Indiana Michigan
Power Company
Cook Nuclear Plant
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Buchanan, MI 49107
616-465-5901

AEP
INDIANA MICHIGAN POWER

September 22, 2000

C0900-07
10 CFR 50.54(a)(3)

Docket Nos.: 50-315
50-316

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant Units 1 and 2
QUALITY ASSURANCE PROGRAM DESCRIPTION,
REVISION 15

Pursuant to 10 CFR 50.54(a)(3), Indiana Michigan Power Company (I&M) is submitting Revision 15 of the Quality Assurance Program Description (QAPD) for Donald C. Cook Nuclear Plant Units 1 and 2.

Attachment 1 provides a synopsis of the changes to the QAPD. This includes the sections changed, a description of the changes, and the reason for the changes. Attachment 2 provides QAPD pages marked up to show the changes. Attachment 3 provides a complete re-typed QAPD with the changes identified by sidebars.

These changes have been evaluated in accordance with 10 CFR 50.54(a)(3), and I&M has concluded that the changes did not reduce the commitments in the QAPD as accepted by the Nuclear Regulatory Commission (NRC), with one exception. This exception addressed a CADWELD splice issue. I&M informed the NRC in a QAPD submittal dated August 14, 2000, of this change that was implemented without prior NRC approval. Since the change has been implemented, it remains in the QAPD that is being submitted in this letter.

There are no new commitments contained in this submittal.

Q004

Should you have any questions, please contact Mr. Wayne J. Kropp, Director of Regulatory Affairs, at (616) 697-5056.

Sincerely,

R. P. Powers
Vice President

/dmb

Attachments

c: J. E. Dyer
MDEQ - DW & RPD
NRC Resident Inspector
R. Whale

AFFIRMATION

I, Robert P. Powers, being duly sworn, state that I am Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.

Indiana Michigan Power Company

R. P. Powers
Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 22 DAY OF September, 2000

Jennifer L Kernosky
Notary Public

My Commission Expires _____

JENNIFER L KERNOSKY
Notary Public, Berrien County, Michigan
My Commission Expires May 26, 2005

ATTACHMENT 1 TO C0900-07

SYNOPSIS OF CHANGES

This attachment provides a table of the changes that have been made to the Quality Assurance Program Description (QAPD).

- The first column in the table indicates the affected page in the marked-up pages in Attachment 2. In addition, this column provides the reference to the 10 CFR 50.54 section under which the change was determined not to be a reduction in commitment.
- The second column in the table provides the affected paragraph number (if it appeared on the changed page) and a brief description of the change.
- The third column provides the reason for the change. Additional support information was provided where the change involved more than an editorial clarification.

Generic Administrative Change Codes

Administrative change codes were used throughout the marked-up pages for changes that were obviously editorial or a repetitive clarification. For example, the code 'A-1' signifies a change in name only of an organizational title with no change in function or organizational alignment for safety or quality functions e.g. Plant Nuclear Safety Review Committee was changed to Plant Operations Review Committee (PORC). These Generic Administrative Change Codes appear only on the marked-up pages and are not discussed further in the table on the following pages. Sidebars designate the changes on the Attachment 3. The highlighting shown in Attachment 2 was removed in Attachment 3 and no sidebars were used to indicate the removal.

A-1 A change in name only of an organizational title with no change in function or organizational alignment for safety or quality functions.
A-2 An administrative clarification that addresses the previous relocation of requirements from section 6.5 of the Technical Specifications (T/S) to Appendix C of the QAPD as approved by the Nuclear Regulatory Commission in safety evaluation for Amendments 226 and 210 to the Unit 1 and 2 licenses, respectively.
A-3 Editorial clarification or typographical correction.
A-4 An administrative clarification recognizing the relocation of certain requirements from T/S to the Administrative Technical Requirements Manual as approved by the NRC in its safety evaluation for Amendments 226 and 210 to the Unit 1 and 2 licenses, respectively.

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / No Reduction Justification	**Description of Change**	**Reason for the Change**
1.7-11 50.54 (a)(3)vi	Relocated Human Resources from a first level Nuclear Generation Group and elevated Employee Concerns group to a first level Nuclear Generation Group.	See "Reason for Change" Page 1.7-108
1.7-13 1.7-19 50.54 (a)(3)vi	Relocated the administrative function of interface with Institute of Nuclear Power Operations (INPO) from the Performance Assurance (PA) organization to Regulatory Affairs.	This change was made to remove PA from performing the line function of review of operating experience. PA maintains cognizance of the operating experience program through audit of corrective actions programs (CAP).

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / No Reduction Justification	**Description of Change**	**Reason for the Change**
1.7-14 50.54 (a)(3)	Changed the qualification requirements for the PA Director.	The qualification requirements for the PA Director have been changed to allow more flexibility in filling the position and to promote the ability to rotate qualified line management into PA for continuing executive development. Indiana Michigan Power Company's (I&M) commitment for personnel selection and qualification is Regulatory Guide (RG) 1.8 (9/75) as specified in Appendix A to the QAPD. RG 1.8 endorses ANSI N18.1-1971 as stated in Section C of the RG. The RG and ANSI N18.1-1971 do not specifically address the quality assurance (QA) function as a staff position. I&M considers the PA Director a technical manager of professional staff as stated in 3.2.3 and 4.2.4 of ANSI N18.1-1971. The position qualifications as stated in 3.2.3 and 4.2.4 of ANSI N18.1-1971 require 8 years experience of which 1 shall be nuclear power plant experience. A degree is optional and may be substituted for 4 of the remaining 7 years experience. The change in the descriptive text of the QAPD remains more conservative than our RG commitments because the QAPD requires a minimum of 4 years nuclear power plant experience instead of the 1 year permitted by ANSI N18.1-1971 and a degree or equivalent. I&M considers nuclear experience as defined by ANSI N18.1-1971 to be performance of activities in a program covered by 10 CFR 50 Appendix B. I&M also chose to specify use of the wording in ANS

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / No Reduction Justification	**Description of Change**	**Reason for the Change**
1.7-14 (Continued) 50.54(a)(3)		3.1-1993 to describe our expectations for replacement of the remaining experience for education. This was done to assure appropriate and consistent implementation of the 'experience for education' exchange. This remains more conservative than ANSI N18.1-1971 because ANS 3.1-1993 section 4.1.1.2, requires more than a one-for-one experience to education exchange allowed by N18.1. I&M is not requesting NRC endorsement of the standard or implementing ANS 3.1-1993 under 50.54(a)(3) i or ii. The conditions for knowledge of QA regulations, policies, practices and standards, and other skills for the position remain unchanged.
1.7-15 1.7-16 50.54 (a)(3)	Changed the level of the PA position that may have stop work authority.	In order to provide flexibility for back shift and other coverage, supervisors within PA have been delegated 'stop work' authority.
1.7-16 1.7-108 50.54 (a)(3)vi	Relocated Regulatory Affairs from a direct report to the I&M Vice President Chief Nuclear Officer (CNO) to a direct report to the Vice President-nuclear engineering.	This change was made as part of a corporate re-organization strategy and does not affect organizations that perform QA functions. Although Regulatory Affairs does have responsibility, as do all line departments, to implement the QA program they do not have any direct QA functions.
1.7-28 50.54 (a)(3)vi	Added the reference to the Plant Manager and relocated the reference to the business services director.	The change now links the functional alignment and responsibilities of the Plant Manager to the Site Vice President to be consistent with the T/S. The change to relocate the business services director functions from page 1.7-33 was performed for editorial purposes.
1.7-33 50.54 (a)(3)vi	Deleted unnecessary text.	The change was made as a clarification. The remaining text describes functions that remain in Business Services under the CNO. See the change at the top of Page 1.7-28 showing site reporting.

