior Vice President Nuclear Operations. Managers responsible for Human Resources, the Employee Concerns Program and the Environment, Health and Safety Programs also report to the Senior Vice President.***<sup>10</sup>

***The Department Manager, Nuclear Quality Assurance and Oversight reports to the Senior Vice President Nuclear Operations, who reports directly to the President of Consolidated Edison Company of New York, Inc. This provides Nuclear Quality Assurance with the authority and organizational freedom to identify quality problems; to initiate, recommend or provide solutions through designated channels; and to verify implementation of solutions. The Department Manager, Nuclear Quality Assurance and Oversight, oversees the licensing<sup>11</sup> and quality assurance activities including procurement quality assurance and audit activities at Indian Point. He has three managers reporting to him: the manager responsible for, Nuclear Safety and Licensing<sup>12</sup>, the manager responsible for the Quality Assurance Oversight Program and the manager responsible for Nuclear Quality Control, Procurement Quality Assurance and the Quality Assurance Programs<sup>13</sup>. The Manager, Nuclear Quality Assurance and Oversight is responsible for the indoctrination and training of personnel reporting to him. Nuclear Quality Assurance is responsible for assuring that quality assurance programs are established consistent with this program and Company policy and, assures that these programs are properly implemented. Nuclear Quality Assurance is responsible for reviewing proposed changes to this program. Nuclear Quality Assurance carries out these responsibilities primarily through program development, site surveillance and first-line inspection and by oversight<sup>14</sup> of those activities which affect plant safety. Nuclear Quality Assurance reviews documents, which implement this program to assure that they include adequate quality assurance principles. Nuclear Quality Assurance develops oversight plans and schedules, and administers other activities associated with continuous auditing process.***<sup>15</sup>

***The manager responsible for Business Services provides support for the Indian Point Station. He has several managers reporting to him. Their responsibilities include for Strategic Planning, Material Procurement, Nuclear Security, Records Management, and Computer Applications. Records Management is responsible for maintenance of records, document control and distribution of design documents.***<sup>16</sup> ***Nuclear Power Material Procurement reports to the General Manager of Business Services. Nuclear Power Material Procurement is responsible for preparing, issuing and controlling***

<sup>9</sup> QAPDrev15-001 rev0 clarification to reflect 10 CFR 50.54(x) replaces "the on watch Shift Manager" with "a licensed senior operator".

<sup>10</sup> Paragraph added to describe organization chart.

<sup>11</sup> QAPD rev15-003 rev0 moving NS&L to NQA & O

<sup>12</sup> QAPD rev15-003 rev0 moving NS&L to NQA & O

<sup>13</sup> QAPD rev15-006 rev0 moving the responsibility for the ISI program to Nuclear Engineering

<sup>14</sup> QAPD rev15-008 rev0 describing the continuous audit process

<sup>15</sup> QAPD rev15-008 rev0 describing the continuous audit process

<sup>16</sup> Paragraph added to describe organization chart.

*purchase orders, which are initiated by the plant personnel<sup>17</sup>; including those in Nuclear Engineering and Nuclear Power. It is also responsible for reviewing purchase requisitions issued by other organizations; for receipt inspection of incoming Class "A" items purchased by Nuclear Power and Nuclear Engineering; and for the inventory control of Class "A" stock items. Material Procurement also maintains an approved vendors list.<sup>18</sup> The Central Field Service of Con Edison's Central Services provides storage facility for materials and supplies for Indian Point Station and fills orders for supplies from users and other storerooms.<sup>19</sup>*

The Nuclear Facilities Safety Committee (NFSC) is composed of Company employees and may also utilize cognizant personnel from outside the Company. A majority of the NFSC membership is independent of the Nuclear Power organization. The NFSC is responsible for advising the Senior Vice President, Nuclear Operations regarding plant safety. The organization and duties of this Committee are described in the Appendix B "Review and Audit" of this document. The NFSC is kept fully informed by Nuclear Power management personnel of matters related to nuclear safety. This information is documented and reviewed by the NFSC. The NFSC meets at least quarterly to review items related to safety and semiannually to review and evaluate the results of periodic audits performed by Nuclear Quality Assurance to further assure safe operation and the adequacy of the audit program.

The Vice President, Nuclear Power is responsible for the day-to-day operation and maintenance at the plant. The Plant Manager and the Manager of the Corrective Action Group report to him. *Chart C depicts the Nuclear Power Operation.*

The on-site Station Nuclear Safety Committee (SNSC) functions within the on-site organization and advises the Vice President, Nuclear Power on all matters related to nuclear safety. The organization and duties of the SNSC are described in the Appendix B "Review and Audit" of this document.<sup>20</sup> This committee meets at least once per calendar month and is comprised of key station personnel.

*The Plant Manager directs the operation and maintenance of the plant. There are several managers reporting to the Plant Manager. A manager is responsible for the operation of the reactor, performance of surveillances and testing, preparation and control of procedures necessary to support the normal and off-normal operation of facility, and control of equipment. A manager is responsible for the performance of preventative maintenance, corrective maintenance, installation of design modifications, and the control and calibration of measuring and test equipment (MT&E). A manager is responsible for the radiation program, the chemistry program, radiological support and the radwaste program. A manager is responsible for controlling work at the station and another is responsible for planning and executing outages.<sup>21 & 22</sup>*

*The Indian Point Unit 1 Project Manager has authority over the conduct of Unit 1 activities. The Unit 1 Project Manager is responsible to the Indian Point Station Plant Manager for assuring that these activities are performed in accordance with the quality assurance program.<sup>23</sup>*

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<sup>17</sup> QAPDrev15-005 reflecting incorporation of Nuclear Projects into Maintenance Department & editing text to reflect any material procurement review of all requisitions

<sup>18</sup> Editorial change removing paragraph break.

<sup>19</sup> Editorial change this sentence was moved within the section 3.2 for clarity.

<sup>20</sup> Editorial change to reflect QAPD revision 15 change that relocated the Technical Specification Administrative Controls to QAPD.

<sup>21</sup> Descriptive text added for clarity to describe generic functions assigned to organization rather than specific titles.

<sup>22</sup> QAPD Change Request 15-005 incorporating Nuclear Projects into Maintenance eliminated the need to define the division of responsibilities between Nuclear Projects and the other sections within the Maintenance Department.

<sup>23</sup> Administrative change to reflect Unit I Technical Specification Amendment request relocating Unit 1 TS section 3.2.1.1a to QAPD

The Corrective Action Group (CAG) is responsible for the administration of the corrective action program. The CAG reviews each condition report, determines the appropriate significance level and makes assignments to the appropriate Department or Section Managers for review and appropriate action. The action addressees are responsible for the evaluation of the condition, establishing appropriate disposition, assigning corrective action and verification of the corrective action as appropriate. The CAG periodically analyzes and trends conditions adverse to quality and reports the results to station management.

The Vice President, Nuclear Engineering is responsible for the station engineering organization, as well as Communications, Emergency Preparedness and Training. <sup>24</sup> *Chart D depicts the Nuclear Engineering Operation. There are several managers reporting to the Vice President, Nuclear Engineering.*

*The Chief Nuclear Engineer is responsible for directing the station engineering organizations<sup>25</sup>. Nuclear Engineering is primarily responsible for ensuring that station equipment and plant structures, systems and components can perform their design functions safely and reliably. Several managers support the Chief Nuclear Engineer.*

*A manager is responsible for the design activities included in system and component modification and the implementation of plant modifications. To exercise this responsibility, the Design Engineering organization prepares, issues, revises, and controls design documents including specifications, drawings, and modification procedures. This group is located near the plant site.<sup>26</sup>*

*A manager is responsible for providing direct engineering support and day-to-day technical advice to the plant. This group is located at the plant site. It also prepares and issues documents associated with minor engineering changes<sup>27</sup> modifications. This group provides oversight of the Technical Specification surveillance program<sup>28</sup>, engineering regulated/codified programs (e.g. ISI/IST, EQ), and post maintenance testing. The group<sup>29</sup> is also responsible for procurement and timely delivery of nuclear fuel to Indian Point 2 consistent with assuring reliable supply. The group's responsibilities include planning and providing for all nuclear fuel requirements, determining the required quantities of uranium, UF6 conversion services, enrichment, fabrication, shipping, storage and other nuclear fuel services, preparation of uranium specifications, arranging and controlling all traffic of nuclear fuel and by-products prior to fabrication and in transfer to and from the nuclear plant.*

*Managers are responsible for providing support to the Nuclear Engineering groups. They perform the functions of maintaining the Updated Final Safety Analysis Report and management of selected projects. These projects include long term capital projects as well as emergent issues that require project management focus for external engineering and installation functions.<sup>30</sup>*

Each organization participating in this program is responsible for providing indoctrination and training of its personnel performing activities affecting quality and safety to ensure that suitable proficiency is achieved and maintained. Nuclear Quality Assurance certifies Con Edison non-destructive examination personnel. Nuclear Quality Assurance personnel are trained to have and maintain proficiency in skills related to their specific assignments and in their knowledge of this program. Nuclear Quality Assurance personnel are provided indoctrination and training in the areas of quality assurance management and quality assurance practices, procedures, and requirements, including applicable regulatory and code requirements. Nuclear Quality Assurance provides indoctrination and training concerning the requirements of this quality assurance program to Nuclear Quality Assurance personnel, and appropriate personnel in other

<sup>24</sup> QA Program Change 15-003 moving NS&L to NQA & O

<sup>25</sup> QAPDrev15-004 rev 0 instituting the Chief Nuclear Engineering position responsible for engineering activities.

<sup>26</sup> Clarification to identify the location of the organization per Std Review Plan 17.2. criteria 1.A.5.

<sup>27</sup> QAPDrev15-013 rev 0 change to reflect current terminology used by station to define design changes.

<sup>28</sup> QA Program Change 15-006 moving Test & Performance functions into Site Engineering group.

<sup>29</sup> QA Program Change 15-016 moving Reactor & Fuels Engineering group to Site Engineering Group.

<sup>30</sup> QAPDrev15-016 rev 0 introducing generic position titles within the Nuclear Engineering Operation

organizations.

### 3.3 Indoctrination and Training

Indoctrination and training in the administrative controls and quality assurance program is conducted for Nuclear Engineering, Nuclear Power, *Central Field Services, Business Services*<sup>31</sup> and Nuclear Quality Assurance personnel who perform activities which affect quality. This training includes:

- (1) Company policies, procedures and instructions that establish the program,
- (2) Procedures or instructions that implement the program.

Personnel participating in the quality assurance program are conversant with the requirements of Appendix B to 10 CFR 50 and the Regulatory Guides, as appropriate, listed in the Foreword. To further their understanding of this document, such personnel participate in industry-technical society discussion groups and maintain contact with latest industry literature.

Training of Nuclear Quality Assurance personnel is based on the individual needs to improve or develop new skills in performing their jobs. Accordingly, selected courses are attended by Nuclear Quality Assurance Engineers, Nuclear Quality Assurance Examiners and Consultants. These courses are in the areas of quality assurance management, quality assurance requirements for the nuclear industry, engineering auditing, reliability, non-destructive examination techniques, and welding technology. When required by Code, detailed and specific training is given to examiners in non-destructive examination in accordance with Society for Nondestructive Testing (SNT) specifications.

A record of training sessions, including a list of those attending and a description of the material discussed, is maintained.

For operations training, station staff retraining and replacement training, a program is maintained under the direction of a Department Manager, Nuclear Training. The Training Department includes two sections; Technical/Skills Training and Operations Training.

### 3.4 On-site Operating Organization

The on-site operating organization includes one or more individuals knowledgeable in the following fields: nuclear power plant operation, nuclear power plant mechanical, electrical and electronic systems; nuclear engineering; chemistry and radiochemistry and radiation protection. Members of the facility staff have appropriate experience, training and retraining to assure that necessary competence is maintained in accordance with the provisions of the plant Technical Specifications. The training and retraining programs are documented and approved by the Section Manager, Technical/Skills Training or Operations Training.

Qualification and training in welding is in accordance with the requirements of ASME Section IX or other applicable codes as identified by the current interval ISI/IST ASME Section XI program commitments.

Positions requiring personnel to have a current NRC reactor operator license are delineated in the plant technical specifications.

The bases for the qualification of personnel who perform quality assurance inspections, examinations and tests are the following:

- a) Education: minimum required - high school graduate or, alternatively, suitable job experience in the particular area;
- b) Training: minimum required - evidence of specialized training sufficient to perform a

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<sup>31</sup> Editorial change to reflect role of Business Services

- particular job, e.g., welding inspection or, alternatively, demonstrated capability via job experience;
- c) Evaluation: personnel are evaluated annually to determine their capability to perform their job function. Each evaluation is documented and included in the individual's personnel folder;
  - d) Specific Capabilities:
    - 1. Physical: minimum required - physically capable of performing the job function including adequate vision and other physical characteristics, if necessary for the job;
    - 2. Technical: minimum required - familiarity with tools and equipment to be used on the job and proficiency in their use including, as necessary, measuring and test equipment calibration and control methods.

The above qualification bases apply to Nuclear Quality Assurance and Material Procurement inspection personnel who perform site inspections of maintenance and modification activities and receiving inspections respectively. For particular projects, Nuclear Quality Assurance, *Maintenance*<sup>32</sup> or Nuclear Power Material Procurement personnel may be supplemented by other Company organizations or by outside forces. In these situations, Nuclear Quality Assurance, *Maintenance*<sup>33</sup> and Nuclear Power Material Procurement retain the responsibility for using appropriately qualified personnel.

If the performance of an individual has not met the requirements specified for the particular job, supervision has recourse to provide additional training, additional supervision or to remove the individual from the job assignment. Position Guides, procedures and manuals identify major responsibilities of particular positions. On-the-job supervision and formal yearly reviews assure the necessary continued proficiency of any particular individual. Prior to the assignment of personnel to a job function, the qualifications of the personnel are evaluated by supervision. This evaluation considers previous education, training, and results of past supervisory reviews and on-the-job experience and performance to assure the initial proficiency of the individual. Supervising personnel monitors on-the-job performance after assignment to particular job functions. The qualifications of Nuclear Quality Assurance and Nuclear Power Material Procurement inspection personnel, including their education, experience and training, are documented. Personnel involved in particular NDE activities, including the performance evaluation and supervision in nondestructive examinations are appropriately qualified in accordance with the requirements specified in SNT-TC-1A. Personnel on-the-job performance is reviewed annually, and the results are documented and retained in personnel folders.

The facility management and technical support organizations are defined in the plant Technical Specifications. At least one licensed Operator is in the control room when fuel is in the reactor. At least two licensed Operators are present in the control room during reactor start-up, scheduled reactor shutdown and during recovery from reactor trips. An individual qualified in radiation protection procedures is on site when fuel is in the reactor. Core alterations after initial fuel loading are directly supervised by a licensed Senior Reactor Operator.

The Plant Manager, Nuclear Power *Generation* has overall responsibility for facility operation.

The Department Manager, Nuclear Quality Assurance and Oversight is responsible for overall Nuclear Quality Assurance activities. Nuclear Quality Assurance reviews and audits the quality assurance program. Additionally, the Nuclear Facilities Safety Committee periodically reviews audit activities.

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<sup>32</sup> QAPDrev15-005 rev0 incorporation of Nuclear Projects into Maintenance and assumption of Nuclear Project's authority to supplement their organization with QC inspectors not directed by NQA.

<sup>33</sup> QAPDrev15-005 rev0 incorporation of Nuclear Projects into Maintenance.

#### 4.0 Reviews and Audits

Programs for reviews and for *oversight*<sup>34</sup> of activities affecting plant safety during the operational phase have been established. These programs are defined in Appendix B "Review and Audit Program." These programs assure that these activities are carried out in accordance with regulatory requirements, approved procedures and instructions, and license provisions. The Station Nuclear Safety Committee (SNSC) and Nuclear Quality Assurance carry out these programs. *The Nuclear Facilities Safety Committee (NFSC) administers an independent review and oversight program. This independent review and oversight function is also defined in Appendix B. Appendix B defines accountabilities, authorities, organization and scope of activities to be reviewed and audited under these programs. Station procedures define the administrative requirements and methodologies for implementation of these program requirements.*<sup>35</sup>

#### 4.1 Audit Program<sup>36</sup>

The *oversight* program conducted by Nuclear Quality Assurance provides for a comprehensive system of planned and periodic *oversight activities* to verify that operating nuclear facilities are operated, administered, and managed in accordance with applicable requirements and to assess quality program effectiveness. *The oversight program consisting of assessments, surveillance and field observations and collectively is referred to as the continuous audit program. The program is fully compliant with regulatory guide 1.144 "Auditing of Quality Assurance Programs for Nuclear Power Plants," January 1979, as modified by Table A. In the QAPD the program is referred to as the audit program.*

Nuclear Quality Assurance documents audit plans and establishes a schedule of periodic audits. These audits are designed to verify compliance with the quality assurance program and are conducted at least once every two years or more frequently commensurate with their safety significance. These audits are listed in Appendix B. The only exception to the two year (or more often) frequency is an inspection and audit of the fire protection and loss prevention program performed by an outside qualified fire consultant which is conducted at least once per 36 months.

The audits are conducted by Nuclear Quality Assurance *which* may utilize other Consolidated Edison employees (except those having direct responsibility in the area being audited) and/or consultants or specialists from outside the Company. The results of each audit are reviewed by the auditors with the management of the activity audited at the conclusion of the audit. A written report containing the audit findings and recommendations is issued by Nuclear Quality Assurance. The audit reports shall be forwarded to Senior Company Officers concerned with nuclear facilities and to management positions responsible for the areas audited within thirty days of the completion of the audit. The audit report is issued to the management of the audited group(s) for reply to the audit results. It is distributed to the Secretary, Nuclear Facilities Safety Committee; the Senior Vice President, Nuclear Operations; the Vice President, Nuclear Power; the Vice President, Nuclear Engineering, the General Auditor; the Senior Officers of the activities audited; the Department Manager, Nuclear Safety and Licensing the *cognizant* manager; the Department Manager, Nuclear Quality Assurance and Oversight and, when it involves ASME, Section III Code Requirements, to the Authorized Inspector. It is the responsibility of the organization audited to review the report and reply, in writing, within thirty days to Nuclear Quality Assurance concerning the actions to be taken to resolve each finding. Nuclear Quality Assurance is responsible for verifying the effectiveness of these actions, including re-audit when necessary. The Nuclear Facilities Safety Committee reviews the adequacy of the audit program at least semiannually.

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<sup>34</sup> QAPDrev15-008 rev 0 introduces oversight process to incorporate continuous audits, surveillance & field observations

<sup>35</sup> QAPDrev15-019 rev 0 clarification NFSC role and elimination of text duplicative of Appendix B

<sup>36</sup> QAPDrev15-008 rev 0 introduces oversight process of continuous audits which is fully compliant with RG 1.144

## 5.0 Program, Policies and Procedures

### 5.1 Program Description

Administrative controls and quality assurance requirements are described in documents such as corporate instructions, station administrative orders and station procedures. Each organization participating in this administrative controls and quality assurance program (here after referred to as program) identifies to Nuclear Quality Assurance administrative documents judged necessary to define and/or control the implementation of the program[13]. These are identified as "Quality Assurance Program Documents." The organizations responsible for these documents include Nuclear Quality Assurance on distribution as each is issued or changed. Nuclear Quality Assurance in a timely manner reviews these documents for adequacy. In addition, Nuclear Quality Assurance maintains an index of documents that define the basic structure of the program. A summary document, which identifies these administrative and quality assurance procedures, has been compiled and is maintained current. This document is suitably indexed to identify relationships of the contents to the pertinent criteria of 10 CFR 50, Appendix B and applicable regulatory guides. The total program definition is reviewed by Nuclear Quality Assurance at least every two years to assure continued program adequacy.

Nuclear power plant structures, systems, components and consumables covered by this program are identified as "Class A" Items and are those that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. A list of "Class A" structures, systems, components and consumables appears in Appendix A.1. Identification of Class A components within systems are made and documented on a case-by-case basis, as required, via established procedures. This may include declassification. In addition, the Vice President, Nuclear Power has an option to utilize the above program for specific non-safety related modifications.

Elements of this QA program are applicable to activities and items affecting safety as defined by Licensing Commitments. The extent of the application of the program, consistent with the licensing commitments, is defined in the Quality Assurance Program Documents governing that activity. *The application of the QA Program to these activities delineated in Appendix C Supplemental QA Programs.*<sup>37</sup> The program applies to activities involving the radioactive material packaging and transport; radioactive waste classification, characterization and solidification; the selection and labeling of containers; and the use, maintenance and repair of shipping packages while within the Indian Point boundary. The program applies to portions of the Fire Protection System, the failure of which could affect the operation of safety-related and safe shutdown systems or that are required for the protection of safety-related and safe shutdown systems. A list of "Class FP" items subject to the control of this program are listed in Appendix A.2. The program also applies to portions of the Meteorological monitoring system. A list of "Class Met" items that are subject to the control of this program are listed in Appendix A.3.

The major organizations and their responsibilities are identified and delineated in paragraph 3.2 of this document.

This program provides control of activities affecting the quality of items listed in Appendix A to an extent consistent with their importance to safety. In the case of consumables, adequate quality is assured by activities such as testing on arrival, review of manufacturer's certification, or vendor evaluation. Additional controls such as vendor surveillance and receipt inspection are not necessarily performed. These controls are described in the various documents identified in the summary document.

This program takes into account the need for special controls, processes, tests, equipment, tools and skills to attain the required quality and the need for verification of quality by inspection, evaluation or test. These needs are accommodated through the issuance of and compliance with procedures, such as:

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<sup>37</sup> QAPDrev15-009 rev 0 to reflect incorporation of supplemental QA Programs into the QAPD.

- a. Non-Destructive Examination Procedures;
- b. Welding Procedures;
- c. Operating Procedures;
- d. Start-up Testing Procedures;
- e. Calibration of Measuring and Test Equipment;
- f. Receiving Inspection Procedures;
- g. Vendor Evaluation Procedures; and
- h. Maintenance and Modification Procedures.

## 5.2 Rules of Practice

Rules and instructions pertaining to personnel conduct and control are contained in various procedures and operating orders issued by the on-site organization. These include special instructions and authority for normal procedural actions, emergency actions, responsibilities of key personnel, watch schedules, availability and duties of key personnel at all times, preparation of procedures and documenting and retention requirements.

### 5.2.1 Responsibilities and Authorities of Operating Personnel

Responsibilities and authorities of the plant operating personnel are delineated in operating and administrative procedures prepared and approved by appropriate on-site management as required by the sections of the plant Technical Specifications entitled "Administrative Controls". These include:

- a. The reactor operator's authority and responsibility for reactor shutdown under various conditions;
- b. The responsibility to determine safe operating procedures for reactor return to power after a trip or unscheduled or unexplained power reduction;
- c. The responsibility for a Senior Reactor Operator to be present at the plant and the authority to provide direction for returning the reactor to power following a trip or unexplained power reduction;
- d. The responsibility to believe and respond conservatively to instrument indications unless they are proved to be incorrect;
- e. The responsibility to adhere to the plant Technical Specifications; and
- f. The responsibility to review routine operating data to assure safe operation.

### 5.2.2 Procedure Adherence<sup>38</sup>

The requirement that procedures be adhered to is both a plant administrative requirement and a plant Technical Specification requirement.<sup>39</sup> In the event of an emergency not covered by an approved procedure, *or an emergency not following the path upon which a procedure is based*, operations personnel *shall* take appropriate action to protect the health and safety of the public and to minimize personnel injury and damage to the facility. Written directives identify the manner in which procedures are to be implemented. *These conditions and controls are discussed further in item 3 of Table A.*

Procedural actions which must be committed to memory are those defined as "Immediate Operator Actions" in the Emergency Operating Procedures.

Documentation of procedure use is required when specifically called for by the procedure in question. For example, a startup "Procedure Check-Off" is completed during plant warm-ups and power ascensions from

<sup>38</sup> QAPDrev15-001 rev0 clarification to reflect 10 CFR 50.54(x)

<sup>39</sup> QAPDrev15-015 rev 0 text revised to establish consistent with QAPD sections pertaining to SNSC review of procedures resulting in the elimination of a sentence redundant to section 5.2.15

shutdown conditions; a shutdown "Procedure Check-Off" is completed during planned plant shutdowns and cooldowns.

Following a unit trip or shutdown, a pre-criticality "Procedure Check-Off" is completed prior to initiating control rod withdrawal for the purpose of achieving criticality if more than 24 hours have elapsed since completing the last pre-critical check-off procedure.

After completion, all check-off procedures are signed by the Shift Manager. Copies of all procedures are available to appropriate members of the plant staff.

### 5.2.3 Operating Orders

Dissemination to the plant staff of instructions of general and continuing applicability to the conduct of business is provided through the issuance of appropriate administrative directives and operating procedures to the affected personnel. Station Administrative Orders identify responsibilities and are binding upon all members of the Nuclear Power and Nuclear Engineering *Operations*<sup>40</sup> as appropriate to the subject matter contained therein. Procedures for activities at the nuclear facility by groups other than Nuclear Power and Nuclear Engineering are to be consistent with the requirements of Station Administrative Orders. Additional guidance, if necessary, is issued within individual departments, sections or subsections to provide for delineation of detail not covered in Station Administrative Orders. Such additional guidance is in the form of administrative directives and/or procedures and may deal with shift changes, control room restrictions, operator duties and requirements, maintenance instructions, document control and other such matters applicable to the needs for operating a safe nuclear plant.

Routine plant procedures, including Station Administrative Orders and Administrative Directives, used more often than every two years are reviewed and updated via various continuing review processes which include consideration of the need for follow-up action (example: procedural revisions)

The continuing review processes include:

- o plant modifications;
- o nonconformance resolutions;
- o plant event and significant occurrence analyses;
- o operator feedback, including operator training;
- o maintenance work package reviews;
- o temporary procedure changes;
- o surveillance tests;
- o operating experience reviews;
- o audits and surveillance; and
- o responses to NRC correspondence.

Routine plant procedures that have not been used for two years shall be reviewed before use to determine if changes are necessary or desirable.

Non-routine procedures (e.g., emergency operating, off normal, emergency plan implementation and other procedures which are event-initiated) shall be reviewed every two years.

Provisions are made for periodic review and updating of the above instructions. Station Administrative Orders are reviewed biennially. The department managers in Nuclear Power ensure that these reviews are accomplished. Section managers assure that administrative directives of their respective sections are reviewed biennially.

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<sup>40</sup> clarification to reflect corporate policy designation of organizational unit

#### 5.2.4 Special Orders

A mechanism exists for the issuance of management instructions which have short-term applicability and which require dissemination. The plant Technical Specifications directs that these orders, among others, be established, reviewed, implemented and maintained. These instructions are written to provide direction for non-recurring events, special situations or other categories of a similar nature.

These are prepared at the appropriate management level and distributed to the affected organizations and personnel. Because of the unique nature of the contents of these instructions, they are automatically canceled, once implemented.

#### 5.2.5 Temporary Procedures

Temporary Operating Instructions are issued, when required, as temporary procedures and are related to the performance of special tests or operations that are applicable for a short period of time. Procedures are issued for guidance during off-normal conditions and during special circumstances, as required.

The review and approval mechanisms for these temporary procedures or changes thereto are the same as those for normal operating procedures as described in sections 5.2.2 and 5.2.15 which include the assignment of approval authority to management.

#### 5.2.6 Equipment Control

Prior approval by Operations personnel is required for the release of equipment or systems for maintenance or repair. Normally, for interfacing station activities, Maintenance supervision, Instrument and Control supervision, and Operations supervision meet beforehand to plan the work. They verify that equipment or systems can be released, determine the time required to do the job, and the safety considerations to personnel and the public. Essential elements of these details are documented in work permits.

When permission is granted to remove equipment from service, the equipment is rendered inoperative and protected for work. The Shift Manager assures that the work is completed prior to readying the equipment or system for return to service.

Shutdown, start-up and normal operating procedures guide the preparation of equipment or systems to support the applicable mode of plant operation for equipment or system maintenance. They include cognizance of such parameters as monitoring and control of reactivity, load reduction and cool down rates, sequencing in activating or deactivating, provisions for decay heat removal and emergency operating situations.

Specific check-lists provide the assurance that pertinent factors are considered. Entries into closed systems or vessels are controlled. This extends to accountability for items taken in and out by maintenance personnel.

Temporary alterations which include such items as bypass devices, lifted electrical contacts, varying of setpoint limits, jumping, and opening of trip links require prior approval from, and are controlled by, Shift Manager acting in accordance with approved directions. Entries of temporary alterations are documented.

Status of inspections in association with work on equipment or systems is controlled through utilization of procedures, travelers, work step lists, check lists, tags and labeling. Nonconformances associated with maintenance are documented in condition reports. The condition reports are referenced in the inspection reports. Acceptance of a disposition of nonconformances by responsible management is required prior to

release of an item for service. Usually, tests are conducted upon completion of work as a pre-operational activity. Test requirements are determined by Test and Performance or other assigned groups. Completion of tests are certified by Shift Manager.

Upon completion of servicing work, operations personnel are responsible for verifying that the work is complete and that operating items are restored to prerequisite positions in accordance with applicable procedures.

#### 5.2.7 Maintenance and Modification

Maintenance/modification of safety-related structures, systems, and components including the installation, inspection and testing of instrumentation, electrical equipment and structural concrete, structural steel, mechanical equipment and piping and the application of protective coatings, are controlled by <sup>41</sup>procedures, as applicable, and are performed in a manner that assures a level of quality consistent with precedents set by the Architect Engineer and NSSS supplier or appropriately reviewed alternates to those precedents.

Pre-operational performance testing provides an added measure of confidence that systems and components will continue to perform their intended functions after maintenance or modification.

These activities are performed in accordance with applicable procedures, manuals, instructions, drawings, specifications and other documents that take into account, as appropriate, planning requirements, codes and standards, the levels of skills required to do the work, and the assurance that properly identified acceptable material is used. Preparation involves consideration of such factors as assigning responsibilities, identification of written instructions and scheduling and interfacing with other applicable operations activities. Included in the instructions are precautions to be observed, installation instructions, identification of equipment, procedures, travelers, step lists, check lists, inspection points, and cleaning, handling and housekeeping requirements, as applicable. Particular attention is paid to prerequisites such as assignment of personnel, assurance that proper documentation and materials are available, need for manufacturer's manuals and preparation for documenting results. Pre-installation activities extend to assuring that only properly accepted material is used, written instructions are available and work permissions have been granted.

##### 5.2.7.1 Maintenance

A maintenance program to maintain structures, systems, and components at a quality level necessary for them to perform their intended function is in effect. Maintenance activities are planned, scheduled and accomplished in a manner consistent with safety considerations and plant Technical Specification requirements. In preparation for maintenance activities, such details as the use of approved material, need for special tools or equipment, safety precautions and detailed work instructions are considered.

Procedures involving maintenance of a recurring nature are contained in a maintenance procedure manual. These procedures may be revised as experience is gained. Preventive maintenance procedures contain maintenance frequency requirements for safety-related systems components.

Inspections and surveillance during maintenance, and repair work verify continued functional capability of equipment on the Environmental Qualification (EQ) database. When these inspections and surveillance show that the equipment does not meet established acceptance criteria the inspection results are reviewed by Nuclear Engineering and quantitatively evaluated to determine that age-related degradation has not compromised the ability of the equipment or system to perform its specified functions. Results of

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<sup>41</sup> QAPDrev15-005 rev 0 incorporated Nuclear Projects into Nuclear Power Maintenance. The identification of the differ work groups responsible for the procedures was no longer required and therefore deleted.

inspections and surveillance are also factored into future inspection intervals in order to change the frequency at which these inspections are conducted, thereby aiding in determining the qualified life of the equipment and its maintenance interval.

Plant maintenance activities are carried out in the following manner:

The appropriate work group initiates work orders, via the plant computerized work order management system, for routine work such as preventative maintenance and predictive maintenance.

The condition report is the mechanism by which station personnel can identify and document conditions in the field, which require corrective work. The initiator of the condition report is responsible for the correctness of the information, which he identifies, e.g., the nature of the condition, which requires corrective work. Anyone working at Indian Point discovering a deficiency on plant components initiates a condition report (CR). When the disposition of the CR requires a work order to correct the deficiency the work order is initiated via the plant computerized work order management system.

Operations reviews all work orders to determine their validity and to approve their implementation.. The following may authorize work orders:

- o Vice President, Nuclear Power;
- o Plant Manager;
- o Department Manager, Operations;
- o Department Manager, Maintenance;
- o Section Manager, Instrument and Control;
- o Shift Manager (in an emergency may authorize for operations manager); and
- o Work Week Manager

**Nuclear Engineering**<sup>42</sup> reviews all work orders to determine testing requirements, including acceptance criteria, ensures that the test criteria address the actual work that was accomplished and assures that the component will be tested under conditions that simulate or actually meet normal operating conditions for that component. **A section within Nuclear Engineering** consisting of a manager, test engineers and test supervisor(s) defines **the** post-maintenance test requirements and supervise equipment testing. The review of work orders by **engineering** constitutes an independent review in that the **engineering organization** reports to the **Chief Nuclear Engineer**. This provides them with the requisite authority and independence of the work groups responsible for performing the work being accepted by testing. The review of work orders by **engineering** normally occurs prior to the start of work, however, if after the start of work, the work scope changes (e.g., to suit field conditions), **engineers** review the revised scope to determine any revised testing requirements.

**Nuclear Engineering** identifies Post-Maintenance Testing (PMT) requirements on the work order. This is accomplished by entering them in the computerized work order management system. A manager responsible for supervising **Test** personnel assures that the PMT requirements are accurately and completely entered in the system. **Nuclear Engineering** also prepares and issues PMT procedures. Additionally, PMTs are reviewed by Operations Watch Engineers to assure that they are appropriate.

**For work managed by Nuclear Power, the Work Control is responsible for the correctness of the work order and implementing documents**<sup>43</sup>, and;

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<sup>42</sup> QAPDrev15-006, rev 0 reflects re-organization of Test & Performance functions into Nuclear Engineering

<sup>43</sup> QAPD rev15-007, rev 0 Re-organization of group performing field work combining Maintenance, I&C and Nuclear Project sections under Maintenance.

- designating the specific work group;
- updating work orders with any changes or additional information as required;
- preparing schedules in conjunction with operations and applicable work groups; and
- preparing implementing documents for the work order as required and entering this information on the work order. The work implementing documents consist of the work order and one or more of the following depending on job complexity: checklists, steplists, procedures, sketches, drawings, etc.

The work implementing documents, developed by *Work Control*<sup>44</sup> are reviewed for adequacy and correctness by a qualified person other than the preparer. This latter review constitutes an independent review.

*Nuclear Engineering* reviews the results of Post Maintenance Testing to verify that acceptance criteria have been satisfied and indicates this on the work order.

#### 5.2.7.2 Modifications<sup>45</sup>

When the work constitutes a modification to the plant, *engineering change documentation* is prepared by *Nuclear Engineering*. Procedures are in effect for the control and implementation of these design activities in accordance with regulatory guide 1.64 "Quality Assurance Requirements for the Design of Nuclear Power Plants," revision 2 as modified by tables A & B.

Inherent in these procedures are provisions for the control of documents and their changes. The *engineering change* documents carry revision level designations to assure those correct revision levels will be used in the work. For addition of new, complex systems, specification and drawing lists are prepared, issued and used. Procedures provide details for the maintenance, retention and storage of these design documents. The *engineering change documentation* is prepared and signed by the Engineer. Additionally, the *engineering change documentation* is reviewed and approved by a qualified Engineer other than the preparer. This additional review is to assure that the *engineering change documentation* is technically correct and that appropriate quality provisions (e.g., non-destructive examinations) are specified.

Affected plant organizations perform critical reviews of the *engineering change documentation*. These include Site Engineering, Operations, Training and Computer Applications.<sup>46</sup> Generally, these reviews verify that *engineering change documentation* includes adequate technical guidance and criteria, evaluate the impact of the modification in their respective areas of responsibility, support determination of post-modification testing requirements, assure consistency with the plant Technical Specifications, assure that applicable *regulatory*<sup>47</sup> requirements have been satisfied and provide for radiological control requirements.

After the *engineering change documentation* is issued for implementation, supplemental work verification packages (WVP's) are assembled by *Work Control*<sup>48</sup> Planners. These WVP's consist of forms, checklists, etc. and information which, when compiled and completed will provide objective evidence of the proper completion of the work. The WVP's contain, as applicable, the following types of records and information:

1. Summary of scope of work as identified in the Engineering modification package;

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<sup>44</sup> QAPDrev15-007 rev 0 consolidating planners into a single group with Work Control

<sup>45</sup> QAPDrev15-013, rev 0 re-engineering of modification process and elimination of text duplicative of N45.2.11 per 10 CFR 50.54(a)(3)

<sup>46</sup> clarification- deleted phrase "Environmental Qualification" which is a scope of Site Engineering's review

<sup>47</sup> QAPDrev15-014 rev0 to reflect revision of 10 CFR 50.59 and cessation of the use of the phrase "safety evaluation."

<sup>48</sup> QAPDrev15-007 rev 0 to reflect re-organization of all planners into Work Control

2. An index of records included in the WVP;
3. Weld information forms;
4. Electrical disconnect and reconnect forms;
5. Cable pull slips;
6. Cable tray inspection checklists;
7. Conduit installation records;
8. Test data records;
9. Torquing records;
10. Grouting checklists;
11. Material used forms;
12. Cleanliness records;
13. Work completion walkdown records; and
14. WVP content checklist;

The *Work Control* Planners specify those work steps to be verified and signed off by Field Supervisors and those independent hold points or inspection points that will be performed by Nuclear Quality Assurance QC Inspectors. The WVP's are reviewed and approved by the responsible *supervisors who* assure the WVP is consistent with the scope of the modification.

In addition to the QC functions performed for *Maintenance*<sup>49</sup>, Nuclear Quality Assurance (an organization independent of Nuclear Projects) will conduct overview surveillance and/or audits of selected activities of Nuclear Projects. The overview surveillance or audits will be conducted when plant modifications are being implemented on a nominal quarterly basis or more frequently. Additionally, where special qualifications are required to perform examinations (e.g., non-destructive examinations) qualified vendor contractor inspection personnel approved by Nuclear Quality Assurance [14] in accordance with Section 5.2.18 of this program may perform these activities for *Maintenance*.

Verification of work during and after installation includes performance of inspections, tests, when applicable, non-destructive examination, recording as-constructed information, status indication, pressure testing, when applicable, and by other appropriate means.

*Nuclear Engineering*<sup>50</sup> is responsible for the preparation of post-modification test procedures, evaluating test results, and informing Operations personnel of acceptability of the test results. Some tests may be prepared by Computer Applications or Reactor Engineering when modifications affect their systems.

Records of the completed work package are filed. Examples of the types of records are the job folder, results of inspections or tests, modification documents, maintenance work order, reference to other documents and closeout documentation. Similar controls apply to preventive, routine and corrective maintenance, as appropriate.

#### 5.2.8 Surveillance Testing and Inspection Schedules

*Oversight of the* surveillance testing and inspections<sup>51</sup>, including in-service testing of pumps and valves, is the responsibility of Nuclear *Engineering* and is accomplished in accordance with the surveillance requirements in the plant Technical Specifications and Inservice Inspection and Testing Program. Included in these activities are: reactor coolant system surveillance, reactor coolant system integrity testing, containment tests, engineered safety features, emergency power system periodic tests, main steam stop valves, auxiliary feedwater system, reactivity anomalies, environmental monitoring surveys, and radioactive materials. Upon completion of testing, surveillance test results and inservice test results are reviewed by the

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<sup>49</sup> QAPDrev15-005 rev0 to reflect consolidation of Nuclear Projects into Maintenance Department

<sup>50</sup> QAPDrev15-006 rev0 to reflect re-distribution of T&P functions within Nuclear Engineering

<sup>51</sup> QAPDrev15-006 rev 0 to reflect re-distribution of T&P functions within Nuclear Engineering.

group responsible for the test.<sup>52</sup>This review consists of:

1. Verifying that the operability and overall acceptance criteria were satisfied;
2. Ascertaining that data were entered as required;
3. Verifying the test was done on schedule;
4. Trend analysis, as appropriate;
5. Evaluating condition(s) adverse to quality; and
6. Evaluating data for compliance with Plant Technical Specification requirements.

The NDE portion of the Inservice Inspection program is the responsibility of Nuclear Quality Assurance and is based on ASME Code Section XI. NDE personnel will be qualified to SNT-TC-1A 1975 as per our commitment to RG 1.58, Rev. 1, September 1980. However, NDE personnel who specifically perform ASME XI inservice examinations shall be qualified in accordance with the applicable edition of ASME XI as determined by Code of Federal Regulations 10CFR50.55a(g). As required, baseline data are gathered to permit a comparison of any changes occurring as a result of plant operations. The areas requiring inspections and the overall schedule are consistent with the requirements of the plant Technical Specifications. Test and Performance maintains inservice testing records and Nuclear Quality Assurance maintains NDE inservice inspection records.

#### 5.2.9 Plant Security and Visitor Control

A comprehensive security and visitor control program has been established including measures to thwart attempted sabotage. These programs are addressed in the Indian Point Physical Security Plan and Safeguards Contingency Plan. These administrative controls are not part of the "Quality Assurance Program" refer to Table A exception 7a.

#### 5.2.10 Housekeeping and Cleanliness Control

Control procedures for housekeeping are prepared by Nuclear Power. These procedures encompass activities related to the control of cleanliness of facilities, materials and equipment; fire prevention and protection, including disposal of combustible material, radioactive contamination control; storage of solid radioactive waste.

Procedures are prepared for and particular attention is given to work and storage areas where important items are handled and stored to preclude damage or contamination. *The Vice President, Nuclear Power establishes policy regarding work permits and provisions for the radiological as well as conventional health and safety of all employees.*<sup>53</sup> The Plant Manager provides for separate controlled storage areas, and issue, use and returns of excess Class A materials. Procedures prepared by Nuclear Power Generation are used to verify control of the cleanliness of open primary systems. The Plant Manager establishes policy for removal of equipment and material from the controlled area and its shipment, and the method of handling solid radioactive waste material for its removal from the controlled area at Indian Point Station.

Fire protection and prevention procedures are prepared and implemented by responsible Nuclear Power personnel. These procedures include provisions for fire fighting and fire watches during and immediately following welding, enforcement of good housekeeping practices, building and maintenance care and outdoor housekeeping. Periodic inspections and surveillance are performed by Nuclear Quality Assurance personnel. Reports of results are issued to higher management.

#### 5.2.11 Corrective Actions

Measures have been established which ensure that conditions adverse to quality, which may occur during, work, e.g., maintenance, are promptly identified in condition reports (CR) and corrected. In the case of

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<sup>52</sup> Editorial change to delete list of examples of groups responsible for test to

<sup>53</sup> Editorial change to re-structure sentence order within paragraph for clarity

significant conditions adverse to quality, the cause of the condition is determined and corrective action taken and appropriately documented and reported.

The Corrective Action Group (CAG) identifies the manager responsible for correction of the identified condition. The manager is responsible for the disposition of the condition, assignment of action addresses and concurrence with the corrective action. The action addressee on condition reports is responsible for either correcting the nonconformance or designating the organization responsible for completing the necessary corrective actions. The management of these designated organizations is responsible for taking the necessary corrective actions.

When corrective action has been completed, this will be identified on the condition report and forwarded to the responsible manager, by the action addressee. Corrective action shall include determination of the cause of the nonconformance and the measures necessary to preclude repetition. The responsible manager reviews the action taken and takes the initiative to resolve disputes and disagreements, if any. Upon the responsible manager's acceptance of the action the addressee's item is closed. After all assigned actions have been accepted, the responsible manager closes the report denoting concurrence. Upon closure of the condition report the initiator of the report is notified.

Nuclear Quality Assurance is responsible, via audits, for verifying that corrective actions resulting from condition reports are implemented at the site.

When significant condition reports are issued, the Corrective Action Group prepares and distributes a quarterly report including the status of all unresolved significant condition reports. This report is routed to appropriate management concerned with correcting the deficiency. The distribution of the quarterly status report of unresolved condition reports assures that the identification of significant conditions adverse to quality and corrective action initiated are documented and reported to appropriate levels of management.

Conditions adverse to safety found during operations are reported as required by the plant Technical Specification. This report includes a description of the condition, its cause and corrective action taken or recommended. The distribution of this report includes the Nuclear Facilities Safety Committee.

#### 5.2.12 Plant Records Management

Con Edison's policy is to maintain documentary evidence of the quality of items and activities affecting plant safety. Consequently, a system for records preparation and retention, as necessary, has been established.

Quality assurance records located in the Nuclear Records Management Center, together with other files of other Con Edison organizations and at contracted storage facilities are retained for periods specified in the Indian Point Records Type List. *Records are maintained on paper, microfilm/aperture cards, or optical disk storage media. Procedures for maintenance of optical disk records comply with the guidance of NRC Generic letter 88-18, "Optical Disk Plant Record Storage on Optical Disks."*<sup>54</sup>

Nuclear Quality Assurance maintains records, which include certain personnel qualification records. The Corrective Action Group maintains condition reports as a record documenting the nonconforming condition; its disposition and corrective action. Operating logs are maintained by Operations. Test procedures and results are maintained by Test and Performance. Material Procurement maintains records of receipt inspections results and backup data. Inspection reports include the signature of the inspector, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted.

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<sup>54</sup> Administrative change to acknowledge implementation of NRC Generic Letter 88-18 "Optical Disk - Plant Record Storage on Optical Disks"

Documented procedures establish the requirements and responsibilities for record maintenance and retention subsequent to completion of work. The records are filed and maintained to minimize deterioration, damage and to prevent loss.

#### 5.2.13 Procurement and Materials Control<sup>55</sup>

Measures have been established for procurement documentation and control of materials and components, which affect plant safety, including spare and replacement parts. Procedures and appropriate instructions assure that purchased materials and components associated with safety-related structures or systems are purchased to appropriate specifications and codes; produced or fabricated to proper requirements; packaged and transported in a manner that will maintain their quality; properly documented, completed, identified and stored; and correctly controlled to assure the identification, segregation, and disposition of nonconforming material. These procedures, as appropriate, provide for procurement document preparation, review and change control; selection of procurement sources; bid evaluation and award; control of supplier's performance, verification of material quality, control of nonconforming items, acceptance of items and services, maintenance of quality assurance records; evaluation of the procurement process and corrective action.

Procurement documents include, as appropriate, provisions for the scope of work to be accomplished; technical requirements; quality assurance program requirements; a statement of right of access to a supplier's plant, facility and records; special quality assurance requirements; documentation and, as applicable, provisions for processing nonconformances.

##### 5.2.13.1 Procurement Document Control

Measures are provided for a procurement document control system which assures that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are suitably included or referenced in the purchase orders for material, equipment and services, whether purchased by Con Edison or by vendors or sub-vendors. Material Procurement Engineering identifies quality assurance program requirements to be included or referenced in requests for quotations and purchase orders. These quality assurance program requirements are imposed on a vendor by means such as specifying applicable provisions of Con Edison's quality assurance specifications, the approved vendors quality assurance manuals, pertinent Code quality assurance requirements, such as, ASME Section III, ANSI N45.2 or unique requirements for the specific purchase order.

For procurement of items associated with plant modifications, Nuclear Engineering *or* Nuclear Power as applicable identifies technical and regulatory requirements to be included or referenced in procurement documents.

Where Nuclear Power manages the project, Nuclear Power prepares the procurement documentation incorporating technical, regulatory and quality requirements. In these cases the documentation is reviewed by Material Procurement to assure that it is complete and adequate. As a minimum the review of procurement documents is accomplished by personnel other than the preparer.

Quality assurance requirements are imposed on contractors by specifying applicable Code quality assurance provisions such as ASME Section III, ANSI N45.2 or unique quality requirements for the specific requisition.

Purchasing, Material Procurement or *Maintenance*, as applicable, evaluates bids and proposals for commercial content. Vendor exceptions to technical requirements are evaluated by Nuclear Engineering or

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<sup>55</sup> QAPDrev15-005, rev 0 deletion of Nuclear Projects to reflect re-organization of Nuclear Projects into Maintenance organization

other appropriate technical disciplines. Vendor exceptions to quality assurance program provisions, which have been stipulated by Nuclear Quality Assurance as a result of source evaluation activities, shall be evaluated by Nuclear Quality Assurance. If the bidder or proposer takes no exceptions to the specifications and requirements, the buyer may secure purchase authorization.

Vendors are evaluated and approved prior to issuance of a purchase order to provide assurance that the vendor is capable of manufacturing and delivering a product or service conforming to the requirements of applicable purchase specifications. Vendor approval documentation is maintained and updated, and purchase orders sent only to the approved vendors. In cases, however, where commercial grade items or services are procured and Consolidated Edison assumes singular responsibility for verifying the acceptability of the item or service for use, the items or services may be procured from vendors who have not been evaluated or approved. After a purchase order is issued, the vendor may be reviewed on a surveillance basis during the manufacturing stage to assure conformance to specification requirements.

Upon receipt of purchase authorization, the cognizant buyer releases the requisition along with other appropriate documents e.g. Standard Terms and Conditions, for preparation of the purchase order. Copies of the purchase order are made available to Nuclear Quality Assurance and the requisitioning activity.

If an outstanding purchase order must be modified, a properly authorized modification to the Purchase Requisition must be prepared and reviewed. Copies of modified purchase orders are distributed to those who received copies of the original purchase order.