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / No Reduction Justification	**Description of Change**	**Reason for the Change**
1.7-39 50.54 (a)(3)	1.7.2.2.3 Added new text.	The change provides a description of the change in management for the QAPD.
1.7-39 50.54 (a)(3)	1.7.2.2.4 Added new text.	The change added a clarifying description of an existing class of procedures associated with the PA section.
1.7-45 50.54 (a)(3)	1.7.3.2.1 Deleted reference to Design Change Packages and added text to describe a new process.	The reason for the change is to describe an equivalent and more appropriate configuration change process. Some past configuration change mechanisms had the potential to bypass the safety evaluation/safety screening process. This weakness in multiple change processes is directly related to issues in the Confirmatory Action Letter dated September 19, 1997. This change limits and bounds the ways in which the plant and/or the design basis can be modified by requiring all change mechanisms to ultimately flow through the approved change process to assure proper safety evaluation screening. The first sentences of 1.7.3.2.1 and 1.7.3.2.2 will remain unchanged and continue to require design changes to be screened/evaluated for impact and unreviewed safety questions under the requirements of 10 CFR 50.59.
1.7-55 50.54 (a)(3)	1.7.5.2.2 – deleted the specific list of procedure types and inserted a three item list of general types of procedures.	This change provides a listing which is a clarification of the procedure types currently in use, but describes them in a more generic way. The specifics of procedure titles are contained in approved administrative procedures.
1.7-56 50.54 (a)(3)	1.7.5.2.3 – deleted the list of procedure series numbers and inserted descriptive text.	This list was added during the late 1980's as an informational aid only and is no longer needed.

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / **No Reduction Justification**	**Description of Change**	**Reason for the Change**
1.7-57 50.54 (a)(3)	1.7.5.2.4 – deleted the last paragraph in this section.	There is no longer an onsite design staff performing this function. Since the corporate relocation in 1996, the design staff is located at the American Electric Power Nuclear Generation offices in Buchanan, Michigan. This staff performs the as-built revision functions.
1.7-57 1.7-58 50.54 (a)(3)	1.7.5.2.5 - deleted the reference to "In Hand" procedures and removed the requirement for use of the "**" for extensive or complex jobs where reliance on memory cannot be trusted and inserted additional descriptive text.	I&M has changed procedure designations to conform to INPO guidance to "Continuous Use", "Reference Use" and "Information Use". A "Continuous Use" procedure is a technical procedure for highly complex, sequence-dependent activities that cannot be performed by memory. These procedures must be at the job site and open to the appropriate step. This procedure classification meets the intent of the "In Hand" designation. Commitments to RG 1.33 (ANSI N18.7-1976) Section 5.2.2 are preserved by this change. The requirements for the use and application of procedure designations is contained in an approved administrative procedure.
1.7-88 50.54 (a)(3)	1.7.15.2.2 - deleted the requirement for the supervisor review signature of the group that initiated a job order.	1.7.15.2.2 The supervisor review signature of the group that initiated a job order was a previous approach to the resolution of a non-conforming condition disposition. Recent improvements in the CAP now encompass the disposition review. QAPD statements allow this approach in the previous two paragraphs. The change clarifies an approved process with no reduction in commitment to RG 1.33 (ANSI N18.7-1976) Section 5.2.14.

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / No Reduction Justification	**Description of Change**	**Reason for the Change**
1.7-89 50.54 (a)(3)	1.7.16.1 Editorial changes and added a statement to reflect the use of safety reviews within the CAP.	Clarifies wording to match processes.
1.7-89 50.54 (a)(3)	1.7.16.2.1 changed "procedures" to "instructions" and added statements to the end of this section regarding the review of procedures which implement the CAP.	Clarifies that the documents reviewed by PA are instructions and is consistent with descriptions previously stated in section 1.7.2.2.4 of this QAPD.
1.7-89, 90 50.54 (a)(3)	1.7.16.2.2 Replaced text describing the process for screening and informing management of conditions adverse to quality.	The reason for the change is to add descriptive text to more accurately describe improved processes for review and classification of identified conditions. Significant conditions are reported to management. The Corrective Action Review Board (CARB) now evaluates the identified corrective actions. However, the PORC continues to perform reviews specified in Appendix C to this QAPD. I&M commitments to RG 1.33 (ANSI N18.7-1976) section 5.2.11 have not been reduced.
1.7-96 50.54 (a)(3)	1.7.18.2.5.changed the review of corrective actions from the PORC to the CARB.	The Site Vice President is responsible for chairing of the CARB as specified in a Plant Administrative Instruction reviewed by PA. This may involve the use of a "designee" which remains consistent with administrative controls specified in Appendix C to this QAPD for other committees such as the PORC. This arrangement assures management cognizance of corrective actions.

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / No Reduction Justification	**Description of Change**	**Reason for the Change**
1.7-108 50.54 (a)(3)vi	Changed the Organization Charts.	The Human Resources (HR) Manager now reports to the Site Vice President as the HR Director (See Page 1.7-110 for the direct reports to the Site Vice President). None of the duties described under Organization in the QAPD for HR include QA functions requiring direct report to the CNO. The Employee Concerns group was relocated to a direct report to the Chief Nuclear Officer to allow high visibility during the significant changes I&M has experienced as a result of programmatic enhancements.
1.7-109 50.54 (a)(3)vi	Changed the Organization Charts.	Administrative infrastructure clarifications in the PA Organization and the addition of the position of Assistant Director PA.

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / No Reduction Justification	**Description of Change**	**Reason for the Change**
1.7-110 50.54 (a)(3)	Changed the Organization Charts.	The establishment of a Training Manager as a direct report to the Site Vice President and the establishment of a Maintenance Director as a direct report to the Site Vice President are changes to a higher management level. The Plant Manager maintains control of maintenance activities by administrative controls that provide operations control of the work order process on plant structures, systems, and components. The establishment of a Work Control Director and assignment to the Site Vice President is further detailing of duties already performed in the organization. Although the Work Control group does have responsibility, as do all other line departments, to implement the QA program (including, but not limited to, corrective action, design control, document control, training, etc.) they do not have any specific QA functions. The designation of the PORC as a direct report to the Plant Manager is a further detailing of a reporting relationship already performed by the PORC. The consolidation of radiation control, chemistry, and environmental under one department has not reduced the level of reporting below the Plant Manager. The HR director was moved from a direct report to the CNO. See explanation on page 1.7-108.