#### 5.2.13.2 Control of Purchased Material, Equipment and Services

Measures have been established which assure that purchased items and services, whether purchased directly or through contractors, conform to procurement documents. These measures include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor, inspection and audit at the source and examination of items upon delivery.

Nuclear Power Material Procurement, Nuclear Engineering, and Nuclear Quality Assurance evaluate the capabilities of approved vendors. Nuclear Engineering evaluates the overall manufacturing capability of the vendor, including its particular technical ability to produce the item, component or services delineated in the specification. Purchasing or Material Procurement evaluates the vendor's financial and administrative capabilities. Nuclear Quality Assurance evaluates the vendor's quality assurance program. The Nuclear Quality Assurance review includes consideration of the following:

1. Quality assurance personnel qualifications;
2. Review and control of design documents;
3. Documented manufacturing procedures;
4. Quality assurance procedures, acceptance criteria and calibration practices;
5. Quality assurance records and their retention;
6. Vendor receipt inspection; and
7. Quality assurance requirements imposed by the vendor on his subcontractors.

Evaluation of vendors by Nuclear Quality Assurance may also be accomplished by reviewing vendor evaluation reports prepared by other licensed U.S. nuclear utilities which participate in industry efforts such as those coordinated by the Nuclear Utility Procurement Initiative Committee (NUPIC).

For a vendor to be maintained as an approved vendor, an evaluation of that vendor is made at least once every five years. Additional reviews of a vendor's facilities or performance may be conducted by Nuclear Quality Assurance on a more frequent basis. During the course of production, manufacturing or service activities, surveillance of the vendor's performance may be conducted.

Vendor surveillance plans are prepared for complex equipment. The surveillance plans identify the areas such as tests and records to be reviewed. The applicable purchase order, including the specifications and drawings, forms the basis for determining the areas for review.

Material procured *for Nuclear Operations*<sup>56</sup> is normally received at the Indian Point offsite Warehouse receiving and storage facility where it is inspected by Material Procurement inspectors in accordance with Material Procurement written instructions. *Material may be received on-site where it is inspected by Material Procurement Inspectors or other qualified inspectors supporting Material Procurement, in accordance with written instructions.*<sup>57</sup>

<sup>58</sup> Documentary evidence that material and equipment conform to the procurement requirements is available at the plant site prior to use of such material and equipment. Receiving inspection written instructions require, as appropriate, checking that objective evidence of quality required from the vendor has been received. Results of receiving inspections are documented on a checklist.

This documentation includes, as a minimum, the identity of the inspector, the type and results of inspection, the acceptability, and the action taken in connection with any deficiencies noted.

The status of accepted material is identified by tags, stickers or other approved methods, which provide suitable traceability. Nonconforming material is tagged until the nonconformance is dispositioned. If the disposition is to reject the material, the tag is maintained on the material until the rejected material is returned to the supplier or scrapped. Nonconformance and corrective actions are controlled in accordance with section 5.2.14.

Accepted components or materials retain their status identification until they have been satisfactorily installed and the installation check has been completed or until it is necessary to remove the status identifier for installation purposes. Records of control of purchased material, equipment and services are maintained in accordance with 5.2.12.

#### 5.2.13.3 Identification and Control of Materials, Parts and Components<sup>59</sup>

Measures have been established for the identification and control of material, parts and components. Procedures are provided by Nuclear Power, Nuclear Engineering, Material Procurement and, as appropriate, other involved organizations which insure that only accepted items are used and installed and, where applicable, relate an item to an applicable drawing, specification or other pertinent technical document. Identification marking is applied by suppliers and/or Con Edison organizations in a clear, unambiguous manner, which does not adversely affect the function of the item. When groups of items are sub-divided, identification marking is appropriately transferred to smaller groups or individual items by<sup>60</sup> storeroom personnel, Nuclear Power or *Maintenance* except for indication of inspection status identification (e.g. "accept" tags) which is transferred by Material Procurement, Nuclear Quality Assurance personnel, or *Maintenance* personnel.

Where required for receipt identification and traceability purposes, materials and shipping containers bear

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<sup>56</sup> Editorial change in the description of Material Procurement reporting relationship from specific "Nuclear Power" to generic Indian Point description of "Nuclear Operations".

<sup>57</sup> QAPDrev15-020 Change provides Material Procurement the flexibility to accept delivery of large items or of contaminated material directly at the station bypassing the Buchanan Warehouse Receiving. Also allows NQA QC Inspectors to perform receipt inspection in support of Material Procurement.

<sup>58</sup> Administrative change to eliminate text redundant to sentence in QAPD section 5.2.13.4 paragraph 4.

<sup>59</sup> QAPDrev15-005 rev 0 editorial changes through-out section to reflect inclusion of Nuclear Projects into Nuclear Power Maintenance Department

<sup>60</sup> Editorial change to reflect generic position within Warehouse organization.

specific marking prior to use at Indian Point. Where such identification by the vendor is deemed necessary, the vendor is instructed by the purchase order documents concerning the identification required. In cases where identification is to be done by personnel at Indian Point, written instructions are issued to accomplish the identification.

Shipping containers are identified and marked by the vendor in accordance with instructions included in the purchase order document in order to permit positive identification. Component or material identification numbers may also be required for traceability and these requirements are also specified by the purchase order. Where it becomes necessary to provide identification of material or components, detailed marking procedures are established. These procedures, if applicable, are prepared by Nuclear Engineering and are reviewed by a qualified individual other than the preparer. Care is taken to assure that marking methods will not adversely affect the material or design characteristics. For example, marking materials containing sulfur and low melting point elements, such as, lead and mercury are not used for identifying nickel alloys and stainless steel.

Care is also taken to apply the markings prior to modification or cutting operations to assure that traceability is not destroyed or lost. Nuclear Quality Assurance is responsible for verifying that marking performed at Indian Point is accomplished in accordance with approved procedures.

During the course of maintenance, repair, or modification work, it will be necessary for traceability purposes to identify new or repaired weld joints. This identification is accomplished in accordance with procedures approved by Nuclear Engineering.

Nuclear Engineering provides unique weld joint numbers for all welds shown on single line diagrams which carry piece numbers traceable to bills of material and weld joint numbers for piping fabrication and installation at Indian Point.

Nuclear Power is responsible for assuring that unique weld joint identification numbers are provided in accordance with Nuclear Engineering's numbering system or contractor's equivalent. Nuclear Power is responsible for assigning unique weld joint numbers for other welds required during installation and site fabrication including field run piping work and shall also be responsible for permanent weld identification.

Nuclear Power shall assure that weld joint identification is accomplished by identifying the welds on piping sketches or drawings prepared by Nuclear Engineering, Nuclear Power or contractors, as applicable, or where precise traceability cannot be assured by these methods, by permanently marking the weld at or near the weld joint. Where pipe size, accessibility or other limitations make physical marking impractical, metal tags shall be secured at or near the weld joint. The tags shall be permanently marked with weld identification information including directional information if tags are offset from the weld. Nuclear Power shall provide "as constructed" information to Nuclear Engineering in writing for updating engineering drawings.

Adequate records of identification and control are retained for periods in accordance with section 5.2.12 above.

#### 5.2.13.4 Handling, Storage and Shipping<sup>61</sup>

Measures have been established which provide control of handling, storage and shipping. These measures include, where applicable, provisions for cleaning, packaging and preservation of material and equipment in accordance with appropriate instructions, procedures, drawings or other documents to prevent damage,

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<sup>61</sup> QAPDrev15-005 rev 0 editorial changes through-out section to reflect inclusion of Nuclear Projects into Nuclear Power Maintenance Department and change in Central Stores organization title to Central Field Services.

deterioration and loss. Included are measures for very expensive, critical, sensitive and perishable items. Nuclear Engineering and other organizations, such as Nuclear Power establish or reference requirements for handling, storage and shipping. These requirements are identified in applicable requisitioning/procurement documents.

Items are packaged in a manner adequate to protect them against corrosion, contamination, physical damage or any effect, which would lower their quality or cause the item to deteriorate during shipping, handling and storage. The specific requirements for packaging, etc., are determined by the procurement document review system and the requirements identified or referenced in the procurement document by Nuclear Power and Nuclear Engineering.

The degree of protection varies according to storage condition and duration, shipping environment and handling conditions. Items are protected against damage during loading, shipping, and handling by the supplier, shipper, and appropriate Con Edison organization. Modes of transportation are consistent with the degree of protection required and with the packaging methods employed.

Items procured by Nuclear Power are received at the Indian Point offsite Warehouse receiving and storage facility. *Central Field Services* personnel at the offsite Warehouse receive and store items for use at the site. Items procured for *Maintenance* are received and stored at on-site facilities or the offsite Warehouse.

Upon their arrival, items are checked by Material Procurement for damage and for general compliance with purchase order requirements or internal documents where items are manufactured by Con Edison. Results of inspection are documented in a receipt inspection checklist by the receiving inspector. Required marking is verified to provide positive identification during receiving, storage and installation.

Appropriate records relating to packaging, shipping, receiving, storage and handling are maintained by Nuclear Power in accordance with Section 5.2.12.

Storage is accomplished in a manner sufficient to minimize the possibility of damage or lowering quality due to corrosion, contamination, deterioration or physical damage from the time an item is stored until the time the item is removed from storage and installed at its final location. Storage requirements are based on supplier recommendations, Nuclear Power requirements and/or instructions supplemented, as appropriate, by Nuclear Engineering recommendations.

Results of storage examination and inspections are documented and deficiencies corrected in accordance with established Nuclear Power procedures. During storage, appropriate care is exercised by personnel to maintain item integrity. *Central Field Services* or Nuclear Power, as applicable, is responsible for handling items. Nuclear Power and *Central Field Services* maintain handling equipment in accordance with appropriate procedures, methods and instructions.

As appropriate, handling instructions and procedures have been established by Nuclear Power and Nuclear Engineering for items requiring special handling. As appropriate, hoisting equipment used for handling is initially certified by the manufacturer. Except for test purposes, hoisting equipment is not loaded beyond rated load as certified by the manufacturer.

Safety requirements for material hoists are adhered to by Nuclear Power and *Central Field Services*. Re-rated equipment is given a dynamic load test over the full range of the lift. Normally, the test weight used in temporarily re-rating hoisting equipment for special lifts is at least equal to 110% of the lift weight.

Records pertaining to packing, shipping, receiving, storage and handling, including procedures, reports, personnel qualification, test equipment calibration, nonconformances and inspection and examination are prepared and maintained by Nuclear Power and *Central Field Services*, in accordance with the provisions of Section 5.2.12 and applicable guides and regulatory requirements.

#### 5.2.14 Nonconforming Items

A system, including appropriate instructions, has been established for identifying, documenting, segregating and dispositioning nonconformances. This system provides for notification of affected organizations, for review and acceptance, rejection, repair or re-work of nonconforming items and establishes the responsibilities for the disposition of nonconforming items. This system also provides for identifying an item as nonconforming and controlled, as accepted "as is," as scrap or as held for further disposition. This system provides for documenting the acceptability of nonconforming items, which have been repaired, reworked or used "as is."

Incoming items are tagged as received. The items are receipt-inspected in accordance with documented instructions by inspectors in Material Procurement. Items which are acceptable are given an "accept" tag, sticker, etc. and put in separate controlled storage. Items, which cannot be accepted are "hold" tagged and stored in segregated, controlled storage to await disposition. Items "hold" tagged but too large for segregated, controlled storage or indoor storage is suitably identified to prevent their use. Items, which are to be scrapped, are also "hold" tagged and kept in separate controlled storage until disposed of. Only items, which have been properly receipt inspected and accepted, can be used. Items, which do not meet acceptance criteria, are evaluated for disposition. Material Procurement prepares a condition report. The report identifies the nonconformance and recommends corrective action to the organization (action addressee) responsible to initiate action or resolve the nonconformance. Copies are forwarded or made available to affected organizations, such as Nuclear Power, Nuclear Quality Assurance, Nuclear Engineering and Purchasing. Nonconforming items are accepted, rejected, repaired or reworked in accordance with documented procedures specified by the organizations involved in resolving the deficiencies identified.

When significant nonconformances are identified, Nuclear Quality Assurance personnel, or other personnel performing quality assurance functions<sup>62</sup>, investigate and initiate a condition report. Condition reports are used to document significant nonconformances with specified quality requirements when found during plant testing, or plant modification, maintenance and repair activities.

The condition report identifies the deficiency and recommends corrective action to the organization (action addressee) responsible to initiate action or resolve the deficiency. Copies are forwarded to other affected organizations such as Nuclear Power Material Procurement, Nuclear Quality Assurance, Nuclear Engineering or contractors. Non-conforming items are accepted, rejected, repaired or reworked in accordance with documented procedures specified by the organizations involved in resolving the deficiencies identified. Items, which have been reworked or repaired, are reinspected and/or retested in a manner identical to the original inspection and/or test or in an alternate manner approved by Nuclear Power, Nuclear Projects, Nuclear Quality Assurance and Nuclear Engineering, as applicable. Significant plant events, including equipment malfunctions, are reviewed by SNSC. Additionally systematic analyses of equipment malfunctions [15] are accomplished by Nuclear<sup>63</sup> Engineering as part of the effectiveness of maintenance review. *This is accomplished by the System Health reviews, which are completed and presented to station management each quarter. These reviews identify adverse trends and/or analysis of equipment malfunctions. In addition, each quarter a Maintenance Rule Report is issued to station management which provides a collective review of overall maintenance effectiveness<sup>64</sup>.*

Analysis of trends may also be initiated independently by Nuclear Quality Assurance as part of its audit review program.

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<sup>62</sup> editorial change to eliminate examples

<sup>63</sup> QAPDrev15-016 rev 0 change to refer to Nuclear Engineer functions on a generic basis rather than a specific organizational unit.

<sup>64</sup> QAPDrev15-017 rev 0 clarifying reporting of review of equipment malfunctions to address CR 20006329

#### 5.2.15 Review, Approval and Control of Procedures<sup>65</sup>

The administrative controls and quality assurance program provide measures, which control and coordinate the approval and issuance of documents, including changes there to, and that prescribe activities affecting quality. These documents include those which describe organizational interfaces or which prescribe activities affecting safety-related structure systems or components. These documents also include operating and special orders, operating procedures, test procedures, equipment control procedures, fire protection procedures, emergency procedures, maintenance or modification procedures, refueling and material control procedures. These are in the form of documents such as station administrative orders, administrative directives, Nuclear Quality Assurance operating procedures, Purchasing, Nuclear Engineering procedures and corporate instructions.

The administrative controls and quality assurance program requires that activities affecting quality be prescribed by documented instructions or procedures of a type appropriate to the circumstances, and accomplished in accordance with these instructions or procedures.

Procedures or instructions are reviewed by other than the originating individual. Included in the review organizations are Nuclear Power, Nuclear Engineering, Purchasing, Nuclear Quality Assurance, the Station Nuclear Safety Committee and the Nuclear Facilities Safety Committee. The Station Nuclear Safety Committee reviews procedures or instructions and changes to procedures or instructions that change the document's intent (*refer to QAPD Appendix B*)<sup>66</sup> to verify that such changes do not *require a license amendment* as defined in 10CFR50.59<sup>67</sup>. Following an unusual incident during operations, testing, an unexpected transient, significant operator's error or equipment malfunction or modification of a system, applicable procedures or instructions are reviewed by appropriate individuals or organizations. Changes to procedures or instructions are reviewed and approved by the appropriate organization. The system for review, approval and control of instructions or procedures provides for the identification of individuals and organizations involved, identification, as appropriate, of documents to be used in performing the activity, coordination and control of interface documents and the maintenance and updating of distribution lists.

These instructions or procedures include, as appropriate, quantitative or qualitative acceptance criteria for determining that certain activities have been satisfactorily accomplished. These administrative controls and quality assurance program establishes measures for controlling the issuance of documents such as procedures or instructions, including changes thereto, which prescribe activities affecting quality. These measures assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed.

#### 5.2.16 Control of Measuring and Test Equipment<sup>68</sup>

Measuring tools, gauges and test equipment used at the site on items, which affect plant safety, are controlled and recalled for calibration at prescribed intervals.

**Nuclear Power** and Nuclear Quality Assurance, as appropriate, maintain required standards, conduct calibrations, adjustments, and approve calibration procedures.

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<sup>65</sup> QAPDrev15-005 rev 0 editorial changes through-out section to delete the phrase "Nuclear Projects" to reflect inclusion of Nuclear Projects into Nuclear Power Maintenance

<sup>66</sup> QAPDrev15-015 rev 0 text revised to establish consistent with QAPD sections pertaining to SNSC review of procedures

<sup>67</sup> QAPDrev15-014 rev0 to reflect revision of 10 CFR 50.59 and cessation of the use of the phrase "un-reviewed safety question"

<sup>68</sup> QAPDrev15-005 rev 0 editorial changes through-out section to reflect inclusion of Nuclear Projects into Nuclear Power Maintenance Department

Nuclear Quality Assurance and *Nuclear Power* maintain records of measuring and test equipment under their control. These records include:

1. Identification number;
2. Description of the item;
3. Manufacturer's name and model number;
4. Calibration frequency; and
5. Reference to method or procedure.

Only after items are listed on the measuring and testing list can they be used on Class A systems. Each measuring tool, gauge, and test equipment bears a tag or a sticker which indicates the next calibration due date.

Calibration requirements are based on the type of equipment, usage, and any other conditions affecting accuracy control requirements.

Calibrations are made against certified measurement standards, which have a known relationship to national standards where such standards exist. Where no such standards exist, the basis for calibration is documented. The accuracy of each calibrating standard is at least equal to the accuracy requirement for the equipment being calibrated. If called for by engineering specification or drawing or other written instruction, calibrating standards of a specified greater accuracy will be used.

Discrepancies discovered in examination or test equipment are reported in accordance with procedures for reporting nonconformances and corrective actions in a condition report. A documented review is initiated of all work accomplished with the equipment since the previous calibration. To determine if applicable requirements have been satisfied, a review is conducted of all material, components and equipment checked with discrepant examination or test equipment since its last acceptable calibration or periodic check. Additional corrective actions are assigned to action addressees, if required, by the manager assigned responsibility for the condition report.

#### 5.2.17 Inspections<sup>69</sup>

Programs for inspection of items and activities affecting safety have been established and are implemented by personnel reporting to Material Procurement, *Nuclear Engineering*, Nuclear Quality Assurance and qualified contractors working under their direction, or by other properly authorized personnel.

For plant maintenance and modification, examination, checks and inspections are normally accomplished by supervisors responsible for the work. When independent examinations are deemed necessary the examinations are accomplished by personnel who did not perform the work and who did not directly supervise the work.

Quality requirements, including inspection requirements, are established either by Nuclear Engineering during development of modification documents or Maintenance during development of work instructions. Nuclear Quality Assurance and other organizations conduct independent inspections to verify compliance as specified in work instructions.

Work inspection instructions identify the inspections, hold points and documentation required for a job. For large and complex work, travelers or other documentation, e.g. modification implementing procedures,

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<sup>69</sup> QAPDrev15-005 rev 0 editorial changes through-out section to reflect inclusion of Nuclear Projects into Nuclear Power Maintenance Department and QAPD rev15-006 reflects inclusion of Test & Performance functions within Nuclear Engineering

are issued by the Nuclear Power. The documentation identifies the operations to be performed on an item after it is drawn from storage. Mandatory independent inspection hold points are also identified on the documentation, as applicable.

The Department Manager, Nuclear Quality Assurance and Oversight has the authority to order cessation of work where continuation of work would lead to unacceptable conditions. Work may be resumed if approved by the Plant Manager or management levels above the General Manager.

The inspecting organizations maintain records of required independent inspection activities.

#### 5.2.18 Control of Special Processes<sup>70</sup>

Measures have been established and documented which assure that special processes are accomplished under controlled conditions employing appropriately qualified personnel and procedures.

Nuclear Engineering prepares in-house welding procedures and acceptance criteria. Maintenance with the review of Design Engineering qualifies welding procedures and personnel to applicable ASME Codes and maintains appropriate records in accordance with ASME Code Section IX.

Welding materials are specified, purchased, receipt inspected, stored, identified, and issued in accordance with written procedures. Nuclear Engineering provides weld joint identification and authorizes weld modifications or repair.

For welds accomplished by Company forces at Indian Point<sup>71</sup> the proper completion of weld inspection forms, weld inspection and acceptance, and permanent recording of weld acceptance, is the responsibility of the Nuclear Quality Assurance inspector or Maintenance and <sup>72</sup>QC Inspectors.

For welds accomplished by contractor personnel, the contractor weld process control form for welds shall require the approval of contractor quality assurance personnel. In cases where the welding contractor does not provide NDE services, as the welding proceeds the appropriate section of weld inspection form shall be completed by the Nuclear Quality Assurance inspector to indicate that inspection requirements have been satisfied and to provide a permanent record of traceability of material and inspection information, as required.

Nuclear Power prepare "as-constructed" information (marked-up drawings) showing weld locations and respective weld identification numbers. The "as constructed" information for modifications is forwarded to Nuclear Records Management Center, which verifies that these drawings conform to the latest modification package drawing list and then forwards them to *Nuclear* Engineering. *Nuclear* Engineering revises the affected original drawings, and distributes copies to the Nuclear Records Management Center. Nuclear Power forwards "as constructed" information for repairs to *Nuclear* Engineering. Nuclear Quality Assurance monitors welding activities to assure compliance with approved procedures. Welding codes or requirements for work performed by contractors requires prior Engineering approval. Heat treatment is conducted in accordance with approved procedures.

The Department Manager, Nuclear Quality Assurance and Oversight or his designee, certifies Level III Non-Destructive Examiners. Level III examiners are responsible for examinations of Level I and Level II personnel. All NDE personnel must meet the required physical fitness criteria, pass a written examination, satisfactorily operate test equipment and interpret or analyze collected indications. Nuclear Engineering

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<sup>70</sup> QAPDrev15-005 rev 0 editorial changes through-out section to delete the phrase "Nuclear Projects" to reflect inclusion of Nuclear Projects into Nuclear Power Maintenance Department and QAPD rev15-016 reflects consolidation of description of functions within Nuclear Engineering

<sup>71</sup> editorial deletion of the phrase "Van Nest shops" to reflect station no longer utilizing Van Nest shops

<sup>72</sup> editorial deletion of the phrase "Shop Operations" to reflect station no longer utilizing Van Nest shops

identifies the type of NDE to be performed.

Nuclear Quality Assurance monitors NDE services to assure compliance with requirements and maintains appropriate records of work performed.

Chemical cleaning may be required during certain maintenance or modification work. The maintenance procedure identifies the approved process to be followed as well as any inspections and other controls required.

#### 5.2.19 Test Control

Nuclear Power provides, and maintains control over operating procedures and test procedures to assure that they are appropriately prepared, authorized, implemented, documented and evaluated.

The plant Technical Specifications incorporate various engineering requirements and parameter limits that are applicable during operation of the plant. Procedures include measures to report conditions adverse to quality and to assure adequate corrective action. The NFSC reviews proposed changes to procedures that **require a license amendment**<sup>73</sup> as defined in 10CFR50.59. Nuclear Power establishes procedures for indicating the status of inoperable equipment, for example, tagging valves and switches to prevent inadvertent operation.

A series of periodic tests have been prepared to satisfy the requirements of the plant Technical Specifications.

Test procedures contain:

1. The test objective;
2. The acceptance or operability criteria to be used in evaluating test results;
3. Pertinent references, as appropriate;
4. Precautions;
5. Limitations;
6. Check-off sheets, as appropriate;
7. Technical specifications, as required;
8. Special equipment, as required; and
9. Step-by-step instructions.

The test procedures are developed and approved by the section responsible for conducting the test.<sup>74</sup> The responsible section sends a copy of the test procedure to the Chairman of the Station Nuclear Safety Committee who arranges a SNSC review.

Once approved by the Station Nuclear Safety Committee, these test procedures are maintained by the responsible group and updated, as required, for possible future use.

Maintenance and preoperational test control consists of the following:

1. Each Work Order issued for Class A items is evaluated for retest requirements by Test and Performance which provides such requirements as necessary;
2. Prior to the test, Operations insures that all Work Orders to which the test applies have been signed off for work completion. Operations also assures that there are no unresolved

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<sup>73</sup> QAPDrev15-014 rev0 to reflect revision of 10 CFR 50.59 and cessation of the use of the phase "un-reviewed safety question"

<sup>74</sup> editorial change to eliminate examples of groups assigned to conduct tests

- conditions adverse to Quality for any item within the boundary of the test;
3. For refueling or other major shutdowns, a total test program is developed including an overall schedule for tests to be performed. The program is based on a review of all Work Orders and associated test requirements by the appropriate organizational units; and
  4. Test procedure results are submitted to the responsible group which monitors test results to assure that data meet acceptance requirements.

*Nuclear Engineering*<sup>75</sup> monitors the performance of test procedures, as necessary, to assure that the tests are performed in accordance with written procedures.

Post-maintenance test results are evaluated by station personnel. When test results are deemed satisfactory, the Shift Manager certifies the test results by signing and dating the appropriate sections of the approval sheet. The record copy of the test results and the applicable Work Order covered by that test are filed in the central record file. Test results are reported to the responsible group for evaluation.

Nuclear Power prepares and controls operating records in accordance with requirements of the plant Technical Specifications. These records provide documentation for all operations, tests, inspections, shutdowns, changes and other pertinent activities associated with daily operations listed in the plant Technical Specifications. These records are maintained at the site in a manner convenient for review and are retained for five years or longer, as required by applicable codes or regulations.

### 5.3 Preparation of Instructions and Procedures

The administrative controls and quality assurance program is carried out in accordance with written instructions and procedures. These instructions and procedures are prepared by organizations participating in the program, e.g., Nuclear Power, Nuclear Engineering, Nuclear Projects, *Central Field Services* and Nuclear Quality Assurance and are reviewed, approved and controlled in accordance with Section 5.2.15.

These instructions and procedures describe activities affecting safety at the plant and provide an approved, preplanned method of conducting operations. Procedures are in documents such as administrative directives, station administrative orders, administrative directives, plant technical procedures, Nuclear Quality Assurance procedures, Nuclear Engineering and Purchasing operating procedures, Nuclear Projects field directives and corporate instructions. Each instruction and procedure is of a detail appropriate to the circumstance and permits the user to perform the required activity without direct supervision; is appropriately titled, dated, and approved; contains a clear, concise statement of purpose; and, as appropriate, contains in its body the titles and identifying numbers of applicable reference documents; and identifies prerequisite activities, precautions to be taken, limitations to be applied, corrective action to be implemented, step-by-step instructions, acceptance criteria and check-off lists.

Procedures fall into the following general categories:

1. System procedures describing operation related to the safety of the plant;
2. Operating procedures providing instructions for the integrated operation of the plant;
3. Startup procedures which provide for starting the reactor from hot or cold condition and recovery from reactor trips;
4. Shutdown procedures which provide for controlled reactor shutdown or shutdown following reactor trips;
5. Power operation and load changing procedures which provide for steady-state power operation and load changing, including response to unanticipated load changes;
6. Process monitoring procedures which provide for monitoring plant system performance and, as appropriate, identify limits for significant process parameters;

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<sup>75</sup> QAPD rev 15-006 rev 0 to reflect incorporation of T&P functions into Nuclear Engineering

7. Fuel-handling procedures which provide for such activities as core alterations, refueling, fuel accountability, receipt and shipment of fuel and safety measures;
8. Maintenance procedures which provide for preparation for maintenance, performance of maintenance, post-maintenance checks and return to service, and maintenance records;
9. Radiation control procedures which provide for implementation of the radiation control program including the acquisition of radiation data, and which identify equipment for performing radiation surveys and for measurement, evaluation and assessment of radiation hazards;
10. Calibration and test procedures which provide for periodic calibration and testing of safety-related instrumentation and control systems and of measuring and test equipment used in activities affecting safety;
11. Chemical-radiochemical control procedures which provide for activities such as sampling and analyses, coolant quality maintenance, control of deleterious agents and for the control, treatment and management of radioactive wastes and the control of radioactive calibration sources;
12. Emergency procedures which provide guidance for operations during potential emergencies in a manner that will allow a trained operator to identify in advance the course of events signaling an emergency as well as describing the action he should take; and for distinguishing, at least initially, between abnormal and emergency conditions; for identifying symptoms of a particular kind of emergency condition; for automatic action; for immediate operator action; for subsequent operator action; and for categories of events of particular kinds of emergencies, such as loss of coolant;
13. Procedures for implementing the emergency plan which provide for assignment of authorities and responsibilities; protective measures; specific action; medical treatment; equipment requirements; identification of emergency communications network; description of alarm signals, restoration of the plant to normal conditions; and for testing of procedures, communications network and alarm system; and
14. Test and inspection procedures which provide a description of objectives, acceptance criteria; prerequisite and special conditions, limiting conditions, the test or inspection procedure; specify any special equipment or calibration required; and which, as appropriate, identify hold points.

APPENDIX A

*Items under the QA Program<sup>1</sup>*

*Appendix A-1 Class A*

*Appendix A-2 Class FP*

*Appendix A-3 Class Met*

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<sup>1</sup> Appendix A was expanded to reflect licensing basis commitments to extend Quality Assurance Program

*Appendix A-1 Class A*

*Unit 1 Class-A Items*

1. Containment
2. Containment Isolation System
3. Waste Disposal System<sup>1</sup>

Note: It has been determined that some of the Waste Disposal System in Unit 1 is non-Class A.

4. Fuel Handling System
5. Functional and Area Radiation Monitoring System
6. Emergency Power Systems
7. Containment Continuous Leakage Rate Monitoring System
8. Spent Fuel Pool Cooling System (Pool level instrumentation and alarm only)
9. Sweep Gas System
10. Hydrogen Gas System
11. Ventilation for Safety Related Areas

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<sup>1</sup> Administrative change in system designation to reflect disposition of CR 200102757 to use maintenance rule system designations

## Unit 2 Class-A Items

1. Core and Reactor Internals.
2. Control Rods and Control Rod Drives and Drive Housings.
3. Primary Coolant System.
  - Pressurizer System.
  - Primary Relief System.
  - Reactor Coolant Pump Shaft.
  - Reactor Coolant Pump Flywheel.
  - Reactor Coolant Pump Seals.
  - All pressure boundaries (vessels, pumps, piping and valves) through the second pressure boundary isolation device.
4. Secondary Coolant System.
  - Main Steam Lines up to and including the Second Main Steam Isolation Valves (MS-2).
  - Main Feedwater System to the Steam Generator downstream of and including the system's second Isolation Valve.
  - Boiler Blowdown from the Steam Generators up to and including the system's isolation valves.
  - The Main Steam Line to the Auxiliary Feedwater Turbine Drive.
  - Turbine Stop and Control Valves.
  - First Stage Turbine Pressure Transmitters.
  - Independent Electrical Overspeed Protection System Electrical Feeds from each of their respective AC Instrument Bus Circuit Breakers up to and including their Internal 1.5A fuses and Fuse Holders

Note: Per Declassification CL-94-0023 (rev. 1) the only parts of the IEOPS that are Class A are the electrical feeds up to the point of isolation device between the IEOPS channel and Class A Power Source.

  - Feedwater Regulator Valves (Main and Low Flow Bypass).
  - Main Boiler Feedwater Pump Motor Operated Discharge Valves (BFD -2-21 & BFD 2-22).
  - Main Steam Traps and Atmospheric Dump Drains and Silencer Drains.
  - Feedwater Leading Edge Flowmeters and Associated Pressure Transmitters (PT-3101 through 3104).

5. Auxiliary Boiler Feedwater System.

Includes:

- Condensate Storage Tank, supply piping and valves to the Auxiliary Feedwater Pumps.  
City water to Auxiliary Feedwater pump up to and including valve CT-49.

6. Chemical and Volume Control System.

7. Containment Building.

Includes:

- Access air locks.
- All piping and electrical penetrations.
- Internal floors, walls and structural steel.

8. Containment Isolation System.

9. Containment Spray System.

10. Containment Air Recirculation Cooling and Filtration System.

11. Waste Disposal System<sup>2</sup>

12. Nuclear Service Water System.

- All cooling paths to and from nuclear safety related equipment

13. Instrument Air System.

- Compressor and associated equipment and essential air header to nuclear instruments, control and valves.
- Closed Cooling Water System.

14. Fuel Handling System.

15. Reactor Control and Instrumentation System.

16. Reactor Protection / Trip System.

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<sup>2</sup> Administrative changes - to reflect disposition of CR 200102757 based on the maintenance rule system designations; QAPD revision 15 item 11, Gaseous Waste Processing System was changed in revision 16 to Waste Disposal System; QAPD revision 15 as item 12, Liquid Waste Processing System has been classified as non-safety and deleted from this list; QAPD revision 15 as item 33, Containment Sump System which was previously listed separately is part of the Waste Disposal System.

17. Sampling System.

- Including only pressurized lines up to the second Containment Isolation Valve.

18. On-site Emergency A.C. Power System.

Includes:

- Electrical components and circuitry up to and including isolation devices for non-emergency loads.
- Emergency Diesel Generators and Diesel Generator Auxiliary Systems, i.e., fuel oil, Cooling Water and Startup Air Systems.
- (6.9 KV Buses and Lighting Systems are both Non-Class A.)

19. On-site D.C. Power Systems.

Includes:

- Electrical components and circuitry up to and including isolation devices for non-emergency loads.
- Batteries, battery chargers, D.C. power panels, D.C. distribution panels and associated cabling.

20. Process and Area Radiation Monitoring Systems.

21. Containment Penetration and Weld Channel Pressurization System.

22. Hot Penetration Cooling System.

23. Isolation Valve Seal Water System.

24. Post Accident Containment Hydrogen Control System.

Includes:

- Hydrogen Recombiner System.
- Post Accident Containment Vent System.
- Containment Building Post Accident Air Sampling System (H2-02 Analyzers).

25. Safety Injection System.

- High Head Injection for ECCS.
- Low Head Injection for ECCS.
- Recirculation and Containment Sumps.
- Accumulators.
- External and Internal ECCS Recirculation Systems.

26. Residual Heat Removal System.

Includes:

- Low Head Injection for ECCS.
- External and Internal Recirculation Systems.
- Recirculation and Containment Sumps.

27. Component Cooling System.

Includes:

- Auxiliary Component Cooling Pumps and Piping.

28. Refueling Water Storage Tank.

29. Spent Fuel Pool Cooling and Make-up System.

30. Ventilation / Filtration System for Areas containing Safety Related Systems and Systems containing Radioactivity.

31. Reactor Vessel Service and Inspection Equipment.

Includes:

- Polar Crane.
- Equipment that is used over the core and that could cause damage to the nuclear fuel assemblies during the time the reactor head is removed.
- Reactor Vessel and head inspection tools.

32. Primary Coolant Leak Detection System.

33. Nitrogen Supply to Nuclear Equipment.

34. Hydrogen Supply to Nuclear Equipment.

35. Primary Water Make-up System.

36. Supports required for all the above listed items.

Includes:

Structures and Seismic Restraining Devices.

37. All Regulating Systems, Controlling Systems and instrumentation used with the above listed items.

Includes:

- Indications used to determine operator action before (normal operation), during and following a postulated accident.

38. All items designed in Design Specification as per ASME Section III, Classes 1, 2, and 3, MC and CS.

39. All equipment performing Category 1 or 2 functions per Regulatory Guide 1.97.

40. Any fuses and circuit breakers which provide protection (limit electrical fault currents) for containment electrical penetrations.

41. ATWS\* Mitigation System Actuation Circuitry (AMSAC)

\*ATWS – Anticipated Transient without Scram.

\*\*Note:

In order to preclude the need to develop an AMSAC specific QA program, AMSAC equipment will be treated as “Class A”, which for quality assurance purposes will invoke Con Edison’s 10CFR50, Appendix B program. Should any aspect of our 10CFR50, Appendix B, QA program, prove overly restrictive or otherwise unnecessary, provision will be made to waive that aspect, provided that the quality assurance guidance contained in Generic Letter 85-06 is observed. Procedures that may waive provisions of 10CFR50, Appendix B, shall be developed for these unique situations and approved by the Senior Vice President, Nuclear Operations per section 3.2 of this Quality Assurance Program.

The following consumables are used in conjunction with the items listed above:

42. Diesel Generator Fuel Oil.

43. Boric Acid.

44. Lubricating Fluids whose loss could degrade critical components.

45. Demineralizer Resin.

Includes:

- Resins used in the Chemical and Volume Control Systems.

46. Trisodium phosphate for use in the Containment Spray System

47. Weld Rod and Weld Filler Material.

48. Hydraulic Snubber Fluids and Seals.

*Appendix A-2*

**FIRE PROTECTION ITEMS (CLASS FP)<sup>1</sup>**

The Fire Protection (FP) items listed in this table are described in more detail in Con Edison's Fire Protection Program Plan.

1. In buildings containing safety-related or safe-shutdown equipment or systems:
  - Barriers (Walls, Floors, Ceilings);
  - Fire proofing coatings;
  - Fire doors and frames;
  - Penetrations for piping and conduit;
  - Roof
  
2. Electrical cables for the fire protection systems and components including power controls, indications and alarms:
  - Cable trays, penetrations and coatings; and
  - Cable.
  
3. Smoke detectors in:
  - Containment Building;
  - Primary Auxiliary Building;
  - Control Building;
  - Electrical tunnel;
  - Electrical and piping penetration areas; and
  - Auxiliary feed room.
  
4. Temperature sensors in:
  - Electrical tunnel; and
  - Diesel Generator Building.
  
5. Fire detection electrical system.
  
6. Fire Protection Water Supply System
  - Water tank and level instrumentation.
  - Water lines and valving from the tank to the fire pumps.
  - Fire pumps and controllers.
  - Yard mains and sectionalizing valves.
  - Tamper switches.
  - Annunciation systems.

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<sup>11</sup> QAPDrev15-009 rev. 0, Class FP list from CI-240-1 (ACN115) Supplement 2 has been added with only editorial change to be consistent with the QAPD text

7. Halon fire suppression system in Control Building.
8. Water sprinkler and hose standpipe:
  - Turbine Building stairwell No. 3,
  - Hose Station at El. 15',
  - Hose Station at El. 33', and
  - Hose Station at El. 53';
  - Stairwell-east end of Control Building,
  - Hose Station at El. 53';
  - Hydrant No. 25 and associated hose house;
  - Hydrant No. 27 and associated hose house;
  - Hose stations in the Primary Aux. Building;
  - Hose stations in the Containment Building;
  - Hose stations in the Fuel Handling Building;
  - Water sprinkler system in electrical tunnel; and
  - Water sprinkler system in Diesel Generator Building.
9. Miscellaneous Components:
  - Floor drain back flow preventor in emergency diesel generator pits; and
  - Fire hose and nozzles.
10. Miscellaneous Items:
  - Emergency diesel generator oil shields;
  - Emergency lighting;
  - Communication equipment (excluding telephone);
  - Self-contained breathing equipment; and
  - Portable extinguishers.
11. Alternate Safe Shutdown Systems and other systems described in the Con Edison Fire Protection Program Plan for compliance with 10CFR50 Appendix R.

*Appendix A-3*

**METEOROLOGICAL MONITORING SYSTEM ITEMS (Class MET)<sup>1</sup>**

The following lists the structures, systems and components required for obtaining and calculating the meteorological parameters specified in NRC Confirmatory Order Appendix A, Annex 1, Parts 1 and 2 dated February 11, 1980 under Docket No. 50-247. Class MET items are the Con Edison-owned facilities identified below.

- |    |  |  |
|----|--|--|
| 1. | <u>Meteorological Towers</u>   | <u>OWNER<sup>2</sup></u>   |
|    | <ul style="list-style-type: none"> <li>• Primary tower (height - 122 meters)</li> <li>• Back-up tower (representative height - 100 feet).</li> </ul>   | <p>ENTERGY</p> <p>Con Ed</p>   |
| 2. | <u>Meteorological System Components</u>  |  |
|    | <ul style="list-style-type: none"> <li>• Cup anemometer with analog recorder (windspeed)                             <ul style="list-style-type: none"> <li>1 ea at 10, 60 &amp; 122 meters elevation</li> <li>1 ea at 10 meters elevation - "back-up tower"</li> </ul> </li> <li>• Wind vane with analog recorder (wind direction)                             <ul style="list-style-type: none"> <li>1 ea at 10,60 &amp; 122 meters elevation.</li> <li>1 ea at 10 meters elevation - "back-up tower"</li> </ul> </li> <li>• Aspirated thermistors (temperature sensors)with analog recorders(T)                             <ul style="list-style-type: none"> <li>12210 meters and 6010 meters.</li> </ul> </li> <li>• Aspirated thermistor with analog recorder (TA)                             <ul style="list-style-type: none"> <li>1 ea at 10 meters elevation</li> </ul> </li> <li>• Aspirated Lithium Chloride dew point sensor with analog recorder (TD).                             <ul style="list-style-type: none"> <li>1 ea at 10 meters elevation</li> </ul> </li> <li>• Heated tipping rain gage with analog recorder (precipitation)                             <ul style="list-style-type: none"> <li>1 ea at 1.0 meter elevation</li> </ul> </li> </ul> | <p>ENTERGY</p> <p>Con Ed</p> <p>ENTERGY</p> <p>Con Ed</p> <p>ENTERGY</p> <p>ENTERGY</p> <p>ENTERGY</p> |
| 3. | MIDAS computer.  | Con Ed   |
| 4. | <u>Redundant Power Source</u>  |  |
|    | <ul style="list-style-type: none"> <li>• Emergency generator with automatic transfer switch located at the primary meteorological tower</li> <li>• Uninterruptible power supply for the back-up meteorological tower, analog recorder and telemetry equipment located in the MIDAS equipment room.</li> <li>• Battery supply located at back-up meteorological tower.</li> </ul>   | <p>ENTERGY</p> <p>Con Ed</p>   |

<sup>1</sup> QAPDrev15-009 rev. 0 the Class MET list from CI-240-1 (ACN115) Supplement 3 added without change.

<sup>2</sup> Editorial change to reflect change in ownership of IP 3 from NYPA to ENTERGY

5. Instrument Shelter

- Building located near primary meteorological tower that houses the analog recorders and associated electronics
- The room (EOF) that houses the back-up meteorological analog recorders and associated electronics and MIDAS computer

ENTERGY

Con Ed

APPENDIX B  
REVIEW AND AUDIT PROGRAM

1.0 Station Nuclear Safety Committee (SNSC)

1.1 Function

The Station Nuclear Safety Committee shall function to advise the Vice President-Nuclear Power on all matters related to nuclear safety.

1.2 Composition

1.2.1 The Station Nuclear Safety Committee shall, as a minimum, be composed of individuals, approved by the Vice President-Nuclear Power in the following disciplines:

Chairman:	Senior Manager *
Member:	Engineering
Member:	Operations
Member:	Maintenance
Member:	Instrument and Control
Member:	Radiation Protection
Member:	Reactor Engineering

\* This Senior Manager shall be appointed by and report directly to the Vice President-Nuclear Power for the SNSC function and shall be independent of the Plant Manager.

1.2.2 The committee members and Alternates shall have an academic degree in engineering or a physical science, or hold a management position, and shall have a minimum of five years technical experience in one or more areas listed in 1.2.1. In addition, other qualified individuals may be appointed by the SNSC Chairman to serve as SNSC members.

1.3 Alternates

Alternate members shall be appointed in writing by the SNSC Chairman to serve on a temporary basis, and must have qualifications similar to the member being replaced.

1.4 Meeting Frequency

The SNSC shall meet at least once per calendar month and as convened by the SNSC Chairman or his designated alternate.

1.5 Quorum

A quorum of the SNSC shall consist of the Chairman or his designated alternate and four members. No more than two alternate members shall be included in the quorum.

1.6 Responsibilities

The Station Nuclear Safety Committee shall be responsible for:

- a. Review of (1) all procedures required by *Indian Point Unit 2*<sup>1</sup> Technical Specification 6.8 and changes *to procedures that change the document's intent*,<sup>2</sup> and (2) any other proposed procedures or changes thereto as determined by the Chairman of SNSC to affect nuclear safety,
- b. Review of all proposed tests and experiments that affect nuclear safety,
- c. Review of all proposed changes to the Technical Specifications,
- d. Review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety,
- e. Investigation of all violations of the Technical Specifications and preparation and forwarding of a report covering evaluation and recommendations to prevent recurrence to the Vice President-Nuclear Power and to the Chairman of the Nuclear Facilities Safety Committee,
- f. Review of facility operations to detect potential nuclear safety hazards,
- g. Performance of special reviews and investigations and the issuance of reports thereon as required by the Chairman of the Nuclear Facilities Safety Committee,
- h. Review of any unplanned, radioactive release, including the preparation of reports covering evaluation, recommendations and disposition of the corrective action to prevent recurrence and the forwarding of these reports to the Vice President-Nuclear Power and to the Nuclear Facility Safety Committee,
- i. Review of changes to the Process Control Program and the Offsite Dose Calculation Manual,
- j. Review of the Fire Protection Program and implementing procedures and submission of recommended changes to the Chairman of the Nuclear Facilities Safety Committee.

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1 Clarification to discriminate between Unit 1 and Unit 2 Technical Specifications

2 QAPDrev15-015 rev 0 text revised to establish consistent with QAPD sections pertaining to SNSC review of procedures

***k. Review of Unit 1 Operating Organization***<sup>3</sup>

1.7 Authority

The Station Nuclear Safety Committee shall:

- a. recommend to the Vice President-Nuclear Power, in writing, approval or disapproval of items considered under 1.6(a) through (d) above,
- b. render determinations, in writing, with regard to whether or not each item considered under 1.6(a) through (e) above ***require a license amendment***<sup>4</sup> and
- c. provide immediate written notification to the Chairman, Nuclear Facilities Safety Committee of disagreement between the recommendations of the SNSC and the actions contemplated onsite. However, the course of action determined by the Vice President-Nuclear Power pursuant to Technical Specification 6.1.1 "Vice President-Nuclear Power Responsibilities" or the Plant Manager pursuant to Technical Specification 6.1.2 "Plant Manager Responsibilities" shall be followed.

1.8 Records

The Station Nuclear Safety Committee shall maintain written minutes of each meeting and copies shall be provided to, as a minimum, the Vice President-Nuclear Power and the Chairman, Nuclear Facilities Safety Committee.

2.0 Nuclear Facilities Safety Committee (NFSC)

2.1 Function

The Nuclear Facilities Safety Committee shall function ***as an advisory body to the Senior Vice President, Nuclear Operations and*** provides independent review and ***oversight of station***<sup>5</sup> activities in the areas of:

- a. reactor operations
- b. nuclear engineering
- c. chemistry and radiochemistry
- d. metallurgy and non-destructive testing

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3 Administrative Change to reflect Unit 1 Technical Specification Amendment request to move Unit 1 TS section 3.2.1.e to QAPD

4 QAPDrev15-014 rev0 to reflect revision of 10 CFR 50.59 and cessation of the use of the phase "unreviewed safety question"

5 QAPDrev15-019 rev0 Clarifications of NFSC advisory & oversight function

- e. instrumentation and control
- f. radiological safety
- g. mechanical and electrical engineering
- h. **administrative controls and** <sup>6</sup>quality assurance practices
- i. radiological environmental effects
- j. other appropriate fields associated with the unique characteristics of the nuclear power plant

## 2.2 Composition <sup>7</sup>

The Committee shall have a permanent voting membership of at least 5 persons of which a majority are independent of the Nuclear Power organization and shall include technically competent persons **having experience** in nuclear plant design, construction, operation or in nuclear safety. The **membership**, Chairman and Vice Chairman will be experienced in the field of nuclear energy **and be** appointed by the Senior Vice President, Nuclear Operations. In the absence of the Chairman, the Vice Chairman will serve as Chairman.

The Secretary shall be appointed by the Chairman of the Committee.

## 2.3 Alternates

Each permanent voting member, subject to the **Senior Vice President, Nuclear Operations** <sup>8</sup> approval, may appoint an alternate to serve in his absence. **Records** <sup>9</sup> shall be maintained showing each such current designation.

No more than two alternates shall participate as voting members in NFSC activities at any one time.

Alternate members shall have voting rights.

## 2.4 Consultants

Consultants shall be utilized as determined by the NFSC Chairman.

## 2.5 Meeting Frequency

The NFSC shall meet at least once per calendar quarter or at more frequent intervals at the call of the Chairman or, in his absence, the Vice Chairman.

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<sup>6</sup> Administrative change to reflect Unit 1 Technical Specification amendment request to move Unit 1 TS section 3.2.1.f to QAPD

<sup>7</sup> QAPDrev15-019 rev 0 Revision of NFSC membership to reflect pending separation of IP#2 from Consolidated Edison of NY

<sup>8</sup> QAPDrev15-019 rev 0 Change in alternate approval authority from Chairmen to VP

2.6 Quorum

A majority of the permanent voting committee members, or duly appointed alternates, which shall include the Chairman or the Vice Chairman and of which a minority are from the Nuclear Power Organization shall constitute a quorum for meetings of the Committee. In the event both the Chairman and the Vice Chairman are absent, one of the permanent voting members will serve as Acting Chairman.

2.7 Review

The following subjects shall be reported to and reviewed by the Committee insofar as they relate to matters of nuclear safety:

- a. The evaluations for (1) changes to procedures, equipment or systems and (2) tests or experiments completed under the provision of 10 CFR 50.59 to verify that such actions did not *require a license amendment*<sup>10</sup>.
- b. Proposed changes to procedures, equipment or systems which *require a license amendment*<sup>11</sup> as defined in 10 CFR 50.59.
- c. Proposed tests or experiments which *require a license amendment*<sup>12</sup> as defined in 10 CFR 50.59.
- d. Proposed changes in Technical Specifications or licenses.
- e. Violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.
- f. Significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.
- g. Reportable Events, as specified by 10 CFR 50.73.
- h. Any indication of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems, or components.