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / No Reduction Justification	**Description of Change**	**Reason for the Change**
1.7-124 50.54 (a)(3)ii	Added exception 2o. addressing the format of emergency operating procedures.	Instead of the requirements of Section 5.3.9 of RG 1.33 (ANSI N18.7-1976), the format and content of the emergency operating procedures follow the applicable NRC approved format. This change was accepted in a NRC Safety Evaluation Report (SER) as referenced in the change.
1.7-129, 1.7-129a (See "Reason for Change")	Added a new paragraph 7.c.	This paragraph was added to implement the latest ASME technical position regarding CadWeld splice testing. The change was implemented as a non-reduction in commitment. Subsequent review by I&M revealed the change was, in fact, a reduction in commitment. However, since the change has already been implemented, it remains in the QAPD. I&M informed the NRC of the implementation of the reduction in commitment change without prior NRC approval and requested the approval of the change under a separate QAPD submittal dated August 14, 2000 (AEP letter designator C0800-05).
1.7-129a, 130 50.54 (a)(3)	Added a new paragraph 7.d. for a clarification of N45.2.5 which 1) eliminates soft fragment testing, and 2) replaces a testing specification with combination of tests.	The reason for this change is to reinstate an exception previously approved by the NRC for I&M and to implement the application of more accurate testing as defined by more recent industry standards. ANSI N45.2.5 –1974, Table B, requires 1) Aggregate-soft fragments test frequency of monthly during production, and 2) Aggregate-potential reactivity test frequency of every six months. 1) The change to eliminate aggregate soft fragment testing during the Donald C. Cook Nuclear Plant (CNP) Unit 2 steam generator repair project (SGRP) was previously approved by an NRC SER for

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / No Reduction Justification	**Description of Change**	**Reason for the Change**
1.7-129a, 130 (continued) 50.54 (a)(3)		Amendment 100 dated March 8, 1988, to the facility operating license for CNP Unit 2. The basis for this approved change is equally applicable to the Unit 1 SGRP. 2) The change to allow an alternate test for potential reactivity, based on an examination of aggregate per ASTM standards to determine which of the two tests for potential reactivity is to be used, is also not considered a reduction in licensee commitments. ASTM C289 may give false acceptable results when the aggregate is carbonate based. The Unit 1 SGRP will first test aggregate to determine aggregate mineral composition by petrographic examination per ASTM C295. Then a test for potential reactivity using ASTM C289 for silicate aggregate or ASTM C586 for carbonate aggregate, as indicated by the results of the examination of ASTM C295, will be performed. The use of the petrographic examination, followed by property specific tests, is a test methodology used in the 1980 Edition of the ASME Code. The NRC in RG 1.136, Revision 2, approved the applicable section, Section III, Division 2, Subparagraph CC-2222.1 (c). The testing is applicable where aggregate is silica based, and provides a more acceptable equivalent test method when carbonate based aggregates, e.g., limestone or dolomite, are used.
1.7-141 50.54 (a)(3)I	14b. Withdrawal of a previous exception.	Returns the ANSI N45.2.12-1977 commitment to the previously NRC approved methods specified in RG 1.144 (1/79).

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / **No Reduction Justification**	**Description of Change**	**Reason for the Change**
1.7-142 50.54 (a)(3)ii	Changed the description of the NRC license requirements for the operations manager.	The change aligns the wording with the current approved T/S Administrative Section 6.2.2.g.
1.7-143 50.54 (a)(3)	6.5.1.2 provided a clarification of the organization of the PORC. Added a sentence – "The PA individual shall be a non-voting member and shall not be included for quorum consideration."	The Plant Manager is no longer specifically required to be a PORC member. This change continues to meet our commitment to RG 1.33 (ANSI N18.7-1976) section 4.1 and 4.4 as they apply to the responsibilities and authority of the Plant Manager. This change authorizes a PA presence on the PORC for purposes of input and discussion. By excluding the PA representative from voting and not including them in quorum considerations, the autonomy and independence of the PA function is preserved while assuring an opportunity to participate and observe.
1.7-144 50.54 (a)(3)	6.5.1.2 Added a phrase after Senior Operating License "or have been certified for equivalent senior operator knowledge." Removed the term "alternates". Changed reference from Section 4.4 of ANSI N18.1-1971 to Section 4.2.	This allows for equivalent knowledge and broadens the population of potential members. This restores the language that already existed in T/S. Removal of qualification for "alternates" simplifies the language of the QAPD because alternates are addressed by ANSI N18.1-1971 To more accurately describe the qualifications of PORC members.
1.7-144 50.54 (a)(3)	6.5.1.2 Added a sentence to the end of last paragraph to detail the qualification requirements of PORC members and the Plant Manager.	This clarification of the requirements for members and the re-statement of the requirement for the qualification of the Plant Manager that is not currently stated in the QAPD is a further detailing of existing commitments to ANSI N18.1-1971 and RG 1.8.

Table of QAPD Changes (Excluding Generic Administrative Changes)		
Affected QAPD Pages / **No Reduction Justification**	**Description of Change**	**Reason for the Change**
1.7-144 50.54 (a)(3)	6.5.1.5 Changed the number of members needed for a PORC quorum from three to four.	The reason for the change is administrative in nature. The change exceeds previous commitments.
1.7-144 50.54 (a)(3)	6.5.1.5 Change allowing Vice-Chair of PORC to vote when not acting as Chair.	The change is further detailing of the organization administration.
1.7-146 50.54 (a)(3)	6.5.2.2 The change removed specific position titles for membership of the Nuclear Safety Design Review Committee (NSDRC) (Offsite Review Committee).	This change does not reduce our commitments contained in RG 1.33 (ANSI N18.7-1976) section 4.3.1 as it applies to the composition or qualifications of committee membership. The NSDRC continues to "assure that appropriate expertise is brought to bear in reviews of operational phase activities" (ANSI N18.7-1976, section 4.3.1) through its ability to use outside consultants as described in section 6.5.2.4 of the QAPD. This authority permits flexibility to utilize experts in other appropriate fields associated with the unique characteristics of nuclear power such as computer software. In addition, the use of the functional descriptions provides adequate description of capabilities to serve as NSDRC members without having to specifically designate membership by titles that periodically change.
1.7-150 1.7-151 1.7-152 50.54 (a)(3)	6.6, 6.7, 6.8, 6.13, and 6.14 Removed the text in these sections.	These sections remain in the Administrative Controls of the current T/S. The sections were proposed by I&M to be moved from the T/S to the QAPD; however, the sections were not approved by the NRC as part of the relocation from the T/S. The SER for Amendments 226 and 210 to the Unit 1 and 2 licenses addressed the transfer of certain administrative controls to the QAPD.

ATTACHMENT 2 TO C0900-07

QAPD PAGES
MARKED TO SHOW CHANGES

DONALD C. COOK NUCLEAR PLANT (COOK NUCLEAR PLANT)

UNIT NUMBERS 1 AND 2

DOCKET NOS. 50-135 AND 50-316

LICENSE NOS. DPR-58 AND DPR-74

UPDATED QUALITY ASSURANCE PROGRAM DESCRIPTION

FOR THE

COOK NUCLEAR PLANT

JULY 1997

A-3

Concurred by: Paul C. Bowers Date: 7-30-97

Performance Assurance Director

Approved by : E E Fitzpatrick Date: 8/1/97

Vice President, Indiana Michigan Power Company

A-3

STATEMENT OF POLICY

FOR THE DONALD C. COOK NUCLEAR PLANT

QUALITY ASSURANCE PROGRAM

POLICY

American Electric Power recognizes the fundamental importance of controlling the design, modification, and operation of Indiana Michigan Power Company's Donald C. Cook Nuclear Plant by implementing a planned and documented quality assurance program, including quality control, that complies with applicable regulations, codes, and standards.

The quality assurance program has been established to control activities affecting safety-related functions of structures, systems, and components in Cook Nuclear Plant. The quality assurance program supports the goal of maintaining the safety and reliability of Cook Nuclear Plant at the highest level through a systematic program designed to assure that activities affecting safety-related functions are conducted in compliance with applicable regulations, codes, standards, and established corporate policies and practices.

As chairman of the board, president, and chief executive officer of American Electric Power Company, I maintain the ultimate responsibility for the quality assurance program associated with Cook Nuclear Plant. I have delegated responsibilities for implementation of, and compliance with, the quality assurance program, as outlined in this statement.

IMPLEMENTATION

A-1

The performance assurance director, under the direction of the ~~executive~~ Senior vice president nuclear generation, has been assigned the overall ~~responsibility~~ for specifying the quality assurance program requirements for Cook Nuclear Plant and verifying their implementation. The performance assurance director has authority to stop work on any activity affecting safety-related items that does not meet applicable administrative, technical, and/or regulatory requirements. The

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March 26, 1997

~~July 1997~~

performance assurance director does not have the authority to stop unit operations, but shall notify appropriate plant and/or corporate management of conditions not meeting the aforementioned criteria and recommend that unit operations be terminated.

The ~~executive~~ vice president nuclear generation, under my direction, has been delegated responsibility for effectively implementing the quality assurance program. All other AEP divisions and departments having a supporting role for Cook Nuclear Plant are functionally responsible to the ~~executive~~ vice president nuclear generation.

The site vice president [redacted], under the direction of the ~~executive~~ vice president nuclear generation, is delegated the responsibility for ~~implementing~~ the quality assurance program at Cook Nuclear Plant.

The performance assurance director is responsible for establishing a quality control program at Cook Nuclear Plant.

The performance assurance director is responsible for providing technical direction to the site vice president [redacted] for matters relating to the quality assurance program at Cook Nuclear Plant. The performance assurance director is responsible for maintaining a quality assurance group at Cook Nuclear Plant to perform required reviews, audits, and surveillances, and to provide technical liaison services to the site vice president [redacted].

The requirements for implementation of the quality assurance program are described in the nuclear generation group policies and procedures.

Each nuclear generation group involved in activities affecting safety-related functions of structures, systems, and components in Cook Nuclear Plant has the responsibility to implement the applicable policies and requirements of the quality assurance program. This responsibility includes being familiar with, and complying with, the applicable quality assurance program requirements.

Statement of Policy for the
Donald C. Cook Nuclear Plant

COMPLIANCE

The performance assurance director shall monitor compliance with the established quality assurance program. Audit programs shall be established to ensure that nuclear generation group activities comply with established program requirements, identify deficiencies or noncompliances, and obtain effective and timely corrective actions.

Any employee engaged in activities affecting safety-related functions of structures, systems, and components in Cook Nuclear Plant who believes the quality assurance program is not being complied with, or that a deficiency in quality exists, should notify his/her supervisor, the performance assurance director, and/or the site vice president. If the notification does not, in the employee's opinion, receive prompt or appropriate attention, the employee should contact successively higher levels of management. An employee reporting such conditions shall not be discriminated against by companies of the American Electric Power System, nor shall any supplier under contract with any of the companies of the American Electric Power System discriminate against any employee of the supplier for reporting such conditions. Discrimination includes discharge or other actions relative to compensation, terms, conditions, or privileges of employment.

E. Linn Draper, Jr.
Chairman of the Board, President,
and Chief Executive Officer

March 26, 1997
~~July 1997~~

for plant modifications, operations and maintenance are delegated to the I&M vice president responsible for nuclear generation. The I&M vice president also serves as the American Electric Power Service Corporation (AEPSC) ~~senior executive~~ vice president nuclear generation (currently designated in Technical Specification 6.2.1.C as Vice-President-nuclear operations). (A-1) INSERT (A-1)

In the operation of a nuclear power plant, the licensee is required to establish clear and direct lines of responsibility, authority and accountability. This requirement is applicable to the organization providing support to the plant, as well as to the plant staff.

The responsibility for the support of Cook Nuclear Plant rests with I&M which includes the onsite and offsite AEP organizations that administer, operate, maintain, and modify the plant. The I&M vice president responsible for nuclear generation has primary responsibility for Cook Nuclear Plant. (A-3) All ~~I&M~~ nuclear generation group organizations are functionally responsible to the I&M vice president (reference Figure 1.7-1). The I&M vice president functions as the chief nuclear officer (CNO). (A-1)

In order to facilitate a more thorough understanding of the support functions, some of the responsibilities, authorities, and accountabilities within the organization are as follows:

1) The responsibilities of the ~~I&M vice president~~ chief nuclear officer (CNO) (A-1) shall be dedicated to the area of Cook Nuclear Plant operations and support.

2) The ~~I&M vice president~~ CNO (A-1) shall be responsible for, and has the authority to direct, all Cook Nuclear Plant operational and support matters and shall make, or concur, in all final decisions regarding significant nuclear safety matters.

(A-3) July 2000 ~~July 1997~~

3) I&M managers shall be familiar with activities within their scope of responsibility that affect plant safety and reliability. They shall be cognizant of, and sensitive to, internal and external factors that might affect the operations of Cook Nuclear Plant.

4) I&M managers have a commitment to seek and identify problem areas and take corrective action to eliminate unsafe conditions, or to improve trends that will upgrade plant safety and reliability.

5) The ~~I&M vice president~~ CNO A-1 shall ensure that Cook Nuclear Plant personnel are not requested to perform inappropriate work or tasks by corporate personnel, and shall control assignments and requests that have the potential for diverting the attention of the site vice president from the primary responsibility for safe and reliable plant operation.

6) I&M managers shall be familiar with the policy statements from higher management concerning nuclear safety and operational priorities. They shall be responsible for ensuring that activities under their direction are performed in accordance with these policies.

1.7.1.2.2 Responsibility for Attaining Quality Objectives in I&M Nuclear Generation

The AEP chairman of the board, president, and chief executive officer has assigned the overall responsibility for specifying QA program requirements and verifying their implementation to the performance assurance director.

A-3

The ~~I&M vice president~~ chief nuclear officer (A-1) under the direction of the AEP chairman of the board, president, and chief executive officer, is responsible for effectively implementing the QA program.

The performance assurance director (A-1), under the direction of the ~~vice president~~ chief nuclear officer, is responsible for establishing the Cook Nuclear Plant quality control program.

Each I&M manager involved in activities affecting safety-related functions of structures, systems, and components in Cook Nuclear Plant, has the responsibility to implement the applicable policies and requirements of the quality assurance program. This responsibility includes being familiar with and complying with, the applicable quality assurance program requirements.

I&M has an independent off-site Nuclear Safety and Design Review Committee (NSDRC) which has been established pursuant to the requirements of the Technical Specifications, Appendix C to this QAPD, for the Cook Nuclear Plant. The function of the NSDRC is to oversee the engineering, design, operation, and maintenance of the Cook Nuclear Plant by performing audits and independent reviews of activities which are specified in ~~the facility Technical Specifications~~ Appendix C to this QAPD. (A-4)

The Cook Nuclear Plant on-site review group is the Plant ~~Nuclear Safety~~ Operations Review Committee (~~PNSRC~~PORC). (A-1) This committee has also been established pursuant to the requirements of ~~the Cook Nuclear Plant Technical Specifications~~ Appendix C to this QAPD. The function of (A-4)

(A-3)

the PNSRC is to review plant operations on a continuing basis and advise the site vice president on matters related to nuclear safety.

1.7.1.2.3 Corporate Organization

American Electric Power Company

AEP, the parent holding company, wholly owns the common stock of all AEP System subsidiary (operating) companies. The chairman of the board, president, and chief executive officer of AEP is the chief executive officer of AEP and all operating companies. The responsibility for the functional management of the major operating companies is vested in the president of each operating company reporting to the AEP chairman of the board, president, and chief executive officer.

Operating Companies

The operating facilities of the AEP System are owned and operated by the respective operating companies. The responsibility for executing the engineering, design, construction, specialized technical training, and certain operations' supervision is vested in AEPSC, while all, or part, of the administrative functional responsibility is assigned to the operating companies. In the case of Cook Nuclear Plant, AEPSC provides limited public affairs, accounting, and industrial safety direction.