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9 QAPDrev15-019 rev 0 clarification that a set of records separate from station records is not required

10 QAPDrev15-014 rev0 to reflect revision of 10 CFR 50.59 and cessation of the use of the phase “unreviewed safety question”

11 QAPDrev15-014 rev0 to reflect revision of 10 CFR 50.59 and cessation of the use of the phase “unreviewed safety question”

12 QAPDrev15-014 rev0 to reflect revision of 10 CFR 50.59 and cessation of the use of the phase “unreviewed safety question”

- i. Reports and meeting minutes of the Station Nuclear Safety Committee.
- j. Environmental surveillance program pertaining to radiological matters.
- k. *NRC Inspection and Enforcement Reports* [TC1] <sup>13</sup>

## 2.8 Audits

Audits of facility activities shall be performed *by Nuclear Quality Assurance with oversight by* <sup>14</sup> the NFSC. *The audits shall be conducted at least once every two years or more frequently commensurate with their safety significance, performance and regulatory requirements except as noted below.* <sup>15</sup>These audits shall encompass:

- a. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions.
- b. The performance, training and qualifications of the entire facility staff .
- c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems or method of operation that affect nuclear safety .
- d. The performance of activities required by the Quality Assurance Program to meet the criteria of Appendix B, 10 CFR 50
- e. The Facility Emergency Plan and implementing procedures [I2]
- f. The Facility Security Plan and implementing procedures, the Fitness for Duty Program and Access Control Program<sup>16</sup>.
- g. The Facility Fire Protection Program and implementing procedures.
- h. A fire protection and loss prevention inspection and audit shall be performed utilizing either qualified offsite licensee personnel or an outside fire protection firm.
- i. An inspection and audit of the fire protection and loss prevention program shall be performed by an outside qualified fire consultant at least once per 36 months.

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13 Editorial correction to reflect NRC commitment RA-78-A69-C03

14 QAPDrev15-019 clarification to reflect NQA responsibility to perform the audit while NFSC has an oversight function

15 QAPDrev15-012 rev 0 extending audit periodicity to two years in accordance with N18.7-76 per 10 CFR 50.54(a)(3)

16 The TS 6.5.2.8 g audit scope was expanded to include the audits that were previously listed in the QAPD section 4.1 to address the 10 CFR 26.80 and 10 CFR 73.56(g).

- j. The radiological environmental monitoring program and the results thereof
- k. The Offsite Dose Calculations Manual and implementing procedures.
- l. The Process Control Program and implementing procedures for processing and packaging of radioactive wastes.
- m. The performance of activities required by the Quality Assurance Program to meet the provisions of Regulatory Guide 1.21, Revision 1, June 1974 and Regulatory Guide 4.1, Revision 1, April 1975.
- n. The procedure review and revision program that evaluates the need for revising procedures.<sup>17</sup>
- o. Any other area of facility operation considered appropriate by the NFSC or the Senior Vice President, Nuclear Operations.

2.9 Authority

The NFSC shall report to and advise the Senior Vice President, Nuclear Operations on those areas of responsibility defined in sections 2.7 and 2.8. of this Appendix.

2.10 Records

Records of NFSC activities shall be prepared, approved and distributed as indicated below:

- a. Minutes of each NFSC meeting shall be prepared, approved and forwarded to the Senior Vice President, Nuclear Operations and to Senior Company Officers concerned with nuclear facilities within 30 days following each meeting.
- b. Reports of reviews encompassed by Sections 2.7 e, f, g and h above, shall be prepared, approved and forwarded to the Senior Vice President, Nuclear Operations and to Senior Company Officers concerned with nuclear facilities within 30 days following completion of the review.
- c. Audit reports encompassed by Section 2.8 above, shall be forwarded to the Senior Company Officers concerned with nuclear facilities and to the management positions responsible for the areas audited within 30 days after completion of the audit.

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<sup>17</sup> This audit was relocated from the QAPD section 4.1 to this Appendix.

## APPENDIX C

### *Supplemental QA Programs*

*Appendix C.1 Quality Assurance Program for Radioactive Material Packages<sup>1</sup>*

*Appendix C.2 Quality Assurance Program for Fire Protection Systems, Indian Point Unit 2*

*Appendix C.3 Quality Assurance Program for Meteorological Monitoring Systems of Indian Point Station*

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<sup>1</sup> Appendix C previously existed and was entitled *Steam Generator Replacement Project Quality Assurance Program Description*. Rev 0 was created on 8/18/00. This appendix was only used for the duration of the *Steam Generator Replacement Project*, and was retired at the conclusion of the project.

## APPENDIX C-1

### QUALITY ASSURANCE PROGRAM FOR RADIOACTIVE MATERIAL PACKAGES

#### 1.0 ORGANIZATION

##### 1.1 Participating Organizations

The organizations that participate in the "Quality Assurance Program for Operating Nuclear Plants" described here also participate in this program to the extent identified below.

##### 1.2 Responsibilities

1.2.1 Nuclear Power (NP) is responsible for all activities involving radioactive material packaging and transport, and radioactive waste classification, characterization, solidification (as applicable), selecting and labeling containers; and use, maintenance, and repair of a package while it is within the Indian Point Site boundary.<sup>2</sup> Nuclear Power is also responsible for establishing a quality control program in accordance with 10CFR20.2006 requirements to assure compliance with 10CFR61.55, and 10CFR61.56, for waste classification, characterization, processing, shipping and documentation.

1.2.1.1 The Radwaste Supervisor or his designated alternate shall prepare purchase requisitions for shipping package use. Such requisitions shall be reviewed by qualified personnel other than the preparer of the requisition. The Radwaste Supervisor or a designated alternate shall provide shipping package work inspection instructions, and check lists to verify compliance with regulatory requirements.

1.2.2 The NP Radioactive Waste Section or the Purchasing Department, as appropriate, shall prepare and issue purchase orders for the packaging and transport of radioactive material. Copies of purchase orders shall be sent to the NP Radwaste Manager and the Department Manager, NQA or their designated representative.

1.2.3 Nuclear Quality Assurance is responsible for verifying that necessary quality assurance procedures for the use and, where necessary, maintenance and repair of shipping packages are established and implemented, for verifying that Nuclear Power complies with the requirements of 49CFR173, Subject I, 10CFR20.2006, 10CFR61.55, 10CFR61.56 and 10CFR61.57, for periodic surveillance of shipping package activities, for auditing, and for vendor QA Program evaluations.

1.2.4 Nuclear Power Engineering and Nuclear Projects do not normally participate in this Program. In the unlikely event either or both are required to support any package repair or maintenance work, their activities shall be controlled in accordance with all associated requirements.

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<sup>2</sup> Normally any required maintenance or repair of a shipping package while it is within the site boundary is performed by the package owner.

- 1.2.5 Each organization participating in this quality assurance program is responsible for assuring indoctrination and training of its personnel that perform activities covered by this supplement to ensure that suitable proficiency is achieved and maintained. The indoctrination and training for the designated personnel shall include instruction in the regulatory requirements applicable to the program activities of the participating organizations. Indoctrination and training shall be recorded by appropriate documentation.

## 2.0 SCOPE

- 2.1 This Appendix defines the on-site quality assurance program for vendor-owned radioactive material packages and quality control requirements for waste classification, characterization (form), documentation, containers and labeling. The requirements defined in this appendix are in accordance with:
  - 2.1.1 The quality assurance provisions of 10CFR71.101(f) for on site use, maintenance and repair of vendor-owned radioactive material transport packages.
  - 2.1.2 10CFR61.55, 10CFR61.56, 10CFR61.57, and 10CFR20.31l for waste classification, characterization (form), labeling and pertinent quality control, respectively.
  - 2.1.3 49CFR173.475 for inspection of transport package prior to shipment.
  - 2.1.4 The applicable provisions of 10CFR50, Appendix B.
  - 2.1.5 NRC IE Bulletin No. 79-19, dated September 24, 1979 for training and periodic retraining in DOT and NRC regulatory requirements.

This Appendix applies to packages for fissile material (uranium-233, uranium-235, plutonium-238, plutonium-239, and plutonium-241) and quantities of licensed material in excess of Type "A" quantities as defined in 10CFR71.61 and all forms of radioactive wastes requiring classification in accordance with 10CFR61.55.

- 2.2 Shipping packages for the fissile or licensed material identified above shall have a valid NRC Certificate of Compliance prior to use. Hereinafter, the term package shall mean only such packages.
- 2.3 The Department Manager, Nuclear Quality Assurance (NQA) shall provide advice and counsel on this Appendix

## 3.0 DESIGN CONTROL

- 3.1 The radioactive material packages falling within the scope of this Program are designed, manufactured, procured, and owned by organizations other than Con Edison. Consequently, Con Edison is not required to establish and implement any in-house design control measure.
- 3.2 To assure that appropriate design control measures have been established and implemented, Con Edison shall require the vendor to submit to Con Edison an NRC Certificate of Compliance for each package in accordance with 10CFR71.12c, and evidence of NRC acceptance of the vendor's QA Program. In addition, NQA shall periodically evaluate vendor's Quality Assurance Program for compliance with applicable regulations.

#### 4.0 PROCUREMENT DOCUMENT CONTROL

- 4.1 Nuclear Power shall initiate purchase requisitions for packaging and transport of radioactive material, including preparation, e.g., solidification of waste for packaging as applicable.
  - 4.1.1 A complete requisition shall contain all necessary information required for the preparation of a request for quotation or a purchase order.
  - 4.1.2 Requisitions that involve waste preparation and/or high integrity containers shall specify 10CFR65.56 and 10CFR20.2006 to assure compliance with structural stability requirements.
  - 4.1.3 The Radwaste Supervisor normally initiates requisitions for the processing, transportation, and disposal of radioactive material. These requisitions are reviewed for completeness by the Material Procurement.
  - 4.1.4 The Radwaste Supervisor or his designated alternate shall identify on the requisition appropriate quality assurance program and documentation requirements. Such requirements shall include:
    - 4.1.4.1 Vendor to be evaluated and approved by Con Edison Procurement QA and have an NRC-approved quality assurance program as indicated by appropriate documentary evidence.
    - 4.1.4.2 Vendor to furnish a valid NRC Certificate of Compliance, or documentary evidence of the existence thereof, for each shipping package together with necessary supporting documentation, e.g., package design documents.
- 4.2 The Nuclear Power Radwaste section shall verify that vendors performing transfer, packaging and transport activities associated with low-level radioactive waste have been periodically evaluated. The Radwaste section shall conspicuously mark requisitions for such activities "rad". Procurement QA shall be responsible to perform the required vendor evaluations. The frequency of such evaluations shall not exceed five (5) years.

#### 5.0 INSTRUCTIONS, PROCEDURES AND DRAWINGS

- 5.1 Nuclear Power shall prepare written instructions and procedures for carrying out the applicable requirements of the QA Program. Vendor procedures may be utilized providing Nuclear Power approves the procedures in accordance with Station Administrative Orders.
- 5.2 Nuclear Power procedures and instructions shall include, where appropriate, provisions for radioactive waste classification, characterization (form) documentation, labeling, dewatering, solidification, quality control; and package receipt, inspection, opening, handling, storage, as necessary, loading, closing and removal from the site.
- 5.3 In the unlikely event that drawings are required under Con Edison package use conditions, i.e., for unusual major repair or maintenance of a package, (See Section 9.0 below) the drawings shall be controlled in accordance with the appropriate Class A requirements.

6.0 DOCUMENT CONTROL

- 6.1 Nuclear Power, NQA, and applicable vendor documents such as instructions, procedures, and drawings which prescribe activities affecting package quality, shall be reviewed, approved, distributed, and controlled in accordance with respective Nuclear Power and NQA administrative procedures. These procedures shall identify the responsibilities, authorities, and frequencies for review and approval in accordance with Station Administrative Procedures, and for controlling any vendor and temporary procedures, instructions or drawings.

7.0 CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

- 7.1 Con Edison purchases radioactive material processing, packaging, transport and disposal services. Included in these activities is Con Edison short-term, on-site use of vendor-owned packages. These activities shall be controlled in accordance with the applicable requirements of 10CFR20.2006 and 10CFR50, Appendix B.
- 7.2 Prior to the issuance of Con Edison purchase orders for use of radioactive material packages within the scope of this Program, NQA shall evaluate the prospective vendor's quality assurance program for conformance with the applicable requirements of 10CFR50 Appendix B or 10CFR71 Sub-part H, and 10CFR20.2006, as appropriate. This evaluation shall include a determination that the vendor's QA Program:
- 7.2.1 Has been approved by the NRC, if required;
  - 7.2.2 Is being satisfactorily implemented; and
  - 7.2.3 Adequately controls the pertinent materials and/or activities of sub-tier vendors.
- 7.3 Purchase Orders shall be placed only with vendors evaluated and approved by Procurement QA for the transfer, packaging and transport of radioactive waste.
- 7.4 NQA shall periodically re-evaluate previously approved vendors to assure the continued adequacy of their QA Program. Re-evaluation shall be conducted at least every five years.
- 7.5 Prior to each use of a package, NP shall inspect it in accordance with 10.0 below.

8.0 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS

- 8.1 Nuclear Power shall establish that package identification and marking conform with the model number identified in the purchase order and the NRC Certificate of Compliance.
- 8.2 During use, maintenance or repair of a package, the identification and marking of the package shall be preserved and pertinent records retained on file in accordance with the records provisions of Section 17.0 below.
- 8.3 Nuclear Power shall assure that radioactive waste containers are labeled in accordance with 10CFR61.57 requirements.

9.0 CONTROL OF SPECIAL PROCESSES

- 9.1 Normally, Con Edison does not apply special processes such as welding and heat treating to packages within the scope of this Program. Any required maintenance or repair of a shipping

package while it is within the Indian Point site boundary is normally the responsibility of the package owner.

- 9.2 In the unlikely event Con Edison finds it necessary to perform maintenance or repair of a package, it shall be performed with the documented approval of the package owner and the work controlled in accordance with the appropriate requirements. This includes appropriate measures for assuring the quality of any special processes employed.

## 10.0 INSPECTION

- 10.1 Prior to each shipment of licensed material, Nuclear Power shall assure that the package satisfies the applicable requirements of 10CFR71.87 including, as appropriate, that:
- 10.1.1 The package is proper for the contents to be shipped; and
  - 10.1.2 The package is in unimpaired physical condition except for any superficial defects such as marks or dents.
  - 10.1.3 Each closure device of the packaging, including any required gasket, is properly installed and secured and free of defects.
  - 10.1.4 Any system for containing liquid is adequately sealed and has adequate space or other specified provisions.
  - 10.1.5 Any pressure relief device is operable and set in accordance with written procedures.
  - 10.1.6 The package has been loaded and closed in accordance with written procedures.
  - 10.1.7 For fissile material, any moderator or neutron absorber, if required, is present and in proper condition.
  - 10.1.8 Any structural part of the package which could be used to lift or tie down the package during transport is rendered inoperable for that purpose unless it satisfies the design requirements of 10CFR71.45.
  - 10.1.9 The level of non-fixed (removable) radioactive contamination on the external surfaces of each package offered for shipment satisfies ALARA and the criteria detailed in 10CFR71.87(i) (1) and (i) (2).
  - 10.1.10 External radiation levels around the package and around the vehicle, if applicable, will not exceed the limits specified in 10CFR71.87 at any time during transportation.
  - 10.1.11 Accessible package surface temperatures will not exceed the limits specified in 10CFR71.43(G) at any time during transportation.
  - 10.1.12 The requirements of 49CFR173.475 are satisfied.
- 10.2 Nuclear Power shall develop written procedures and checklists for inspection of the package and transport vehicle upon arrival, of the package during handling, closure and loading, and of the package, package tie-down, and transport vehicle immediately prior to departure. Inspections shall include verification of compliance in accordance with 10CFR20.2006 requirements.

11.0 TEST CONTROL

- 11.1 Any on-site testing required by the Certificate of Compliance (COC) that is associated with normal operation (i.e., not with repair or maintenance) of vendor-owned shipping packages shall be performed in accordance with written procedures. The responsible vendor or Nuclear Power, as appropriate, shall be responsible for the preparation and control of such test procedures and shall assure compliance with the applicable requirements of 10CFR71.123.
- 11.2 In the unlikely event Con Edison finds it necessary to perform major repair or maintenance on a package, the work and any required testing shall be controlled in accordance with the appropriate requirements.

12.0 CONTROL OF MEASURING AND TEST EQUIPMENT

- 12.1 Measuring equipment, e.g., torque wrenches, used to verify characteristics such as package closure threaded fastener tightness, shall be controlled in accordance with the applicable requirements of applicable Nuclear Power procedures.

13.0 HANDLING, STORAGE, AND SHIPPING

- 13.1 Nuclear Power is responsible for the handling and, when necessary, storage of a package while it is within the site boundary.
- 13.2 Prior to shipping a package, Nuclear Power shall assure that any special instructions needed to safely open the package are sent to or have been made available to the consignee. Nuclear Power shall also assure that a shipment manifest accompanies each shipment in accordance with 10CFR20.2006 requirements.
- 13.3 Nuclear Power is responsible for developing necessary written procedures or instructions to assure adequate package handling, storage, if necessary, and shipping; or NP may approve and utilize vendor procedures or instructions.

14.0 INSPECTION, TEST, AND OPERATING STATUS

- 14.1 Nuclear Power shall indicate package inspection status in applicable procedures, instructions or checklists.
- 14.2 Nuclear Power shall be responsible for performing any tests associated with necessary repair or maintenance work. Nuclear Power shall indicate test status on tags, or other appropriate indicators, or in applicable procedures, instructions or checklists.

15.0 NONCONFORMING MATERIALS, PARTS, OR COMPONENTS

- 15.1 Nuclear Power or NQA, as appropriate, is responsible for identifying, dispositioning, and documenting any conditions adverse to quality found during normal Con Edison short-term package use. Although such conditions adverse to quality, if any, are likely to be minor in nature and easily corrected, Nuclear Power and NQA may utilize existing conditions adverse to quality report formats and procedures for these purposes.
- 15.2 NQA shall be informed of or identify, as appropriate, any conditions adverse to quality that cause Con Edison to perform maintenance or repair work on a package, or are found during the course of such work. In either case, NQA shall document such conditions adverse to quality in accordance with applicable procedures.

16.0 CORRECTIVE ACTION

- 16.1 Nuclear Power is responsible for determining, implementing and documenting any corrective action for conditions adverse to quality in a timely manner.
- 16.2 NQA is responsible for reviewing the disposition of, and verifying corrective action for conditions adverse to quality resulting in maintenance or repair. Corrective action measures shall be in accordance with any applicable requirements.

17.0 RECORDS

- 17.1 Nuclear Power shall maintain the following quality-related shipping package records:
  - 17.1.1 Waste classification and form records pertinent to 10CFR61.55 and 10CFR61.56 and 10CFR20.311.
  - 17.1.2 Inspection and test records
  - 17.1.3 Procurement records
  - 17.1.4 Measuring and test equipment calibration records
  - 17.1.5 Maintenance and repair records
  - 17.1.6 NRC package certificates of compliance
  - 17.1.7 Evidence of NRC approval of vendor QA Program
  - 17.1.8 Shipment manifests as per 10CFR20.311
  - 17.1.9 Nonconformance and corrective action records (re: 15.1 and 16.1 above)
  - 17.1.10 Records required by 10CFR71.91, as applicable
- 17.2 NQA shall maintain the following quality-related shipping package records.
  - 17.2.1 Surveillance reports
  - 17.2.2 Nonconformance and corrective action records (re: 15.2 and 16.2 above)
- 17.3 Nuclear Power (NRMC) shall maintain audit reports of shipping package quality-related activities pertinent to the requirements of this supplement including 10CFR20.2006, 10CFR61.55 and 10CFR61.56. Reports shall be maintained for a minimum of three years.
- 17.4 Nuclear Power shall also maintain personnel indoctrination and training records (re: Section 1.2.5 above).
- 17.5 Records pertaining to the use of a package for shipment of radioactive material shall be retained for a period of two (2) years after shipment (re: 10CFR71.135).

Records pertaining to the fabrication of the package shall be retained for the life of the package to which they apply (re: 10CFR71.135).

## 18.0 AUDITS

Nuclear Quality Assurance shall conduct periodic audits of activities affecting waste classification, waste characterization (form), and the quality of shipping packages within the site boundary. Audits shall be designed to verify compliance with this Supplement and the pertinent part of 10CFR71, 10CFR20.2006, 10CFR61.55, 10CFR61.56, 10CFR61.57 and 49CFR173.475. Audits shall be conducted at a frequency commensurate with the safety significance of such activities.

## APPENDIX C-2

### QUALITY ASSURANCE PROGRAM FOR FIRE PROTECTION SYSTEMS INDIAN POINT UNIT 2

INTRODUCTION – This appendix details certain allowable relaxations from the quality assurance provisions specified in the Quality Assurance Program Description (QAPD) for items within the scope of this appendix. Wherever the designation “Class A” or “Safety Related” appears within the QAPD, it shall be construed to mean “Class FP” for fire protection (FP) items.

#### 1.0 QUALITY ASSURANCE PROGRAM SCOPE

##### 1.1 Bases

The bases for the fire protection quality assurance provisions are the applicable guidelines set forth in the Branch Technical Position (BTP) 9.5-1 Appendix A dated August 23, 1976 as committed to in Con Edison’s Fire Protection Program Report Revision 1 dated April, 1977 and Supplemental Con Edison letter of October 31, 1978. The Fire Protection Program has been updated pursuant to 10CFR50 Appendix R and described in Con Edison’s Indian Point Unit 2 Fire Protection Program Plan Revision 2 dated November 21, 1985. The quality assurance requirements of Appendix C-2 are consistent with the applicable provisions indicated in these documents and as such, these documents should be used as reference material in carrying out the Quality Assurance Program. The Regulatory Guides and the QA Program description applicable to Class A items are not applicable to these fire protection quality assurance provisions unless specifically referred to in this appendix or in Con Edison’s Fire Protection Program Plan.

##### 1.2 Applicability

This appendix applies to portions of the Fire Protection System, the failure of which could affect the operation of, or that are required for the protection of, safety-related and safe shutdown systems. Such fire protection items are designated “Class FP”. Class FP items are listed in Appendix A-2 “Class FP” of the QAPD.

In the event a Class FP device is also to be used in an EQ application, based on availability, installation schedule, excess inventory, etc., (for example, temperature sensors) then the more stringent EQ quality requirements take precedence and all subsequent activities relative to such devices shall be carried out in accordance with the applicable portions of the QAPD.

#### 2.0 ORGANIZATION AND RESPONSIBILITIES

The requirement for NQA to review the total QA program every two years does not apply to the provisions of this appendix. Also, Safety Services performs inspections of non-fixed or portable FP equipment and Nuclear Power is responsible for Fire Brigade training at the Con Edison Fire School

NQA shall conduct periodic surveillance of the activities defined in this appendix.

#### 3.0 PROCEDURES

##### 3.1 Quality Assurance Records

3.1.1 Single copy quality assurance records for FP items may be stored in metal file cabinets in lieu of fire-rated cabinets.

- 3.1.2 Where records similar to those listed for Class A are developed in the course of applying this fire protection QA program, the listing within the QAPD shall be used as a guideline for identifying custodial organizations.
- 3.2 Preparation, Review & Control of Design Documents
  - 3.2.1 The corresponding procedure of the QAPD applies to this appendix.
- 3.3 Requisitioning and Procurement
  - 3.3.1 The requisitioning activity shall assure that the requisition indicates "Class FP".
  - 3.3.2 Treating of parts of components of Class FP items as non-Class FP requires concurrence of an engineer designated by Nuclear Power as noted on the requisition. It is not necessary to indicate non-Class FP on the requisition. "Commercial Grade" designation is not applicable to FP items.
  - 3.3.3 Codes and standards such as; Factory Mutual (FM), Underwriter's Laboratories (UL), National Fire Protection Association (NFPA) or other organizations shall be specified by Nuclear Power Engineering in procurement documents, when applicable.
  - 3.3.4 Changes in procurement documents must have written concurrence of the requisitioning activity for commercial changes and Nuclear Power Engineering for technical changes.
  - 3.3.5 For NP-managed projects, NP shall determine necessary approvals required for changes consistent with the above guidelines. For Nuclear Projects- managed projects, the Project Manager shall likewise determine necessary approvals.
  - 3.3.6 Prior to procurement, Nuclear Power shall assure that Nuclear Engineering have evaluated and approved protective equipment and portable or non-fixed fire protection equipment (i.e., fire nozzles and hoses) requested on requisitions.
- 3.4 Vendor Approval and Surveillance
  - 3.4.1 Vendor lists specific to Class FP items need not be maintained. Existing vendor lists may be used as a basis for evaluating and approving vendors for Class FP items in accordance with this procedure.
  - 3.4.2 NQA or Nuclear Engineering may unilaterally evaluate and approve vendors. Approval of both organizations is not required.
  - 3.4.3 Nuclear Engineering approval of a vendor shall be based on the function of the item, its application and available knowledge of the vendor's capabilities. In these cases Nuclear Engineering shall document this approval which shall include identity of the vendor and item, its application and basis for approval. Such approval documentation shall be sent to NQA and Purchasing, and the vendor identified therein shall be considered qualified as suppliers of fire protection items.
  - 3.4.4 In specific cases, Nuclear Engineering may waive the requirement for Purchasing to procure only from an approved vendor. In these cases Nuclear Engineering shall identify the item and the basis for waiving vendor approval. Copies of such waivers shall be sent to Purchasing.

- 3.4.5 The requirements of this procedure may also be satisfied by verifying that a vendor's products have been accepted and approved by Factory Mutual (FM) or Underwriters Laboratories (UL). Such verification constitutes approval of the vendor. A copy of the vendor's certificate(s) shall be maintained by NQA or verification can be obtained directly from UL or FM to assure that listing is current.
- 3.4.6 A joint NQA/Nuclear Engineering vendor evaluation report need not be prepared. Instead, NQA or Nuclear Engineering shall submit an evaluation report to Purchasing. Authorized distributors for approved vendors may be considered qualified as suppliers of Class FP items without additional evaluation.
- 3.4.7 Purchasing shall send purchase orders only to vendors approved or otherwise authorized by this procedure. Copies of approved or authorized vendor lists shall be sent to Maintenance and Nuclear Power.
- 3.4.8 Vendor surveillance is not required for FP items accepted and approved by Factory Mutual (FM) or Underwriters Laboratories (UL).
- 3.4.9 Surveillance trip reports shall be sent to Maintenance.
- 3.5. Receiving Inspection
  - 3.5.1 As an alternate to receiving inspection, the Project Management Authority (PMA) may inspect Class FP items prior to installation to verify that the items are suitable for installation and that UL, FM, or NFPA-approved items are properly labeled. Such inspections shall be documented.
  - 3.5.2 An "on-hold" tagged item may be conditionally released for installation or fabrication but not used in plant operation. When a conditionally released item is to be installed, the PMA shall document the authority and justification for the conditional release and inform NQA prior to release of the item by the Central Stores and Material Controls staff. The item's conditionally released status shall be indicated on the "on-hold" tag attached to the item.
  - 3.5.3 Inspection status tags for the fire protection items shall conspicuously indicate the following: "Class FP" – Not for general "Class A" use.
  - 3.5.4 In the event that an item becomes available for service as both EQ and FP, as indicated in Section 1.2 above, it shall be tagged to conspicuously indicate its dual service, as follows: "EQ and Class FP Dual Service Use"
- 3.6 Identification and Marking
- 3.7 Handling and Storage Requirements
- 3.8 Control of Measuring and Test Equipment

NOTE: Sections 3.6, 3.7, 3.8 of this appendix are not required to satisfy Con Edison's Quality Assurance commitment for fire protection.

- 3.9 Maintenance, Repair and Modification Control
  - 3.9.1 Maintenance and repair procedures shall include fire protection requirements as applicable.

- 3.9.2 Nuclear Engineering shall review planned modifications for potential increases in the fire hazard or degradation of the existing fire protection. Where such a situation exists, the Nuclear Power Engineering determination and supporting information shall be sent to the Station Fire Protection Specialist for review and evaluation.
- 3.9.3 A "Step List" may be used in lieu of a Traveler to identify the procedural steps for large and complex work.
- 3.9.4 The Department Manager, Maintenance or the Section Manager, I&C as applicable, shall review all maintenance repair and modification activities for potential increases in the fire hazard or degradation of the existing fire protection. Where such a situation exists, the Fire Protection Specialist may be consulted and the Maintenance or I&C Engineer shall take corrective actions such as:
  - 3.9.4.1 Alternate methods of providing fire protection.
  - 3.9.4.2 Temporary addition of fire protection equipment.
  - 3.9.4.3 Posting of a fire watch.
- 3.10 Operating and Test Procedures
  - 3.10.1 The corresponding procedures within the QAPD apply to this section.
- 3.11 Inservice Inspection
  - 3.11 The corresponding QAPD procedures do not apply to this section.
- 3.12 Audits
  - 3.12.1 The corresponding procedures within the QAPD apply to this section.
- 3.13 Conditions Adverse to Quality and Corrective Action
  - 3.13.1 NQA may also initiate CR's.
- 3.14 Welding
  - 3.14.1 The corresponding Procedure of the QAPD does not apply to the fire protection QA program. However, the following provisions shall be satisfied.
    - 3.14.1.1 Nuclear Engineering shall determine the welding procedures to be used for Class FP system modification, maintenance or repair. When Con Edison welding procedures are selected for use, welder qualifications shall satisfy, as a minimum, the performance and qualification requirements of the ASME Section IX, Boiler and Pressure Vessel Code except as otherwise authorized by Nuclear Engineering.
    - 3.14.1.2 NQA shall be responsible for inspection of welds to assure that weld inspection criteria established by Nuclear Engineering are satisfied. These inspections shall be documented.

3.15 Non-Destructive Examination

3.15.1 The corresponding procedures within the QAPD apply to this section.

3.16 Authorized Inspection Agency

3.16.1 The corresponding QAPD procedures do not apply to this section.

## APPENDIX C-3

### QUALITY ASSURANCE PROGRAM FOR METEOROLOGICAL MONITORING SYSTEMS OF INDIAN POINT STATION

INTRODUCTION - This appendix details certain allowable relaxations of and deviations from the corresponding Class-A quality assurance provisions specified within the QAPD for the meteorological monitoring systems identified herein. Wherever the designation "Class A" or "Safety-Related" appears in this appendix, it shall be construed to mean "Class MET" for meteorological monitoring system items.

Information previously contained in TABLE I has been relocated to QAPD Appendix A-3, *Meteorological Monitoring System Items (CLASS MET)*

#### 1.0 QUALITY ASSURANCE PROGRAM SCOPE

- 1.1 This program provides quality assurance controls for the Con Edison meteorological monitoring systems of Indian Point Station, i.e., for those systems, structures and components that comprise the Con Edison on-site meteorological data acquisition, communications, and data processing apparatus. These facilities and component parts are designated "Class MET" and are listed in Table 1 of Appendix A-3.
- 1.2 This Quality Assurance Program conforms with the applicable provisions of 10CFR50 Appendix B, and is consistent with the applicable acceptance criteria contained in NUREG-75/087 Section 17.2 Revision 1, as directed by NRC Confirmatory Order Appendix A, Annex 1, Parts 1 and 2 dated February 11, 1980, under Docket No. 50-247. Accordingly, THE ANSI standards and Regulatory Guides identified in the corresponding section of the QAPD do not apply unless specifically required by the above-mentioned Federal Regulations and Guides.
- 1.3 Con Edison organizations participating in this program shall develop appropriate documents such as procedures or instructions which reflect the controls defined herein.
- 1.4 In the event that a Class MET device is also to be used in an EQ application, based on availability, installation schedule, excess inventory, etc., the more stringent quality requirements take precedence and all subsequent activities relative to such devices shall be carried out in accordance with the applicable portions of the QAPD.
- 1.5 The Department Manager, Nuclear Quality Assurance (NQA) shall provide advice and counsel on this program.

#### 2.0 ORGANIZATION AND RESPONSIBILITIES

- 2.1 Emergency Preparedness (EP) shall be responsible for maintenance, repair, modifications, testing, calibration and operation of Class MET facilities. These activities shall apply only to those parts of the meteorological monitoring system owned by Con Edison and may be supported, as applicable, by other Con Edison organizations, approved meteorological system consultants, equipment suppliers and/or manufacturers.

- 2.2 In addition, some or all of the activities may be managed by ENTERGY<sup>3</sup> in accordance with the Indian Point Unit No. 3 QA Program, and mutual agreement between Con Edison and ENTERGY<sup>4</sup>.
- 2.3 Nuclear Power is responsible for assuring that administrative procedures and instructions reflecting EP responsibilities and controls defined herein are developed and implemented.
- 2.4 Nuclear Quality Assurance (NQA) shall conduct periodic surveillances of activities defined in this Supplement. NQA shall periodically review the Class MET QA Program for adequacy.
- 2.5 Environmental Affairs (EA) shall participate in this program in an advisory capacity to provide technical support, advice and counsel to Nuclear Engineering, EP and, as applicable, other participating organizations for activities that are specific to meteorological monitoring equipment.
- 2.6 Nuclear Engineering shall assure that design and engineering documents developed for work involving meteorological data-taking equipment or systems receive appropriate technical review by organizations or consultants having expertise in meteorological monitoring systems.
- 2.7 Nuclear Projects, when designated the Project Management Authority (PMA) for Class MET modifications, maintenance and repairs, shall employ the quality controls of the Class A program as modified by the provisions detailed in this Supplement.

3.0 PROCEDURES

3.1 Quality Assurance Records

3.1.1 EP shall maintain the following records for the period indicated and shall review these records upon receipt to assure that, as applicable, the inspector, data recorder, the type of observation, the results, and acceptability are identified therein and that action taken with respect to any deficiencies is noted.

Procurement documents	- Life of plant
Test records *	- 6 years
Conditions adverse to Quality Reports *	- Life of plant
Meteorological monitoring records	- Life of plant
Meteorological data summaries	- 2 years

NOTE: \* implies that the record is pertaining to meteorological data-taking equipment or systems.

For other records, the listing in the corresponding section of the QAPD shall be used as a basis for identifying custodial organizations.

3.2 Preparation, Review and Control of Design Documents

- 3.2.1 Nuclear Engineering shall coordinate reviews with other Con Edison organizations and meteorological system consultants or suppliers for technical documents involving meteorological data-taking equipment prior to approval of such documents.
- 3.2.2 EP shall assure that drawings and other technical documents released for initiating maintenance, modifications, repairs and calibration of meteorological data-taking

<sup>3</sup> Administrative change to reflect ENTERGY operation of IP#3

<sup>4</sup> Administrative change to reflect ENTERGY operation of IP#3

equipment or systems have been reviewed and concurred in by the applicable Con Edison organization.

- 3.2.3 Prior to their distribution and use, all Class MET system drawings shall be conspicuously stamped as follows:

Class MET Items  
Per the QAPD Appendix C-3

### 3.3 Requisitioning and Procurement

- 3.3.1 The requisitioning activity shall assure that the requisition indicates "Class MET".
- 3.3.2 The requisitioning activity shall assure that Nuclear Engineering or EP, as applicable, has reviewed and concurred in purchase requisitions involving meteorological monitoring equipment or systems.
- 3.3.3 Treating of parts or components of Class MET items as non-Class MET requires concurrence of the Manager, Emergency Preparedness or his designee noted on the requisition. It is not necessary to indicate "non-Class MET" on the requisition.
- 3.3.4 Commercial Grade designation does not apply to Class MET items.
- 3.3.5 Nuclear Engineering shall assure that acceptance test criteria are specified in procurement documents for equipment that will be accepted on the basis of tests performed at manufacturers' facilities. Nuclear Engineering shall require that the results of vendor tests be documented in vendor acceptance test reports for Nuclear Engineering review and approval.
- 3.3.6 Changes in procurement documents must have written concurrences of:
- 3.3.6.1 The requisitioning activity for commercial changes; and
- 3.3.6.2 Nuclear Engineering for technical changes.
- 3.3.7 For NP-managed projects, Emergency Preparedness (EP) shall determine the necessary approvals required for changes consistent with the above guidelines. For Nuclear Projects-managed projects, the Project Manager shall likewise determine necessary approvals.

### 3.4

#### Vendor Approval and Surveillance

- 3.4.1 Vendor lists specific to Class MET items need not be maintained. Existing vendor lists may be used as a basis for evaluating and approving vendors for Class MET items in accordance with this procedure.
- 3.4.2 NQA or Nuclear Engineering may unilaterally evaluate and approve vendors and service contractors. Approval by both organizations is not required.
- 3.4.3 Nuclear Engineering approval of a vendor shall be based on available knowledge of the vendor's product and capabilities, and the function and application of the item(s), and its relation to the current state of the art. Nuclear Engineering shall document such approval, identify the vendor, the item, its application and basis for approval.

- 3.4.4 Vendor approval documentation shall be sent to Purchasing. The Vendors identified therein shall be considered qualified as suppliers of Class MET items.
- 3.4.5 In specific cases, Nuclear Engineering may waive the requirement for Purchasing to procure only from an approved vendor, e.g., items accepted on the basis of successful testing at manufacturers' facilities. In these cases, Nuclear Engineering shall identify the item and provide in writing to Purchasing, the basis for the waiver including, as applicable, test criteria for item acceptance.
- 3.4.6 A joint NQA/Nuclear Engineering Vendor evaluation report need not be prepared. Instead, either NQA or Nuclear Engineering shall submit an evaluation report to Purchasing.
- 3.4.7 Authorized distributors for approved vendors may be considered qualified suppliers of Class MET items without additional evaluation.
- 3.4.8 Purchasing shall send purchase orders to vendors approved or otherwise authorized by this procedure.
- 3.4.9 Vendor surveillance is not required unless considered necessary for particular items by Nuclear Engineering.

### 3.5 Receiving Inspection

- 3.5.1 As an alternate to receiving inspection, the PMA may perform pre-installation material inspection to verify that the item(s) is in good condition, is suitable for the installation and satisfies the requirements of the procurement documents including, as applicable, acceptance test requirements. The inspection shall also determine that no degradation of the item has occurred during storage. Such inspections shall be documented.
- 3.5.2 A hold-tagged item may be conditionally released for installation or fabrication purposes providing it is not placed in operation. The PMA shall document the authority and justification for the conditional release of hold-tagged items and inform NQA prior to installation. The status of conditionally released items shall be indicated on the tag attached to the item.
- 3.5.3 Inspection status tags for Class MET items shall conspicuously indicate the following:  
  
Class MET - not for general Class-A use.
- 3.5.4 In the event that an item becomes available for service as both EQ and Class MET, as indicated in Section 1.0, above, it shall be tagged to conspicuously indicate its dual service, as follows:

"EQ AND CLASS MET DUAL SERVICE USE"

### 3.6 Identification and Marking

- 3.6.1 Shipping containers and pertinent documents shall be clearly marked for identification by the vendor or supplier in accordance with the requirements of the procurement documents.

### 3.7 Handling and Storage Requirements

- 3.7.1 Class MET items that are not immediately installed shall be appropriately identified, stored and protected from physical damage, and deterioration due to adverse environmental conditions.
- 3.8 Control of Measuring and Test Equipment, Installed Instruments and Control Devices
  - 3.8.1 The regulatory requirements, Codes and Standards applicable to this procedure are identified in Section 1.0 of this Supplement.
  - 3.8.2 EP shall be responsible for implementation of this procedure. Instrument and Control (I&C) shall provide technical assistance, as applicable, recommend calibration methods and calibration frequency criteria, and provide advice for the selection of calibration services.
  - 3.8.3 Calibration records shall be maintained and stored by EP or their designee.
  - 3.8.4 EP shall require that discrepancies discovered in the examination of test and data-taking equipment at calibration be immediately reported to EP.
- 3.9 Maintenance, Repair and Modification Controls
  - 3.9.1 Normally, maintenance, repairs and minor modifications are accomplished by equipment suppliers or approved contractors under the direction of EP.
  - 3.9.2 EP is responsible for developing maintenance, repair and, as applicable, other job procedures that define the scope of work and the sequential steps required to accomplish the work including, as applicable, pertinent inspections and tests (inspection check-list or Traveler). This responsibility may be delegated to meteorological system consultants, or equipment suppliers that are contracted to do the work providing EP reviews and concurs with the procedures they develop. These procedures shall comply with the applicable requirements of the QAPD.
  - 3.9.3 Maintenance, repair and modification procedures shall include fire protection requirements and provision for fire hazard evaluation with subsequent recommendations by the applicable PMA.
  - 3.9.4 Following each maintenance, repair or modification, EP shall inspect and/or test the applicable equipment to verify readiness for operation or, as applicable, for post-maintenance or preoperational testing. Results of verification tests/inspections shall be documented.
- 3.10 Operating and Test Procedures
  - 3.10.1 EP shall be responsible for the preparation and control of operating and test procedures involving meteorological data-taking equipment or systems. These procedures shall satisfy the applicable requirements of the QAPD.
  - 3.10.2 EP shall assure that test procedures involving Class MET facilities that interface, or are a part of, the nuclear in-plant facilities, e.g., control room instruments, indicators, and recorders, electrical supply facilities, are reviewed and concurred in by Nuclear Engineering.

- 3.11 Inservice Inspection
  - 3.11.1 The corresponding QAPD procedures do not apply to this section.
- 3.12 Audits
  - 3.12.1 Audits shall normally be conducted at a frequency commensurate with the safety significance of program activities but not less often than annually.
- 3.13 Conditions Adverse to Quality and Corrective Action
  - 3.13.1 EP shall require that condition reports are generated for conditions adverse to quality by EP and service contractors in accordance with the applicable requirements of the QAPD.
  - 3.13.2 EP shall be the action addressee for field conditions adverse to quality affecting the operation and maintenance of meteorological data-taking equipment and systems. This shall include nonconforming items and calibrations, test failures, operational malfunctions or other occurrences that are abnormal in relation to specified Class MET system design parameters, normal operating conditions or functions.
  - 3.13.3 As action addressee, EP shall provide the report initiator with a response. The response shall be in accordance with the applicable provisions of the QAPD.
- 3.14 Welding
  - 3.14.1 The corresponding QAPD procedure does not apply to this section. Nuclear Engineering shall determine the welding procedures to be used for maintenance, repair or modification work.
- 3.15 Non-Destructive Examination
  - 3.15.1 The corresponding QAPD procedure does not apply to this section.
- 3.16 Authorized Inspection Agency
  - 3.16.1 The corresponding QAPD procedure does not apply to this section.

Corporate Organization

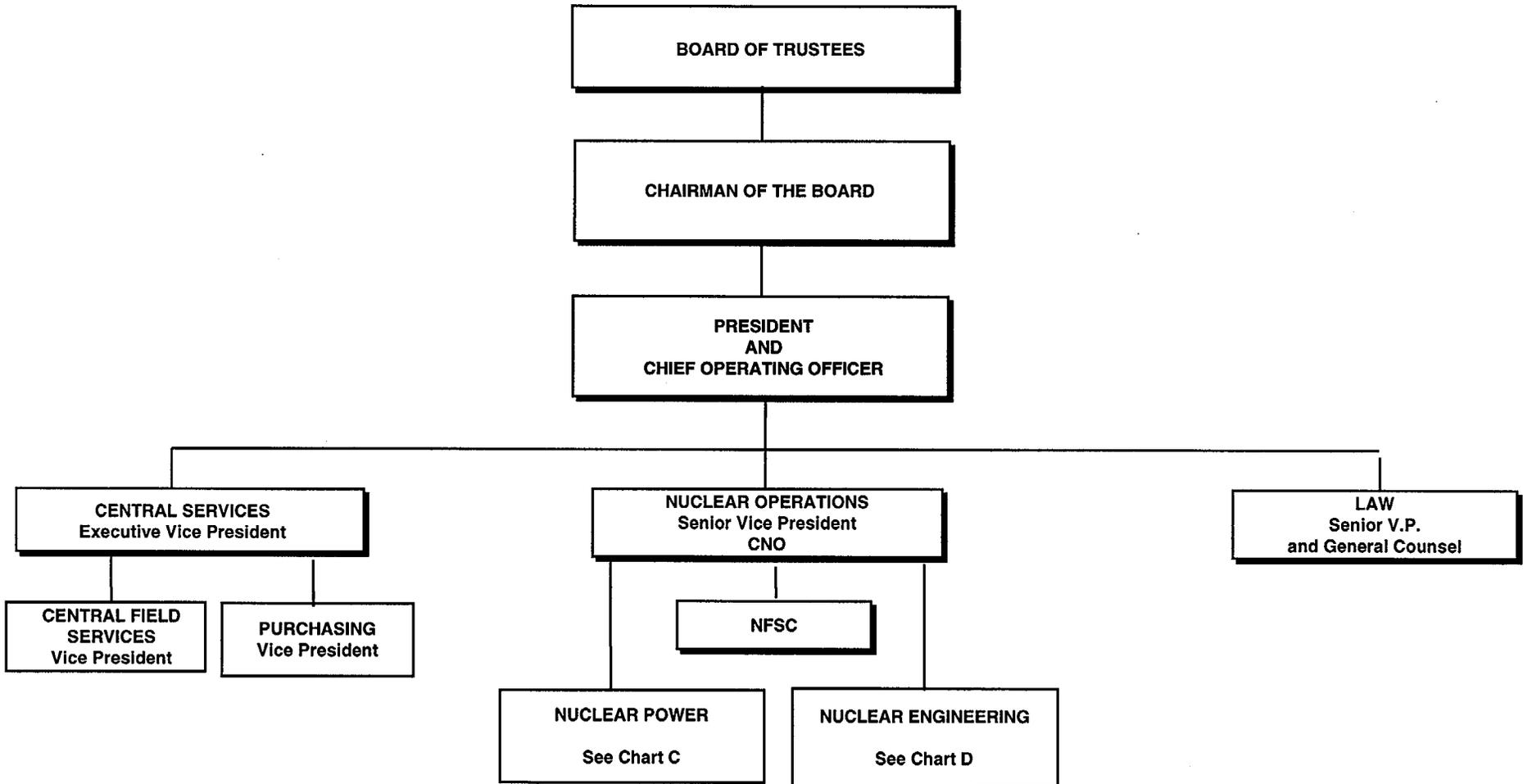
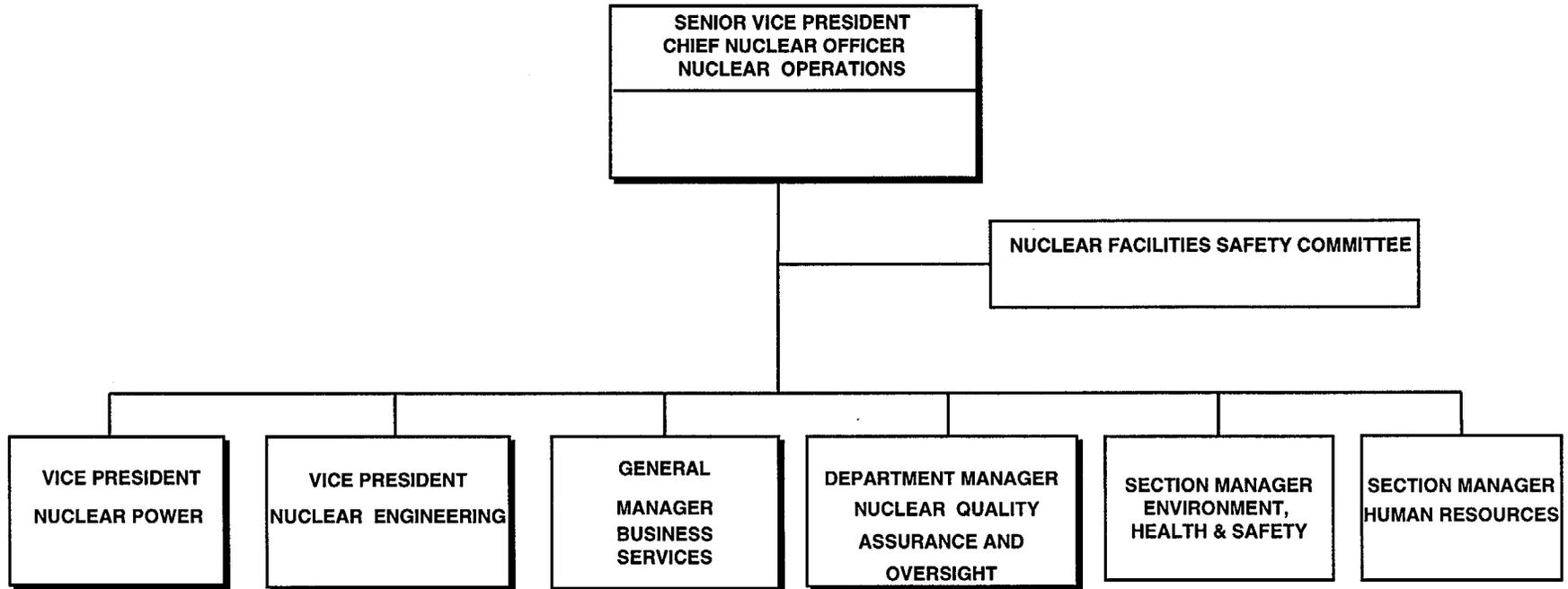
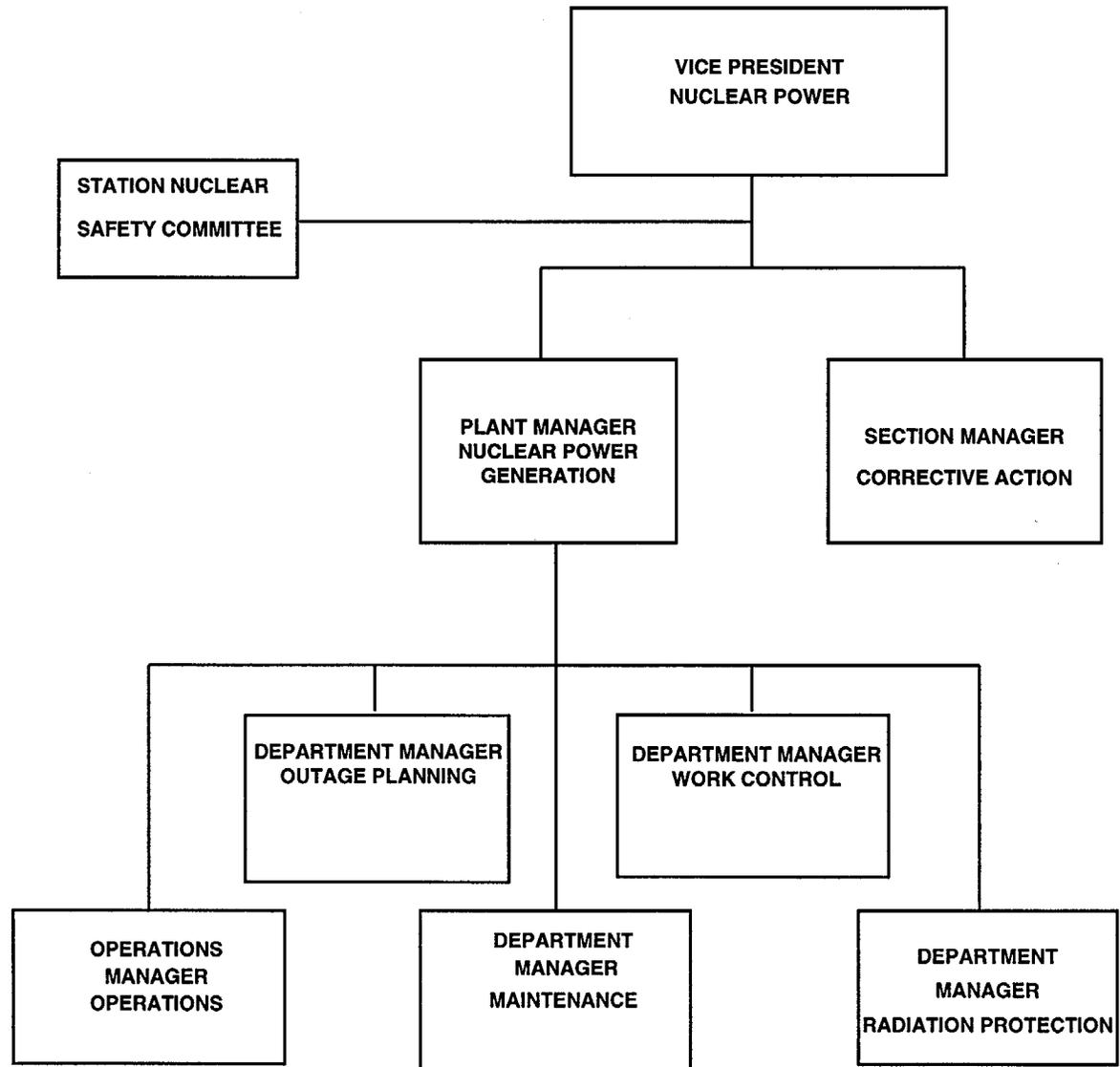