The Cook Nuclear Plant is owned and operated by I&M which is part of the AEP System.

responsibility includes the implementation of the quality assurance and quality control measures for systems, equipment, structures, or functional areas included in that individual's responsibility. The various titles used for the identification of an individual's responsibility and assignment shall be understood to mean the same as cognizant engineer in the respective areas of responsibility.

Quality Assurance Responsibility - Cook Nuclear Plant

The Cook Nuclear Plant staff operates the Cook Nuclear Plant in accordance with licensing requirements, including the Technical Specifications and such other commitments as established by the operating licenses. The categories of procedures identified in section 1.7.5.2.2 describe the means by which compliance is achieved and responsibilities are assigned. Figure 1.7-1 indicates the organizations pertaining to the operation and support of the Cook Nuclear Plant.

1.7.1.2.5 Organization

The chairman of the board, president, and chief executive officer is ultimately responsible for the QA program associated with the Cook Nuclear Plant. This responsibility is administered through the I&M vice president responsible for nuclear generation, the chief nuclear officer (CNO). A-1

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Nuclear Generation

Nuclear generation is comprised of regulatory affairs, nuclear engineering, performance assurance, business ~~performance~~ services, site operations, and ~~human resources~~ employee concerns.

Performance Assurance

The performance assurance director, reporting to the ~~vice president~~ chief nuclear officer (CNO), is responsible for the performance assurance organization. The Performance Assurance ~~consists of the following~~ organization is shown in Figure 1.7-2.

- ~~Performance engineering and analysis~~
- ~~Plant and supplier performance~~

Performance Assurance is organizationally independent and is responsible to perform the following:

- Specify QA program requirements.
- Identify quality problems.
- Initiate, recommend, or provide solutions through designated channels.
- Verify implementation of solutions, as appropriate.
- Prepare, issue and maintain QA program documents, as required.
- Verify the implementation of the QA program through scheduled audits and surveillances.
- Verify the implementation of computer software quality assurance through reviews, surveillances and audits.

- Audit dedication plans for commercial grade items and services.
- Issue "Stop Work" orders when significant conditions adverse to safety-related items are identified to prevent unsafe conditions from occurring and/or continuing.
- Provide management with periodic reports concerning the status, adequacy and implementation of the QA program.
- Prepare and conduct special verification and/or surveillance programs on in-house activities, as required or requested.
- Routinely attend, and participate in, daily plant work schedule and status meetings.
- Provide adequate QA coverage relative to procedural and inspection controls, acceptance criteria, and QA staffing and qualification of personnel to carry out QA assignments.
- Determine the acceptability of vendors to supply products and services for safety-related applications.
- ~~Provide working-level coordination with the Institute of Nuclear Power Operations (INPO) in the areas of INPO training, seminars, and workshops. This effort includes providing the nuclear generation organization access to INPO resources, such as NUCLEAR NETWORK, and effectively considering the use of INPO recommendations contained in operating experience reports to improve Cook Nuclear Plant performance.~~

RELOCATED TO P. 1.7-19

- Develop and implement an effective Quality Control (QC) Program. This encompasses, but is not limited to, the planning and directing of quality control activities to assure that industry codes, NRC regulations, and company instructions and policies

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regarding quality control for Cook Nuclear Plant are implemented, qualified personnel perform the work, and that these activities are properly documented.

- Direct the activities of contractor QC/nondestructive examination (NDE) personnel assigned to the plant performance assurance department and provide oversight of work performed.
- Qualification and certification of I&M personnel performing inspections or tests of major modifications and non-routine maintenance to the requirements of Regulatory Guide 1.58 and ANSI N45.2.6, except as noted in Appendix B hereto, item 9.
- Proper certification of contractor inspection, test and examination personnel in accordance with Regulatory Guide 1.58, ANSI N45.2.6, ASME B&PV Code and/or SNT-TC-1A, as applicable.
- Selection of a qualification and certification administrator (NDE administrator) to certify personnel in accordance with ANSI N45.2.6 and SNT-TC-1A, as applicable.

Amplification of Specific Responsibilities

- Qualification of the performance assurance director

  The performance assurance director shall possess the following position requirements:

  - Bachelor's degree in engineering, scientific, or related discipline.
  - ~~Ten (10) years experience in one of, or a combination of, the following areas: engineering, design, construction, operations, maintenance of fossil or nuclear power generation facilities' or utility facilities' QA, of which at least four (4) years must be~~

The performance assurance director may have equivalent educational qualifications in accordance with ANSI / ANS 3.1-1993, paragraph 4.1 to 4.1.2.4.

INSERT

At least four years experience in the field of nuclear quality assurance or an equivalent number of years nuclear power plant experience in a supervisory position or combination of the two.

~~experience in nuclear quality assurance related activities.~~

- Knowledge of QA regulations, policies, practices and standards.
- The same, or higher, organization reporting level as the highest line manager directly responsible for performing activities affecting the quality of safety-related items, such as engineering, procurement, construction and operation, and is sufficiently independent from cost and schedule.
- Effective communication channels with other senior management positions.
- Responsibility for approval of QA Manual(s).
- Performance of no other duties or responsibilities unrelated to QA that would prevent full attention to QA matters.
- Stop Work Orders

  The performance assurance organization is responsible for ensuring that activities affecting the quality of safety-related items are performed in a manner that meets applicable administrative, technical, and regulatory requirements. In order to carry out this responsibility, the AEP chairman of the board, president, and chief executive officer has given the performance assurance director the authority to stop work on any activity affecting the quality of safety-related items that does not meet the aforementioned requirements. Stop work authority has been further delegated by the performance assurance director to ~~the manager of performance engineering and analysis, and the manager of plant and supplier performance.~~ direct report managers and supervisors.

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The performance assurance director and ~~the subordinate~~ managers do not have the authority to stop unit operations, but will notify appropriate [redacted] management of conditions which do not meet the aforementioned criteria, and recommend that unit operations be terminated.

- QA Auditor, Qualification and Certification Program
- I&M has established and maintains a QA auditor training and certification program for all [redacted] QA auditors.
- Condition Identification, Reporting and Escalation
- I&M has established mechanisms for the identification, reporting and escalation of conditions affecting the quality of safety-related items to a level of management whereby satisfactory resolutions can be obtained.

Regulatory Affairs

The regulatory affairs director, reporting to the ~~I&M~~ vice president [redacted] is responsible for the following:

- Formulate policies and practices relative to [redacted], licensing, [redacted] fuel management, and radiological support.
- [redacted]
- Maintain liaison with the performance assurance director.
- Implement the requirements of the [redacted] QA program.

- Contribute to the annual FSAR updates through reviews of Licensee Event Reports, and the Annual Operating Report.

- Relocated from p 1.7-13

- Serve as technical advisors on plant audits.
- Remain cognizant of current decommissioning practices and developments.

Provide working-level coordination with the Institute of Nuclear Power Operations (INPO) in the areas of INPO training, seminars, and workshops. This effort includes providing the nuclear generation organization access to INPO resources, such as NUCLEAR NETWORK.

Nuclear Engineering

A-1

The vice president - A-1 engineering reporting to the ~~chief nuclear officer~~ ~~vice president~~ is responsible for certain engineering, design, procurement, and construction functions. Nuclear engineering is comprised of plant engineering, design engineering, and production engineering.

chief nuclear officer (CNO)

Certain organizations within the AEP power generation group and energy delivery provide occasional technical assistance for the Cook Nuclear Plant. The administrative and quality assurance controls for this assistance are controlled through documented interface agreements.