CHART A  
QAPD rev 16

Office of the Senior Vice President  
Nuclear Operations





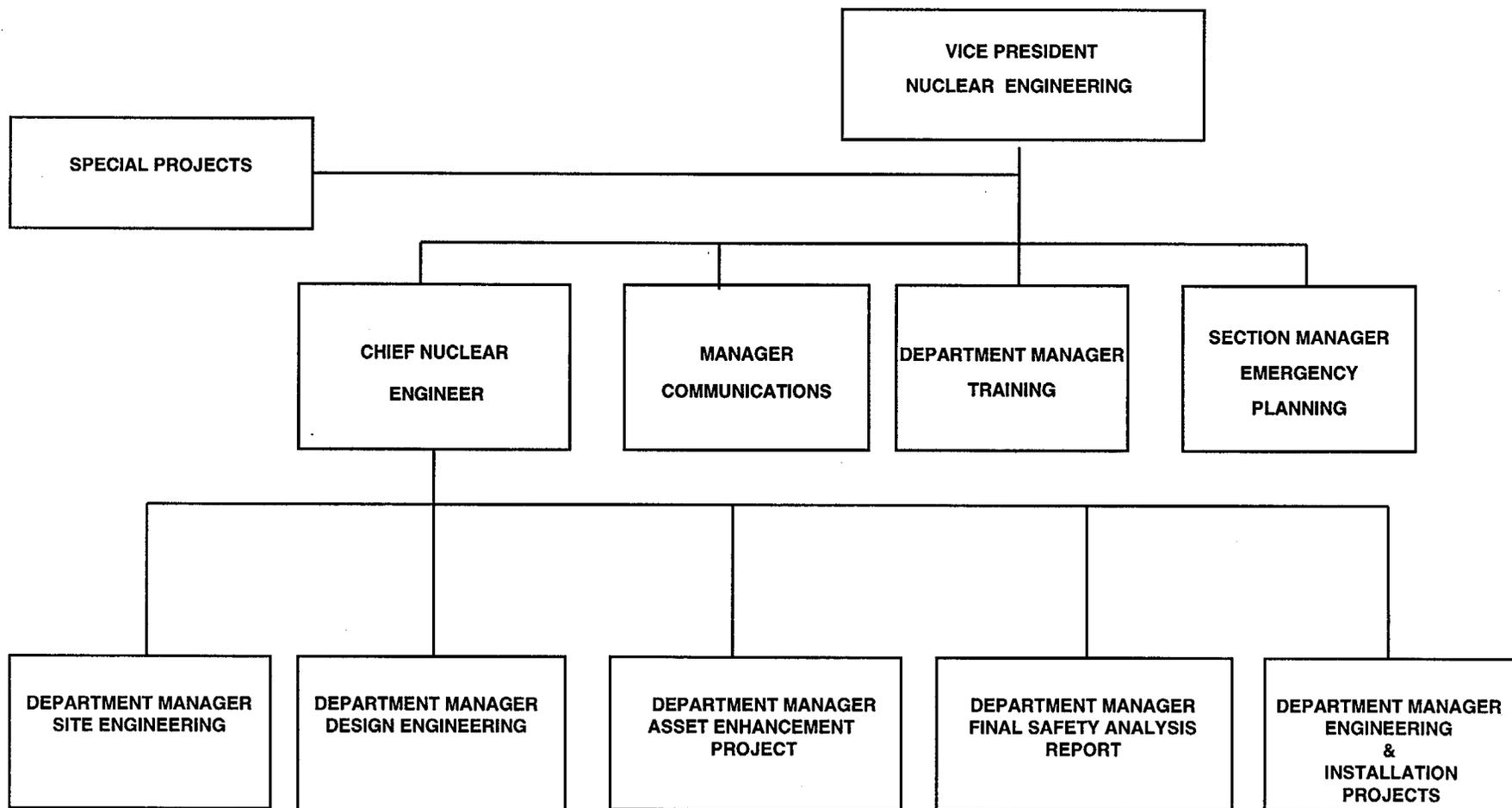


CHART D  
QAPD rev 16

**TABLE A**

<b><u>ITEM NO.</u></b>	<b><u>REGULATORY GUIDE/ANSI STANDARD REFERENCE</u></b>	<b><u>REQUIREMENT</u></b>	<b><u>INTERPRETATION/ALTERNATE/EXCEPTION</u></b>
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1.	General	Certain Regulatory Guides invoke or imply Regulatory Guides and standards in addition to the standard each primarily endorses.	The Con Edison commitment refers to the Regulatory Guides (and the ANSI Standards they endorse) specifically identified in the "Foreword". Additional Regulatory Guides, other guides and similar documents implied or referenced in those specifically identified in the "Foreword" are not part of this commitment.
2.	General	Certain ANSI Standards extend the scope of applicability to include systems, structures, and components whose satisfactory performance is required for a plant to operate reliably.	Our commitment to these standards applies only to those systems, structures, and components whose satisfactory performance is required to prevent postulated accidents that could cause undue risk to health and safety of public; or to mitigate the consequences of such accidents. Reliable operation of the plant may depend upon other systems structures and components, which are not covered by this commitment.
3.	General	NRC Regulatory Guides and ANSI Standards do not provide for deviation from any requirement(s) when emergency or other urgent conditions make such deviation necessary.	The majority of ANSI Standards endorsed by the Regulatory Guides to which Con Edison has committed are concerned with the design and/or construction phases of nuclear power plants. Consequently, Con Edison has adapted these standards to its operations phase, where practicable, and has developed provisions for certain conditions not addressed in the standards.

**TABLE A**

<b><u>ITEM NO.</u></b>	<b><u>REGULATORY GUIDE/ANSI STANDARD REFERENCE</u></b>	<b><u>REQUIREMENT</u></b>	<b><u>INTERPRETATION/ALTERNATE/EXCEPTION</u></b>
3. continued			<p><i>In the event of an emergency condition, which if not promptly corrected could likely affect the health and safety of the public, a licensed senior operator may authorize emergency repairs and deviations from written procedures in accordance with 10 CFR 50.54(x). The nature of the emergency, its cause and the corrective action taken are documented. In accordance with 10 50.72, when time permits, notification of the NRC is made before the protective action is taken; otherwise, it is made as soon as possible thereafter. Waivers to specific procedures may be authorized by the a Senior Licensed Operator if necessary to avoid personnel injury or equipment damage that could adversely effect the capability to protect public health and safety. Such waivers, including the need therefore, are documented. The above provisions assure procedural control for bypassing critical inspections, tests, and operations.<sup>1</sup></i></p>
4.	General	<p>Certain ANSI Standards contain requirements which, under certain conditions, may conflict with limiting personnel radiation exposure.</p>	<p>The majority of ANSI Standards endorsed by the Regulatory Guides to which Con Edison has committed are concerned with the design and/or construction phases of nuclear power plants. Consequently, Con Edison has adapted these standards to its operations phase, where practicable, and has developed provisions for certain conditions not addressed in the standards.</p>

<sup>1</sup> QAPDrev15-001 to reconcile N18.7-76 section 5.2.2 with 10 CFR50.54(x)

**TABLE A**

<b><u>ITEM NO.</u></b>	<b><u>REGULATORY GUIDE/ANSI STANDARD REFERENCE</u></b>	<b><u>REQUIREMENT</u></b>	<b><u>INTERPRETATION/ALTERNATE/EXCEPTION</u></b>
4. continued			When conformance with particular standards requirements; e.g., cleaning of fluid systems, housekeeping, would conflict with limiting personnel radiation exposure, the degree of conformance to the standards is determined by appropriate levels of management.
5.	General	Various standards require inspections, examinations and tests, but do not specify the frequencies of these activities.	Except in ANSI N45.2.5, the frequencies of required inspections, examinations and tests are not specified in the standards. Accordingly, the frequency of inspections, examinations and tests required by the standards – other than ANSI N45.2.5 – is identified on a job-by-job basis. The amount of inspections, examinations and tests identified is based upon the safety significance of the item involved.
5.1 <sup>2</sup>	ANSI N18.7 Section 4.3.2.3	Quorum. A quorum for formal meetings of the committee...shall be subject to the following constraints: the chairman (or his duly appointed alternate) shall be present...	In the event both the chairman and Vice Chairman are absent, one of the permanent voting members will serve as Acting Chairman
5.2 <sup>3</sup>	ANSI N18.7 Section 4.4	Review Activities of the Onsite Operating Organization. The onsite operating organization shall provide, as part of the normal duties of plant supervisory personnel,...These continuing monitoring activities are considered to be an intergal part of the routine supervisory function	The composition of the onsite review organization (SNSC) shall be organization specific rather than position /title specific. In addition the qualifications of the members will have an academic degree in engineering or a physical science , or hold a management position, and shall have a minimum of 5 years technical experience in the listed areas

<sup>2</sup> Alternate quorum requirements are based on Technical Specification 6.5.2.6 amendment 198 text that was relocated to the QAPD Appendix B.

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<b><u>ITEM NO.</u></b>	<b><u>REGULATORY GUIDE/ANSI STANDARD REFERENCE</u></b>	<b><u>REQUIREMENT</u></b>	<b><u>INTERPRETATION/ALTERNATE/EXCEPTION</u></b>
5.3 <sup>4</sup>	ANSI N18.7 Section 4.3.4	<p><i>The following subjects shall be reviewed by the independent review body:</i></p> <p><i>(1) Written safety evaluations of changes...This review is to verify that such changes, tests or experiments did not involve a change in technical specifications or an unreviewed safety question as defined in 10 CFR 50.59(a)(2).</i></p> <p><i>(2) Proposed changes in procedures, proposed changes in the facility, or proposed tests or experiments any of which involves a change in technical specifications or an unreviewed safety question as defined in 10 CFR 50.59(c).</i></p>	<p><i>10 CFR 50.59 was revised through Federal Register Notice 19991001 RIN3150-AF94 to eliminate the terms safety evaluation and unreviewed safety question. The term safety evaluation has been replaced with 10 CFR 50.59 evaluation. The term unreviewed safety question as defined by 10 CFR 50.59 (c) is replaced by requiring a license amendment as required by 10 CFR 50.59(c).</i></p>
6.	ANSI N18.7 Section 5.2.2	<p>“Temporary changes which clearly do not change the intent of the approved procedure shall, as a minimum, be approved by two members of the plant staff knowledgeable in the areas affected by the procedures.”</p>	<p><i>A mechanism shall exist for making temporary changes and they shall be only made by approved management personnel in accordance with the requirements of ANSI 18.7-1976. The change shall be documented, reviewed<sup>5</sup> and approved by the Plant Manager, or appropriate Department Manager, within 14 days of implementation.<sup>6</sup></i></p>

<sup>3</sup> The NRC approved this exception in the Safety Evaluation of Technical Specification Amendment 198 evaluation 2.10.

<sup>4</sup> QAPDrev15-014 rev0 to reflect revision of 10 CFR 50.59 and elimination of the phases “safety evaluation” & “unreviewed safety question”

<sup>5</sup> QAPD rev 15-015 rev0 change to be consistent scope of SNSC review of procedures defined in QAPD section 5.2.15

<sup>6</sup> The QAPD revision 14 Table A Exception item 6 referenced the Technical Specifications. The reference was deleted and replaced with the text of the TS 6.8.3 amendment 198. The TS 6.8.3 was revised to reference to QAPD

**TABLE A**

<b><u>ITEM NO.</u></b>	<b><u>REGULATORY GUIDE/ANSI STANDARD REFERENCE</u></b>	<b><u>REQUIREMENT</u></b>	<b><u>INTERPRETATION/ALTERNATE/EXCEPTION</u></b>
7.	ANSI N18.7 First Sentence of 5.2.7	(a) "Maintenance or Modification...shall be performed in a manner to ensure quality at least equivalent to that specified in original – design bases and requirements, materials specifications, and inspection requirements..."	Requirement (a), (b) and (c), as a whole, require a degree of quality for replacement items consistent with their function. Our program allows this degree of quality to be more or less stringent than the original, provided the specified quality requirements are reviewed and approved by Nuclear Engineering prior to use.
	ANSI N18.7 First Sentence of 5.2.7.1	(b) "A maintenance program shall be developed to maintain safety related structures, systems and components at the quality required for them to perform their intended functions."	
	ANSI N18.7 Paragraph (1) Of 5.2.13 (1)	(c) "Purchased to specifications and codes equivalent to those specified for the original equipment, or those specified by a properly reviewed and approved revision."	
7a	ANSI N18.7 Section 5.2.9 Plant Security and Visitor Control	<b><i>General Requirements</i></b>	The requirements of N18.7-1976 section 5.2.9 "Plant Security and Visitor Control" have been superceded by the issuance of 10 CFR 26 "Fitness for Duty" and 10 CFR 73 "Physical Protection of Plant"
8.	ANSI N18.7 Section 5.2.14	General requirements for nonconforming items.	Paragraph 5.2.14 applies to programmatic as well as to specific provisions of ANSI N18.7 and its associated references. Consistent with paragraph 5.2.14, our quality assurance program will contain provisions for controlled documented waivers to its requirements.

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<b><u>ITEM NO.</u></b>	<b><u>REGULATORY GUIDE/ANSI STANDARD REFERENCE</u></b>	<b><u>REQUIREMENT</u></b>	<b><u>INTERPRETATION/ALTERNATE/EXCEPTION</u></b>
9.	ANSI N18.7 Section 5.2.13.1	Requires certain provisions in procurement documents	Per 5.2.13 procurement document contents for replacement items will be based primarily on original procurement document contents. The provisions of 5.2.13.1 will be included if required by original procurement document or warranted by performance of the item. Procurement document content for new items will meet the requirements of 5.2.13.1. When requirements of ANSI standards are included in procurement documents, the requirements may not be identified as excerpts from ANSI standards. Procurement documents are developed and reviewed in accordance with paragraph 5.2.13 of the Quality Assurance Program description.
10.	ANSI N18.7 Section 5.2.13.1, (2)	“...Drawings, specification and industrial codes and standards...shall be identified by titles and dates of issue...”	Drawings are identified by drawing number, revision number, and title.
11.	ANSI N18.7 Section 5.2.13.1 1 <sup>st</sup> Paragraph	Where changes are made to procurement documents, they shall be subject to the same degree of control as was used in the preparation of the original documents.	Consistent with the requirements of ANSI N45.2.11, paragraph 7.2, minor changes to (procurement) documents, such as, inconsequential editorial corrections, or changes to commercial terms and conditions may not require that the revised (procurement) document receive the same review and approval as the original documents.

**TABLE A**

<b><u>ITEM NO.</u></b>	<b><u>REGULATORY GUIDE/ANSI STANDARD REFERENCE</u></b>	<b><u>REQUIREMENT</u></b>	<b><u>INTERPRETATION/ALTERNATE/EXCEPTION</u></b>
11.1	ANSI N18.7 Section 5.2.15	<p>“The frequency of subsequent [procedure] reviews shall be specified...”.</p> <p>“Plant procedures shall be reviewed by any individual knowledgeable in the area affected by the procedure no less frequently than every two years...”.</p>	As an alternate to a periodic review, procedures are reviewed as described in Section 5.2.3.
12.	ANSI N18.7 Section 5.2.17	<p>“Inspection shall be performed by qualified individuals other than those who performed or directly supervised the activity being inspected.”</p>	Examinations, checks, and inspections of work at Indian Point Station are normally accomplished and documented by Supervisors responsible for the work. Where independent examinations, checks, and inspections are determined appropriate, personnel who do not perform work and do not directly supervise the work are utilized. These independent examinations, checks, and inspections are comparable in extent to corresponding construction phase activities.
13.	ANSI N18.7 Section 5.2.17 Last paragraph, next to last sentence	Deviations, their cause, and any corrective action completed or planned shall be documented.	Consistent with the documentation requirements of Criterion XVI, Appendix “B” to 10 CFR 50, for corrective action, significant deviations, their cause and any corrective action completed or planned are documented. Results of inspections used to accept or reject items shall be documented in all cases.

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13.1 <sup>7</sup>	ANSI N18.7 Section 5.3.9	<i>...The emergency procedure format given in 5.3.9.1 provides a basis...</i>	<i>Instead of the requirements of this section the format and content of the Emergency Operating Procedures (EOPs) shall follow a Station Administrative Order that reflects the commitments contained in the NRC approved Con Edison Procedures Generation Package (PGP). The administrative guidance shall be maintained current with the industry guidance.</i>
14.	ANSI N18.7 Section 6 References	“When the preceding American National Standards referred to in this document are superseded by a revision approved by the American National Standards Institute, Inc., the revision shall apply.”	Our commitment to ANSI standards does not extend beyond the standards (date, revision, etc.) identified in that commitment.
16.	ANSI N45.2.2 Section 2.1	“The specific items to be governed by this standard shall be identified.”	Items governed by this standard or portions thereof are identified on a case-by-case basis during the design document and procurement document development processes.
17.	ANSI N45.2.2 Section 2.7	Each of the specific items governed by this standard shall be classified into one of four levels.	All safety-related items are protected to an extent commensurate with their sensitivity and importance to safety, but are not specifically classified in various levels per the guidance of paragraph 2.7. Therefore, satisfaction of requirements for packaging, shipping, receiving, storage and handling for particular items could be different than those suggested.

<sup>7</sup> QAPDrev15-010 rev 0 change to replace the format and content requirements of N18.7 –1976 with reference to the EOP format and content approved by NRC in the 1989 SER approval of the Con Edison Procedures Generation Package (PGP).

**TABLE A**

<b><u>ITEM NO.</u></b>	<b><u>REGULATORY GUIDE/ANSI STANDARD REFERENCE</u></b>	<b><u>REQUIREMENT</u></b>	<b><u>INTERPRETATION/ALTERNATE/EXCEPTION</u></b>
18.	ANSI N45.2.2 Subsection 3.9	General marking requirements.	Some items are of a size, shape or consistency, which preclude marking. Marking in such cases is applied to box or other enclosure. Tagging is employed, where necessary.
19.	ANSI N45.2.2 Subsection 5.2.1	“Preliminary visual inspection or examination shall be performed prior to unloading...”.	Inspection after unloading is sufficient to determine the condition of many items. In special instances, pre-unloading examination is performed.
20.	ANSI N45.2.2 Section 5.2.2	The (receiving) inspections shall be performed in an area equivalent to the level of storage requirements for the item.	Receiving inspection is performed in a manner and in an environment, which do not endanger the requisite quality of an item; however, receiving inspection area environmental-controls may be less stringent than storage environmental requirements for that item.
21.	ANSI N45.2.2 Paragraph 5.2.3	...”The ‘Special Inspection’ procedure, complete with documentation instructions shall be attached to the item or container...”.	The “Special Inspection” procedure shall be readily available to inspection personnel and may be attached to the item or container.
22.	ANSI N45.2.2 Paragraph 5.3.3	“A statement documenting the authority and technical justification for the conditional release ...shall be prepared...”.	A statement documenting the authority and justification for the conditional release is prepared. Justification may not always be of a technical nature.
23.	ANSI N45.2.2 Subsection 6.2.4	The use or storage of food, drinks and salt tablet dispensers in any storage area is prohibited.	People working in storage areas have a right of access to water dispensers per OSHA requirements. Additionally, due to location and layout of the building, personnel temporarily store lunches in the workplace. This area is regularly policed for sanitation.
24.	ANSI N45.2.2 Appendix (A-3) A.3.9 (1) Second Group	“Container markings shall appear on a minimum of two sides of the container, preferably on one side and one end.”	Containers are adequately marked for storage, identification and retrieval. Multiple marking requirements are imposed, where necessary.

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25.	ANSI N45.2. Appendix (A-3) A.3.9 (4) Second Group	“Container markings shall be...no less the 3/4” high container permitting.”	Container markings are of a size, which permits easy recognition.
26.	ANSI N45.2.2 Appendix (A-3) A.3.9 (6)	“Container markings shall include the following information:”	The information required in container marking is evaluated on a case-by-case basis. Marking is adequate in each case.
27.	ANSI N45.2.2 Appendix (A-3) Section A 3.5.1 (1)	“Non-metallic plugs and caps shall be brightly colored.”	Non-metal plugs and caps are of a suitably visible color.
28.	ANSI N45.2. Appendix (A-3) Section A 3.5.1 (5)	Plugs or caps shall be secured with tape or other means as necessary to prevent accidental removal.	In cases where plugs or caps do not snugly fit, additional securing devices or measures will be used.
29.	ANSI N45.2.3	Identifies various housekeeping requirements, including cleanliness, fire prevention and fire protection which must be accomplished during the progress of construction.	When this standard is applied, its requirements are implemented in those areas affected by work activities associated with modifications or maintenance as determined necessary by Nuclear Engineering or Nuclear Quality Assurance. Remaining provisions of paragraph 5.2.10 of 18.7 will be adhered to.
30.	ANSI N45.2.4 Section 3.0	Pre-construction verification.	This section requires verification that items are in satisfactory condition for installation and have not suffered since initial receipt inspection. Documentation of that verification in addition to the documentation of the initial receipt inspection is not required.
31.	ANSI N45.2.4 Section 5.2	Identifies various tests to be performed.	Consistent with section 5.2 of IEEE 336, Draft 1, Revision 2, 1976, these tests will be performed “as appropriate” as determined by Nuclear Engineering or Nuclear Power.