Nuclear engineering is responsible for the following:

- Provide planning, engineering and design of the electrical facilities inside Cook Nuclear Plant up to the high voltage (HV) bushings of the main generator transformers and mechanical facilities inside Cook Nuclear Plant including:
  * determination of general layout and design;
  * selection of equipment;

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- Coordinate Cook Nuclear Plant activities associated with the initiation, review, approval, engineering, design, production, examination, inspection, test, turnover, and close out of design changes.
-
-
- Administer and implement job orders issued by the Cook Nuclear Plant organization for major modifications, replacement and maintenance work with outside contractors.
- Administer and monitor contractor's industrial safety programs and performance.
-
- Manage construction labor relations with the international building and construction trades unions.
-
- Plan, organize and control major construction projects, as assigned by the ~~T&M vice president~~ chief nuclear officer (CNO). (A-1)
- Maintain cognizance on matters pertaining to the Cook Nuclear Plant emergency response organization.
- Prepare labor estimates.
- Provide constructability guidance when requested in support of engineering and design changes.
- Formulate Policies and practices relative to nuclear safety.
- Maintain knowledge of the latest safety requirements, codes, standards, and federal regulations applicable to the operation of Cook Nuclear Plant.
- Provide analysis to support reactor physics, core thermal hydraulic and LOCA and non-LOCA transient safety analysis (A-3)

Site Operations

The site vice president reports to the chief nuclear officer ~~VP~~ and is responsible for the Cook Nuclear Plant activities (Figure 1.7-1). Reporting to the site vice president is the plant manager who shall be responsible for overall safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant. Also reporting to the CNO is the business services director.

The ~~site operations~~ organization is responsible for the following:

- Ensure the safety of all facility employees and the general public relative to general plant safety, as well as radiological safety, by maintaining strict compliance with plant Technical Specifications, procedures and instructions.
- Recommend facility engineering modification and initiate and approve plant improvement requisitions.
- Ensure that work practices in all site operations organizations are consistent with regulatory standards, safety, approved procedures, and plant Technical Specifications.
- Provide membership, as required, on the ~~PNSRC~~ PNSRC.
- Maintain close working relationships with the NRC, as well as local, state, and federal government regulatory officials regarding conditions which could affect, or are affected, by Cook Nuclear Plant activities.
- Set up plant load schedules and arrange for equipment outages.
- Develop and efficiently implement all site centralized training activities.

- Provide material service and support in accordance with policies and procedures required by AEPSC purchasing and materials management, QA, and the NRC, which are administered and enforced in a total effort to ensure safety and plant reliability.
- Provide nuclear General Employee Training (GET) for nuclear generation personnel.

~~Business Performance~~

~~The business performance director, reporting to the I&M vice president, is responsible for the following:~~

- Prepare and administer equipment, labor and service contracts.
- Administer contracts and schedule outside contractors' work forces.
- Administration of the QA records program.
- Scope, bid, recommend awards and administer construction labor and service contracts.
- Process incoming vendor information.

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1.7.2.2.3

This QAPD, organized to present the QA Program for the Cook Nuclear Plant in the order of the 18 criteria of 10CFR50, Appendix B, states I&M policy for each of the criteria and describes how the controls pertinent to each are carried out. Any changes made to this QAPD that do not reduce the commitments previously accepted by the NRC must be submitted to the NRC at least annually. Any changes made to this QAPD that do reduce the commitments previously accepted by the NRC must be submitted to the NRC and receive NRC approval prior to implementation. The submittal of the changes described above shall be made in accordance with the requirements of 10CFR50.54.

INSERT HERE

The program described in this QAPD will not be intentionally changed in any way that would prevent it from meeting the criteria of 10CFR50, Appendix B and other applicable operating license requirements.

Changes made to this QAPD that do not reduce commitments and do not require prior approval by the NRC before implementation will be identified by an alpha-numeric addendum for each changed page and be issued to the organization. All addenda generated since the last QAPD submitted to the NRC for review and approval will be included in the next revision submitted to the NRC. Each page of this QAPD will carry an applicable revision level and date.

1.7.2.2.4

Documents used for implementing the provisions of this QAPD include the following:

Plant Manager Instructions (PMIs) establish the policy at the plant for compliance with specified criteria, and assign responsibility to the various departments, as required, for implementation. Plant Manager Procedures (PMPs), Department Head Procedures (DHPs), and in some cases Department Head Instructions (DHIs), have been

Performance Assurance Department Polices (POLs) establish policies for the Performance Assurance Department for compliance with specified criteria and to assign responsibility to various sections, as required, for implementation.

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prepared to describe the detailed activities required to support safe and effective plant operation as per the PMIs.

The PMIs are reviewed by performance assurance for concurrence that they will satisfactorily implement regulatory requirements and commitments. PMIs and PMPs are reviewed by the PNSRC prior to approval by the site vice president.

DHPs and DHIs are reviewed within the departments prior to approval by the department head of origination. DHPs and DHIs that might involve an unreviewed safety question as defined in 10CFR50.59 are reviewed by PNSRC prior to approval by the department head of origination.

AEP Nuclear Organization Policy & Procedure Manual and General Procedures (GPs) are utilized to define policies and requirements for quality assurance, and to implement certain QA program requirements. Division/department and/or section procedures are also used to implement QA program requirements.

When contractors perform work on-site under their own quality assurance programs, the programs are audited for compliance and consistency with the applicable requirements of the Cook Nuclear Plant's QA Program and the contract, and are approved by performance assurance prior to the start of work. Implementation of on-site contractor's QA programs, will be audited to assure that the contractor's programs are effective.

1.7.3 DESIGN CONTROL

1.7.3.1 SCOPE

Design changes are accomplished in accordance with approved design. Activities to develop such designs are controlled. Depending on the scope of the design change, these activities include design and field engineering; the performance of physics, seismic, stress, thermal, hydraulic and radiation evaluations; update of the FSAR; review of accident analyses; the development and control of associated computer programs; studies of material compatibility; accessibility for inservice inspection and maintenance; determination of quality standards; and requirement for equipment qualification. The controls apply to preparation and review of design documents, including the correct translation of applicable regulatory requirements and design bases into design, procurement and procedural documents.

1.7.3.2 IMPLEMENTATION

1.7.3.2.1

Design changes are controlled by procedures and instructions and are reviewed as required by 10CFR50.59 and ~~the Technical Specifications.~~ Appendix C to this QAPD (A-2)

A documented evaluation is made of safety related and non-safety related design changes ~~are implemented via Design Change Packages (DCPS).~~ to determine which approved change process is most appropriate for implementation.

1.7.3.2.2

Design changes are reviewed to determine their impact on nuclear safety and to determine if the proposed changes

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involve an unreviewed safety question as defined by 10CFR50.59. If a design change were to involve an unreviewed safety question, it would not be approved for implementation until the required NRC approval was received.

Design Change Packages (DCPs) are reviewed and approved prior to implementation, by the DCP team members and cognizant managers. The PNSRC also reviews those DCPs, for which safety evaluations are deemed necessary, pursuant to 10CFR50.59 and ~~Technical Specification~~ paragraph 6.5.1.6. of Appendix C to this QAPD.

1.7.3.2.3

When DCPs involve design interfaces between internal or external design organizations, or across technical disciplines, these interfaces are controlled. Procedures are used for the review, approval, release, distribution and revision of documents involving design interfaces to ensure that structures, systems and components are compatible geometrically and functionally with processes and the environment. Lines of communication are established for controlling the flow of needed design information across design interfaces, including changes to the information as work progresses. Decisions and problem resolutions involving design interfaces are made by the organization having responsibility for engineering direction of the design effort.