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32.	ANSI N45.2.4 Subsection 5.2.2 Mechanical Tests	“Mechanical tests shall be performed to ascertain that ...components or systems can withstand system pressure ratings.”	For the plant operational phase “system pressure ratings” is interpreted to mean system-operating pressure. For the Reactor Coolant System, Facility Technical Specifications identify testing requirements.
33.	ANSI N45.2.4 Subsection 6.2.1	“Items requiring calibration shall be tagged...indication date of calibration and identity of person...”.	Items requiring calibration are tagged indicating date of calibration. Identity of person that performed the calibration shall be indicated on tag or traceable through records.
34.	ANSI N45.2.5 Section 2.5	Requires periodic calibration of thermometers.	The initial accuracy of liquid-in-glass thermometers is established and, because of their inherent stability, they need not be “adjusted or calibrated at prescribed intervals”.
35.	ANSI N45.2.5 Section 2.5.2 Second paragraph	“...when discrepancies...are found all items inspected shall be considered unacceptable.”	Consistent with ANSI N18.7, 5.2.16 when devices are found to be out of calibration, an evaluation shall be made and documented concerning the validity of previous tests.
36.	ANSI N45.2.4 Subsection 6.2.2 Systems Tests	“These tests shall be made to verify that all parts of a system properly coordinate with each other.”	For the plant operation phase, this requirement is interpreted as not requiring that an entire system be re-tested after completion of modification of only a portion of that system. The testing requirements of the plant Technical Specifications are for inoperable equipment.
37.	ANSI N45.2.5 Section 3.3.4	“Inspections shall be performed to...verify that the process is suitable for the particular application. Verify that manpower, equipment and materials are available...”	Design controls verify qualifications of processes and suitability for particular applications. Verification of availability of manpower equipment, etc. is performed by project management rather than inspection personnel.

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38.	ANSI N45.2.5 Section 4.2	This section specifies inspections of storage, handling facilities, stockpiles, water, etc.	Quality of materials is verified prior to batching in lieu of these inspections.
39.	ANSI N45.2.5 Section 5.4	Various wrenches require calibration twice daily or weekly.	This requirement will be conformed with in the case of continued use. For intermittent use calibration frequency is based upon usage and calibration intervals may be greater than days or weeks.
40.	Regulatory Guide 1.58 ANSI N45.2.6	General requirements for inspection, examination and testing personnel.	NDE personnel meet the requirements of ASNT-TC-1A. Other personnel are qualified as discussed in Sections 3.3 and 3.4 of the Program Description.
41.	ANSI N45.2.8 Section 3.2	If checks disclose apparent loss of identification, affirm identification prior to release for installation.	We will check identification of an item prior to release for installation; however, option is maintained to knowledgeably install equipment lacking full identification providing deficiencies are resolved prior to its use; i.e., operation. Such action is recorded in quality control documents.
42.	ANSI N45.2.9 Section 1.1	This standard provides general requirements...of nuclear power plants.	The requirements of this standard will be applied to records generated after this standard is implemented.
43.	ANSI N45.2.9 Section 1.4	Definition of Quality Assurance Records.	This definition results in unreasonable requirements regarding time of application of the record system. Con Edison will introduce records into the system as soon as practical after completion of the document.

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<b><u>ITEM NO.</u></b>	<b><u>REGULATORY GUIDE/ANSI STANDARD REFERENCE</u></b>	<b><u>REQUIREMENT</u></b>	<b><u>INTERPRETATION/ALTERNATE/EXCEPTION</u></b>
44.	ANSI N45.2.9 Section 3.2.2	The quality assurance records shall be listed in an index.  The index shall indicate, as minimum, record retention times, where the records are to be stored and the location of the records within the storage area.	The types of quality assurance records shall be listed in an index.  In accordance with ANSI N45.2.9, paragraph 3.2.2, the index will indicate the location of the record within the records system.
45.	ANSI N45.2.9 Section 4.2	A specific submittal plan shall be established for quality assurance records by management between the purchaser and supplier.	Purchase orders identify any particular record submittal requirements, as applicable. Acceptance of the purchase order by the supplier constitutes agreement with the purchaser.
46.	ANSI N45.2.9 Sections 4.3, 4.4 and 5.3	“...a receipt control system shall include: 1. A records checklist... 2. A record of ...records received. 3. Procedures for receipt and inspection of ...records.  ...system shall permit...assessment ...status...of records. ...a method for verifying that records received are in agreement...and are in good condition. ...method of verifying that the records agree with pre-established records checklist.”	We will provide these administrative controls for our Nuclear Engineering, Nuclear Power and Nuclear Quality Assurance record storage area(s) but, where only a small number of non-permanent records are controlled by individual organization(s), these auxiliary administrative controls are unnecessary.

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47.	ANSI N45.2.9 Section 5.4	"Special processed records shall be stored...as recommended by the manufacturer of these materials."	In determining storage requirements, we will take into account recommendations of the manufacturer if available. Normally, these recommendations will be followed; however, a blanket commitment is impracticable, as we must retain the flexibility for final determination of storage needs.
48.	ANSI N45.2.9 Section 5.6	"For storage of film...controls shall be provided...as recommended by the manufacturer."	See above.
49.	ANSI N45.2.9 Section 5.5	A full time security system shall be established to preclude the entry of unauthorized personnel into the storage area. This system shall guard against larceny and vandalism.	For the purpose of this commitment "storage area" is interpreted to mean a Con Edison facility which contains records; e.g., the Indian Point site, 4 Irving Place, etc., and "security system" is interpreted to mean security measures.
50.	ANSI N45.2.9 Section 5.6	Requires a "Facility" or duplicate records.	Non-permanent records need not be duplicated or stored in a "Facility" but are required to be stored per NFPA Class I record provisions.
51.	ANSI N45.2.9 Section 6.2	"Storage system shall provide for the accurate retrieval of information without undue delay."	In accordance with ANSI N45.2.9, paragraph 6.2, the storage system shall provide for the accurate retrieval of information.
52.	Regulatory Guide 1.88	"When NFPA 232-1975 is used, Quality Assurance Records should be classified as NFPA Class I Records."	When a single record storage facility is maintained, permanent (lifetime) records will be afforded fire protection in accordance with NFPA Class I record provisions.

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53.	ANSI N45.2.9 Section 5.6	“An alternative to...a record storage facility...is...duplicate records stored in a separate remote location.”	Our duplicate records may be stored in separate rooms distant from one another but within the same building providing their simultaneous exposure to hazards is unlikely.  If records are stored in the same building, protection will be provided to assure that simultaneous exposure to hazards is unlikely.
54.	ANSI N45.2.9 Section 6.2	A list shall be generated designating those personnel who shall have access to the files.	Lock and key controls, duplication of records in separate locations and other security measures could obviate the need for access lists. In cases where access lists are utilized, they are not required in all cases to identify specific individuals.
55.	ANSI N45.2.9 Section 7.2	“Upon final transfer the owner shall...acknowledge receipt...”.	Except for special cases as agreed to by Con Edison and the vendor, acknowledgement or receipt of vendor quality assurance records is unnecessary.
56.	ANSI N45.2.9 Appendix A	Applicable Codes and Standards used in Design.	Codes and standards used in design are not considered records to be stored and controlled per the requirements of N45.2.9. They will be stored and controlled in accordance with normal library practices.
57.	ANSI N45.2.10	“Quality Assurance Terms and Definitions.”	Where terms defined in ANSI N45.2.10 are also defined in other standards to which Con Edison has referred via commitments to Regulatory Guides in the “Foreword” of the program description, the definitions in those other standards shall apply.
58.	ANSI N45.2.10	Definitions of “Certificate of Conformance” and “Certificate of Compliance”.	Based upon the guidance of ANSI N45.2.13, 10.2, the definitions of these two terms may be used interchangeably.

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59.	Deleted by QAPD Rev.13		
60.	ANSI N45.2.11 Section 2.2	Program procedures shall cover making experience reports available to cognizant design personnel.	A variety of experience reports from a number of sources are made available to design personnel without benefit of written procedures.
61.	ANSI N45.2.11 Section 2.2	“Program procedures shall cover necessary training of personnel performing activities covered by this standard.”	Procedures describing technical training are unnecessary. However, our program includes procedures for programmatic training of Engineers.
62.	ANSI N45.2.11 Section 6.3	“The results of the review shall be documented...a number of basic questions that shall be addressed...”.	Con Edison documents completion of the design verification activity, but does not necessarily document that each of the questions listed has been considered in the verification process. The subjects required to be considered during design review is identified in procedures.
63.	ANSI N45.2.13 Section 5.2	Specifies subjects to be evaluated during bid evaluation.	Except in special cases items d., e., and f. may be evaluated prior to submittal to bids.
64.	ANSI N45.2.11 Section 3.1	“Changes from specified design inputs including the reason for the changes shall be identified, approved, documented and controlled.”	Changes from specified design inputs and quality standards are identified, approved, documented and controlled. The reasons for the changes need not be documented.
	Section 4.2	“Changes from specified quality standards including reasons for the changes shall be identified, ....”	
65.	ANSI N101.4	Identifies numerous detailed, specific requirements that must be accomplished in the course of procuring, applying and inspecting protective coatings.	When N101.4 is applied, new quality requirements will be developed based on its provisions, but specific requirements, such as documented site meetings, field demonstrations, substrate priming, applicator reporting, inspection reporting and report forms will be considered on a job-by-job basis.

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66.	Regulatory Guide 1.37 Section C.4	Prohibits chemical compounds that contain chlorides, fluorides, lead, zinc, copper, sulphur or mercury.	Use of cleaning agents containing only trace amounts of these compounds is acceptable.
67..	Regulatory Guide 1.64 Section C.2	Restriction on design verification.	Considering the various duties of a supervisor, both administrative and technical, universal prohibition of design verification by the originator's supervisor is inappropriate. Design verification is performed by an individual(s) other than the originator if that individual(s) did not specify a singular design approach, rule out certain design considerations or establish the design inputs for the particular design aspect being verified.
68	ANSI N45.2.12	Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants.	This standard is primarily applicable to audits conducted of utilities' quality assurance programs by internal auditing organizations. Some of its provisions are impractical and unnecessary to apply when conducting vendor surveillance and vendor evaluations and in these cases all of the provisions of this standard will not apply.
69	ANSI N45.2.13 Section 4.2a	"Information which shall be evaluated shall include 1) Experience of users of identical or similar products of the prospective supplier:	"Experience of users" is interpreted to mean Con Edison or other utility experience at conventional plants and nuclear plants.
70	ANSI N45.2.13 Section 10.2	General requirements for Certificate of Conformance.	Vendor certifications that do not necessarily contain all of the requirements of section 10.2 may also be used as a basis for receiving inspection.
71	ANSI N45.2.13 Section 10.2d	"The certificate shall be attested to by a person who is responsible for this quality assurance function and whose	Certificates may be signed at times by company president, staff personnel, or Engineering and not necessarily persons directly responsible for the quality

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		function and position are described in the Purchaser's or Supplier's quality assurance program."	assurance function as described in the supplier's quality assurance program.
72	ANSI N45.2.13 Section 10.2c	"The certification system, including the procedures to be followed in filling out a certificate and the administrative procedures for review and approval of the certificates shall be described in Purchaser's or Supplier's quality assurance program."	The vendors overall quality assurance program is reviewed during the vendor evaluation activity. Specific procedures related to the details of the certification system, if applicable, may not necessarily be reviewed.
73.	ANSI N45.2.13 Section 10.2f	"Means shall be provided to verify the validity of suppliers certificates."	Verification of validity of supplier's certificates is conducted if past quality performance indicates the need for such verification.
74.	ANSI N45.2.23 1.4.3	An audit is a documented activity performed in accordance with written procedures or checklists to verify, by examination, that applicable elements of the quality assurance program have been developed, documented, and effectively implemented in accordance with specified requirements. An audit should not be confused with surveillance or inspection for the sole purpose of process control or product acceptance.	The requirements of ANSI N45.2.23 apply to personnel who perform audits involving quality assurance elements. They do not apply to personnel who perform audits involving compliance with Technical Specifications in areas such as Auxiliary Electrical Systems, Steam & Power Conversion and Containment Integrated Leak Testing etc., nor to personnel who perform vendor evaluations or surveillance.

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75.	ANSI N45.2.23 2.3.1.1	“...in addition score one (1) credit for a master degree in engineering, physical sciences, business management, or quality assurance from an accredited institution.”	Also score one (1) credit for a Masters Degree in mathematics.
76.	ANSI N45.2.23 2.3.1.2	“...if two (2) or more years of this experience have been in quality assurance, score two (2) additional credits, or...”.  “...if two (2) or more years of this experience have been in nuclear quality assurance, score three (3) additional credits, or...”.	Also score two (2) additional credits for two (2) or more years reliability experience.  Also score three (3) additional credits for two (2) or more years nuclear reliability experience.
77.	ANSI N45.2.23 2.3.1.3	“...Certification of competency in engineering, science, or quality assurance specialties issued and approved by a State Agency, or National Professional or Technical Society, score (2) credits.”	Also score two (2) credits for ASQ certification as a Reliability Engineer.
78.	ANSI N45.2.23 2.3.2	“...the prospective Lead Auditors shall have the capability to communicate effectively both written and oral. These skills shall be attested to in writing by the Lead Auditor’s employer.”	Separate attestation regarding communications skill shall not be made. Designation as Lead Auditor shall constitute indication of adequate communication skill.

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79.	ANSI N45.2.23 2.3.3	“...Prospective Lead Auditors shall have training to the extent necessary to assure their competence in auditing skills.”	Previous on-the-job training at prior companies, organizations or Con Edison shall constitute credit towards Lead Auditor designation. Contractor personnel used as Lead Auditors shall be certified by their employers whose training program shall have been reviewed and found satisfactory by Con Edison.
80.	ANSI N45.2.23 2.3.4	“The prospective Lead Auditor shall have participated in a minimum of five (5) quality assurance audits within a period of time not to exceed three (3) years prior to the date of qualification, one audit of which shall be a nuclear quality assurance audit within the year prior to his qualification.”	Participation in vendor quality assurance program evaluations, vendor surveillance, site Nuclear Quality Assurance surveillance or ASME “N” stamp nuclear surveys, shall constitute credit towards meeting this requirement.
81.	ANSI N45.2.23 2.3.5	“...The prospective Lead Auditor shall pass an examination, which shall evaluate his comprehension of and ability to apply the body of knowledge identified in paragraph 2.3.3.”	Audit management may waive the requirements of ANSI N45.2.23, paragraph 2.3.4 and 2.3.5 requiring participation in audits and examination, when the individual has demonstrated, by past experience and/or knowledge, an obvious capability to conduct audits.

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82.	ANSI N45.2.23 3.2	“Lead Auditors shall maintain their proficiency through one or more of the following: regular and active participation in the audit process; review and study of codes, standards, procedures, instruction, and other documents related to quality assurance programs and programs and program auditing; participation in training programs. Based on management annual assessment, management may extend the qualification, required training, or require requalification. These evaluations shall be documented.”	Participation in vendor quality assurance program evaluations, vendor surveillance, site Nuclear Quality Assurance surveillances, or ASME “N” stamp nuclear surveys, shall constitute credit towards maintenance of proficiency. Documented annual assessment of auditors is not required for personnel whose ongoing responsibilities include auditing, vendor evaluation, vendor surveillance, or site Nuclear Quality Assurance surveillances.
83.	ANSI N45.2.23 3.3	“Lead Auditors who fail to maintain their proficiency for a period of two years or more shall require requalification. Requalification shall include retraining in accordance with the requirements of paragraph 2.3.3, reexamination accordance with paragraph 2.3.5, and participation as an Auditor in at least one nuclear quality assurance audit.”	Management shall determine the basis for requalification on a case-by-case basis, and may elect to waive retraining, reexamination and audit participation based upon a review of the individual’s knowledge and capability, prior performance and recent experience.

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	ANSI N45.2.1, 1973 "Cleaning of Fluid Systems..."		
1.	Subsection 3.1.1	"Such items should receive their required level of cleanliness..."	This "should" is beyond the scope of this standard as indicated by the last sentence on the page.
2.	Subsection 3.1.2.1	Under "NOTE", "localized rusting ... should be evaluated metallurgically."	Laboratory types tests on localized rusting will be conducted when the need for such tests is determined by Nuclear Engineering or Nuclear Quality Assurance.
3.	Section 5	The fourth "should" requires fabrication of a complete unit where inspection can be blocked. The fifth "should" requires inspection of the completed unit immediately prior to closing access points.	The special fabrication and inspection requirements will be complied with as required by Nuclear Engineering or Nuclear Quality Assurance.
4.	Section 5	The sixth "should" requires cleaning of surfaces before proceeding to the next installation or construction step.	The degree of surface cleanliness and the frequency of cleaning will be as determined by Nuclear Engineering or Nuclear Quality Assurance.
5.	Section 5	The seventh "should" prohibits the use of mineral or organic acids on stainless steel.	Organic acids will be used as permitted by Nuclear Engineering. After their use, however, all residual traces of the acid will be removed.

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	ANSI N45.2.1, 1973 "Cleaning of Fluid Systems..."		
6.	Section 5	The eighth "should" requires removal of local rusting from corrosion resistant alloys by mechanical means.	When the need for removal of rust is determined, it shall be removed by mechanical means.
7.	Section 6	The second "should" requires personnel entering the system to wear clean outer clothing and shoe covers.	We interpret system to mean the primary coolant system.
8.	Subsection 7.1	The first "should" requires attachment of loose tools "to either the workman or the exterior of the system with a lanyard."	Loose tools will be controlled as specified by procedure or by Nuclear Quality Assurance. Precautionary measures such as barriers between work areas, and tool check-in and check-out controls may obviate the need for attachment.
9.	Subsection 7.2.2	The first "should" specifies a method for determining the effectiveness of alkaline cleaning.	When alkaline cleaning is performed, it will be accomplished in accordance with the requirements of Nuclear Engineering.
10.	Subsection 7.2.2	The second "should" requires flushing of pockets and dead legs. The third "should" requires that attention be given to removal of solution. The fourth "should" requires system to be sealed.	When alkaline cleaning is performed, it will be accomplished in accordance with the requirements of Nuclear Engineering.

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	ANSI N45.2.1, 1973 "Cleaning of Fluid Systems..."		
11.	Subsection 7.2.3	The first "should" requires flushing to remove chelating agents. The second "should" requires flushing of pockets and deadlegs. The third "should" requires that attention be given to removal of solution. The fourth "should" requires system to be sealed.	When chelate cleaning is performed, it will be accomplished in accordance with the requirements of Nuclear Engineering.
	ANSI N45.2.2, "...Packaging, Shipping, Receiving, Storage, and Handling..."		
12.	Subsection 4.3.6	Requires location and stacking limits to be specified on crates and boxes.	Consistent with the provisions of ANSI N45.2.2, 1972 Appendix "A", A.3.9.6 (e), such requirements will be specified, "as appropriate".
13.	Appendix A,A.3.5.2.(1),(a)	Limits halogen and sulphur content of tape.	Nuclear Engineering may allow the use of tapes containing greater amounts of halogen after appropriate evaluation.
14.	ANSI N45.2.9, 1974 "...Records..." Subsection 3.2.2	The second "should" requires compatibility between the organization's system and the owner's system.	Special compatibility requirements of organization's records index system will be identified, where necessary, in procurement documents.

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14.1	ANSI N45.2.9, 1974 “...Records...” Subsection 3.2.7	Types of quality assurance records with recommended minimum retention periods are listed in Appendix A...	The following records shall be retained for at least five years: a. Records and logs of facility operation covering time intervals at each power level. b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety. c. Reportable Event Reports. d. Records of surveillance activities, inspections & calibrations required by Technical Specifications. e. Records of reactor tests and experiments. f. Records of changes made to Operating Procedures. g. Records of radioactive shipments. h. Records of sealed source leak tests & results. i. Records of annual physical inventory of all source material on record. <b><i>j. Records of Quality Assurance activities required to show evidence that an activity was performed in accordance with applicable requirements but need not be retained for the</i></b>

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			<p><i>life of the item. These are listed as non-permanent in N45.2.9 Attachment A.<sup>1</sup></i></p> <p>The following records shall be retained for the duration of the Facility Operating License:</p> <ul style="list-style-type: none"><li>a. Record and drawing changes reflecting facility design modifications made to systems and equipment described in the Updated Final Safety Analysis Report.</li><li>b. Records of new and irradiated fuel inventory fuel transfers and assembly burnup histories.</li><li>c. Records of facility radiation and contamination surveys.</li><li>d. Records of radiation exposure for all individuals entering radiation control areas.</li><li>e. Records of gaseous and liquid radioactive material releases to the environs.</li><li>f. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.</li><li>g. Records of training and qualification for current members of the plant staff.</li><li>h. Records of inservice inspections performed</li></ul>

<sup>1</sup> Clarification to reflect the disposition of CR 199811127 to identify nonpermanent QA records in QAPD.

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			<p>pursuant to the Technical Specifications.</p> <ul style="list-style-type: none"><li>i. Records of Quality Assurance activities required by the QA Manual except as noted above.</li><li>j. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.</li><li>k. Records of meetings of the SNSC and the NFSC.</li><li>l. Records for Environmental Qualification, which are covered under the provisions of Technical Specification 6.13.</li><li>m. Records of analyses required by the radiological environmental monitoring program that would permit evaluation of the accuracy of the analysis at a later date. This should include procedures effective at specified times and QA records showing that these procedures were followed.</li><li>n. Records of the service lives of all snubbers addressed by Section 3.12 of the Technical Specifications, including the date at which the service life commences and associated</li></ul>

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			installation and maintenance records. The documentation referred to herein is required for all snubbers beginning with those replaced following the issuance of Technical Specification Amendment 112 (i.e.5/19/86).
	ANSI N45.2.9, 1974 “...Records...”		
15.	Subsection 5.6	The first “should” requires that records shall be protected by NFPA, Class A, four hour minimum rated facility.	See Table A, Page A-16, #52.
16.	Subsection 7.3	Recommends that non-permanent records be retained as specified in Appendix A.	As stated in section 5.2.12, "Plant Records Management" the retention times of non-permanent records are specified in the Indian Point Records Type List.
17.	Regulatory Guide 1.58, Revision 1, 9/80 “...Examination and Testing Personnel...”	Endorses the recommendations and requirements of ANSI N45.2.6, 1978	See Table A, Page A-13, #40.
18.	ANSI N45.2.5, 1974 “...Concrete...Structural Steel...”	The requalification procedure for cadweld splices should be identical to the original qualification procedure.	The content of the requalification procedure shall be determined by Nuclear Engineering.

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19	ANSI N 18.7 Section 5.3	Procedures shall be prepared and approved prior to implementation as required by 4.3 and 5.2.15.	<p>In addition to the requirements of 4.3 and 5.2.15, Each procedure and administrative policy of Technical Specification 6.8.1, and any changes to them shall be reviewed and approved for implementation in accordance with a written administrative control procedure approved by the appropriate General or Department Manager, with the concurrence of the Station Nuclear Safety Committee and the appropriate Vice President. The administrative control procedure shall, as a minimum, require that:</p> <ul style="list-style-type: none"><li>a. Each proposed procedure/procedure change <i>that changes the document's intent</i><sup>2</sup> involving safety-related components and/or operation of same receives a pre-implementation review by the SNSC except in case of an emergency.</li><li>b. Each proposed procedure/procedure change which renders or may render the Updated Final Safety Analysis Report or subsequent</li></ul>

<sup>2</sup> QAPD rev 15-015 rev0 change to be consistent with QAPD section 5.2.15

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20	<i>Reg Guide 1.33-rev.2 QA Program Requirements (Operations) section C.4</i>	<i>Section 4.5 Audit Program...audit of all safety related functions is completed within a period of 2 years. In amplification of this requirement, the following program elements should be audited at the indicated frequencies:</i>	<p>safety analysis reports inaccurate and those which or may <i>require a license amendment</i><sup>3</sup> are approved by the SNSC prior to implementation.</p> <p>c. The approval of the Nuclear Facilities Safety Committee shall be sought if, following its review, the Station Nuclear Safety Committee <i>review determines</i> that the proposed procedure/procedure change either <i>requires a license amendment</i> or if it is in doubt as to whether or not <i>a license amendment is required.</i><sup>4</sup></p> <p><i>The audit frequencies shall follow N18.7-76 not the RG 1.33 amplification</i><sup>5</sup></p>

<sup>3</sup> QAPD rev15-014 rev 0 change to reflect changes in changes in 10 CFR 50.59 terminology

<sup>4</sup> QAPD rev15-014 rev 0 change to reflect changes in changes in 10 CFR 50.59 terminology

<sup>5</sup> QAPD rev 15-012 rev 0 change to reflect NRC approved change to NYPA IP#3 QAPD per 50.54(a)(3)(ii) to audit on 2 year frequency