1.7.5.2 IMPLEMENTATION

1.7.5.2.1

Instructions and procedures incorporate: 1) a description of the activity to be accomplished, and 2) appropriate quantitative (such as tolerances and operating limits) and qualitative (such as workmanship and standards) acceptance criteria sufficient to determine that the activity has been satisfactorily accomplished. Hold points for inspection are established when required.

Instructions and procedures pertaining to the specification of, and/or implementation of, the QA Program receive multiple reviews for technical adequacy and inclusion of appropriate quality requirements. Top tier instructions and procedures that define the quality assurance program requirements are reviewed and/or approved by performance assurance. Lower tier documents are reviewed and approved, as a minimum, by management/supervisory personnel trained to the level necessary to plan, coordinate and administer those day-to-day verification activities of the QA Program for which they are responsible.

Special procedures may be issued for activities which have short-term applicability.

1.7.5.2.2

I&M activities are outlined by procedures which provide the controls for the implementation of these activities. I&M has the following categories of QA program implementation procedures:

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instructions and -

- Policy statements
- Administrative documents
- Technical documents

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~~1) General Procedures (GPs), Plant Manager's Instructions (PMI's) and American Electric Power Nuclear Organization Procedures (AEPNOs) which are applicable to part or all organizations involved with Cook Nuclear Plant.~~

~~2) Organization procedures which apply to the specific division, department or section involved.~~

1.7.5.2.3

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~~The procedures controlling I&M activities are classified into the following series:~~

~~1000 Personnel Selection, PNSRG Procedures~~
~~2000 Administration - Document Control, Security, Training, Records, Emergency Plan, Fire Protection, Clearance Permits, Chemical Control, Internal Cleanliness, Spill Response, Standing orders, Corrective Maintenance.~~
~~3000 Procurement, Receiving, Shipping and Storage~~
~~4000 Operations, Fuel Handling, Surveillance Testing, Test Controls~~
~~5000 Maintenance, Repair, Modification, Special Processes, EQ and ISI Control of Contractors~~
~~6000 Technical - Chemistry/Radiological Controls, Radiation Protection, Performance/Engineering Testing, and Instrument and Control Maintenance and Calibration, Measuring and Test Equipment~~
~~7000 Quality Assurance, Quality Control Program and Condition/Problem Reporting~~

Instructions and procedures identify the regulatory requirements and commitments which pertain to the subject that it will control and establish responsibilities for implementation. Instructions and procedures may either provide the guidance necessary for the development of supplemental instructions and/or procedures to implement their requirements, or provide comprehensive guidance based on the subject matter.

~~Instructions and procedures identify the regulatory requirements and commitments which pertain to the subject that it will control and establish responsibilities for implementation. Instructions and procedures may either provide the guidance necessary for the development of supplemental instructions and/or procedures to implement their requirements, or provide comprehensive guidance based on the subject matter.~~

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1.7.5.2.4

Cook Nuclear Plant drawings are produced, controlled and distributed under the control of I&M. I&M design drawings are produced by, or under the control of, [redacted] nuclear engineering [redacted] under a set of procedures which direct their development and review. These procedures specify requirements for inclusion of quantitative and qualitative acceptance criteria. Specific drawings are reviewed and approved by the cognizant engineering organization.

~~I&M has stationed an on-site design staff to provide for the revision of certain types of design drawings to reflect as built conditions.~~

1.7.5.2.5

~~Complex [redacted] procedures that are specific to Cook Nuclear Plant site are designated as "In Hand" procedures. Examples of "In Hand" procedures are those developed for extensive or complex jobs where reliance on memory cannot be trusted. Further, those procedures which describe a sequence which cannot be altered, or require the documentation of data during the course of the procedure,~~

I&M technical procedures developed for extensive or complex tasks where reliance on memory cannot be trusted are designated as "Continuous Use." These procedures are continuously used at the controlling job site to ensure verification of completion of significant steps and recording of necessary data as the task is completed.

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~~are considered. "In Hand" procedures are designated as such by double asterisks (**) which precede the procedure number on the cover sheet, all pages and attachments of a procedure and the corresponding index.~~

1.7.6 DOCUMENT CONTROL

1.7.6.1 SCOPE

Documents controlling activities within the scope defined in 1.7.2 herein are issued and changed according to established procedures. Documents such as instructions, procedures and drawings, including changes thereto, are reviewed for adequacy, approved for release by authorized personnel, and are distributed and used at the location where a prescribed activity is performed.

Changes to controlled documents are reviewed and approved by the same organizations that performed the original review and approval, or by other qualified, responsible organizations specifically designated in accordance with the procedures governing these documents. Obsolete or superseded documents are controlled to prevent inadvertent use.

1.7.6.2 IMPLEMENTATION

1.7.6.2.1

Controls are established for approval, issue and change of documents in the following categories:

a) Design documents (e.g., calculations, specifications, analyses)

b) Drawings and related documents

c) Procurement documents

a) Qualification tests, as applicable, to verify design adequacy.

b) Acceptance tests of equipment and components to assure their operation prior to delivery or installation.

c) Post-design tests to assure proper and safe operation of systems and equipment prior to unrestricted operation.

d) Surveillance tests to assure continuing proper and safe operation of systems and equipment. The PMI on surveillance testing controls the periodic testing of equipment and systems to fulfill the surveillance requirements established by the Technical Specifications and the Administrative Technical Requirements (A-4). Controls have been established to identify uncompleted surveillance testing to assure it is rescheduled for completion to meet Technical Specification and Administrative Technical Requirements (A-4) frequency requirements. Data taken during surveillance testing is reviewed by appropriate management personnel to assure that acceptance criteria is fulfilled, or corrective action is taken to correct deficiencies.

e) Maintenance tests after preventive or corrective maintenance.

1.7.11.2.2

Test procedures, as required, provide mandatory hold points for witness or review.

1.7.15.2.2

Nonconforming items are identified by marking, tagging, segregating, or by documented administrative controls. Documentation describes the nonconformance, the disposition of the nonconformance and the inspection requirements. It also includes signature approval of the disposition.

Completed Job Order activities are reviewed by the supervisor responsible for accomplishing the work. ~~and the supervisor of the department/section that originated the Job Order.~~ Performance assurance periodically audits the Job Order System, and on a sample basis, Job Orders.

1.7.15.2.3

Items that have been repaired or reworked are inspected and tested in accordance with the original inspection and test requirements, or alternatives, that have been documented.

Items that have the disposition of "repair" or "use-as-is" require documentation justifying acceptability. The changes are recorded to denote the as-built condition.

When required by established procedures, surveillance or operability tests are conducted on an item after rework, repair or replacement.

1.7.15.2.4

Disposition of conditionally released items are closed out before the items are relied upon to perform safety-related functions.

management maintain cognizance of reported conditions and assignments. For conditions adverse to quality, Condition Reports are used to document the corrective actions taken and any investigation requested by the screening committee. In the case of significant conditions adverse to quality, Condition Reports are used to identify corrective actions, investigations and those actions necessary to prevent recurrence of the reported condition.

[redacted] A screening committee assesses reported conditions for significance, and assignment to responsible organizations. Results of the screening committee's activities are provided to management to help

1.7.16 CORRECTIVE ACTION

1.7.16.1 SCOPE

Conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are identified promptly and corrected as soon as practical in accordance with the approved QA program and incorporate safety reviews, as necessary.

For significant conditions adverse to quality, the cause of the condition is determined, immediate and/or interim corrective action is taken to correct the ~~immediate~~ condition, as well as long term action ~~and preventive action is implemented~~ to prevent recurrence. In these cases, the condition, cause and corrective action taken is documented and reported to appropriate levels of management.

1.7.16.2 IMPLEMENTATION

1.7.16.2.1

Instructions ~~Procedures~~ are established that define the ~~describe~~ ~~ICM's~~ corrective action program. These instructions ~~procedures~~ are reviewed and concurred with by performance assurance.

1.7.16.2.2 Procedures that implement the corrective action program are reviewed and approved, as a minimum, by management/supervisory personnel trained to the level necessary to plan, coordinate and administer those day-to-day activities of the corrective action program.

Condition Reports and audit/surveillance reports provide the mechanism for ~~ICM~~ personnel to notify management of conditions adverse to quality. Condition Reports are also used to report violations to codes, regulations and the Technical Specifications. ~~Investigations of reported conditions adverse to quality are assigned by management. The Condition Report is used to document the investigation of an adverse condition; and to identify the need for a design change to correct system or equipment deficiencies.~~

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Corrective Action Program data is analyzed to identify potential trends and the results are provided in regular reports to management. Those trends determined to be adverse are considered significant conditions adverse to quality.

~~or to identify the need for the initiation of Job Orders to correct minor deficiencies. In the case of significant conditions adverse to quality, Condition Reports are used to identify those actions necessary to prevent recurrence of the reported condition.~~

Corrective Action Review Board (CARB)

The ~~PNSRC~~ evaluates actions taken or being taken to correct and prevent recurrence of ~~the deficiency for condition reports involving:~~ Significant conditions adverse to quality. This review will contain but will not be limited to:

a. a violation of Technical Specification
b. a reportable event
c. any accidental, unplanned, or uncontrolled radioactive release
d. a safety-related adverse trend
e. a potential nuclear safety hazard
f. an entry into Technical Specification LCO 3.0.3 (failure to comply with LCO's not containing specific shutdown schedule)
g. a Technical Specification LCO entry that was the result of personnel error.

The CARB will provide a report of review activities to the NSDRC.

The [redacted] NSDRC is responsible for assuring that independent reviews of violations (as specified ~~in the Technical Specifications~~ in Appendix C) are performed. These violations are considered significant conditions which are documented on Condition Reports. The reviews will provide an independent evaluation of the reported conditions and corrective actions.

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Performance assurance periodically audits the corrective action system for compliance and effectiveness.

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1.7.17 QUALITY ASSURANCE RECORDS

1.7.17.1 SCOPE

Records that furnish evidence of activities affecting the quality of safety-related structures, systems and components are maintained. They are accurate, complete, legible and are protected against damage, deterioration, or loss. They are identifiable and retrievable.

1.7.17.2 IMPLEMENTATION

1.7.17.2.1

Documents that furnish evidence of activities affecting the quality of safety-related items are generated and controlled in accordance with the procedure that governs those activities. Upon completion, these documents are considered records. These records include:

a) Results of reviews, inspections, surveillances, tests, audits and material analyses.
b) Qualification of personnel, procedures and equipment.
c) Operation logs.
d) Maintenance and modification procedures and related inspection results.
e) Reportable occurrences.
f) Records required by the plant Technical Specifications and Appendix C to this QAPD (A-2)
g) Condition Reports.
h) Other documentation such as drawings, specifications, dedication plans, procurement documents, calibration procedures and reports.
i) Radiographs.

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1.7.18.2.4

The independent off-site review and audit organization is described in Appendix C to this QAPD. (A-2) the [redacted] NSDRC. This committee is ~~composed of I&M [redacted] management members~~. An NSDRC Manual has been developed for this committee which contains the NSDRC Charter and procedures. The NSDRC conducts periodic audits of Cook Nuclear Plant operations pursuant to ~~established criteria (Technical Specifications, etc.).~~ Appendix C of this QAPD. (A-2)

NSDRC audit reports are (A-1) submitted for review to the NSDRC membership and the Chair~~man~~ of the NSDRC. Condition Reports and/or audit reports provide for the recording of actions taken to correct deficiencies found during these audits.

1.7.18.2.5

The I&M on-site review group is the ~~P~~NSRC. (O) (A-1) This committee reviews plant operations as a routine evaluation and serves to advise the site vice president [redacted] on matters related to nuclear safety. The composition of the committee is defined in ~~the Technical Specifications~~ Appendix C to this QAPD. (A-2)

(A-1) (O) The ~~P~~NSRC also reviews instructions, procedures, and design changes for safety-related systems prior to approval by the site vice president [redacted]. In addition, this committee serves to conduct investigations of violations ~~to~~ of (A-3) Technical Specifications, ~~and~~ reviews significant Condition Reports to determine if appropriate action has been taken.

The Corrective Action Review Board (CARB)

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c) Inspections of cable routing to verify conformance with design requirements as specified in engineering specifications and/or plant procedures.

d) Inspections to verify that appropriate requirements for fire barriers are satisfied following installation, modification, repair or replacement activities.

e) Measures to assure that inspection personnel are independent from the individuals performing the activity being inspected and are knowledgeable in the design and installation requirements for fire protection.

f) Inspection procedures, instructions or checklists for required inspections.

g) Periodic inspections of fire protection systems, emergency breathing and auxiliary equipment.

h) Periodic inspections of materials subject to degradation, such as fire stops, seals and fire retardant coating as required by the Administrative Technical Requirements ~~Specifications~~ or manufacturer's recommendations. A-4

1.7.19.7 Test and Test Control

a) Installation testing - Following installation, modification, repair, or replacement, sufficient testing is performed to demonstrate that the fire protection systems and equipment will perform

satisfactorily. Written test procedures for installation tests incorporate the requirements and acceptance limits contained in applicable design documents.

b) Periodic testing - Periodic testing occurs to document that fire protection equipment functions in accordance with its design.

c) Programs have been established to verify the testing of fire protection systems, and to verify that test personnel are effectively trained.

d) Test results are documented, evaluated, and their acceptability determined by a qualified responsible individual or group.

1.7.19.8 Inspection, Test and Operating Status

Administrative

The inspection, test and operating status for plant Technical ~~Specification~~ Requirements fire protection systems are performed as described in 1.7.14 herein.

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1.7.19.9 Nonconforming Items

Administrative

Technical ~~Specification~~ Requirements fire protection equipment nonconformances are identified and dispositioned as described in 1.7.15 herein.

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1.7.19.10 Corrective Action

The corrective action mechanism described in 1.7.16 herein applies to the Technical ~~Specification~~ Administrative Requirements fire protection equipment. A-4

1.7.19.11 Records

Records that furnish evidence of the quality of activities, and of systems, structures and components associated with the fire protection program are maintained. The maintenance of the records includes assuring that records are accurate, complete, legible, and protected against damage, deterioration, or loss. The records are identifiable and retrievable. The records include results of reviews, inspections, tests, audits, monitoring of work performance, and qualifications of personnel and equipment. Inspection and test records identify the inspector or data recorder, the type of observations, results, acceptability, and actions taken in connection with any deficiencies noted. Records provide for traceability of activities that occur at the plant that affect the quality of fire protection systems, structures, and components.

1.7.19.12 Audits

Audits are conducted and documented to verify compliance with the Fire Protection QA Program as described in 1.7.18.1 herein.

Audits are periodically performed to verify compliance with the administrative controls and implementation of fire

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AMERICAN ELECTRIC POWER

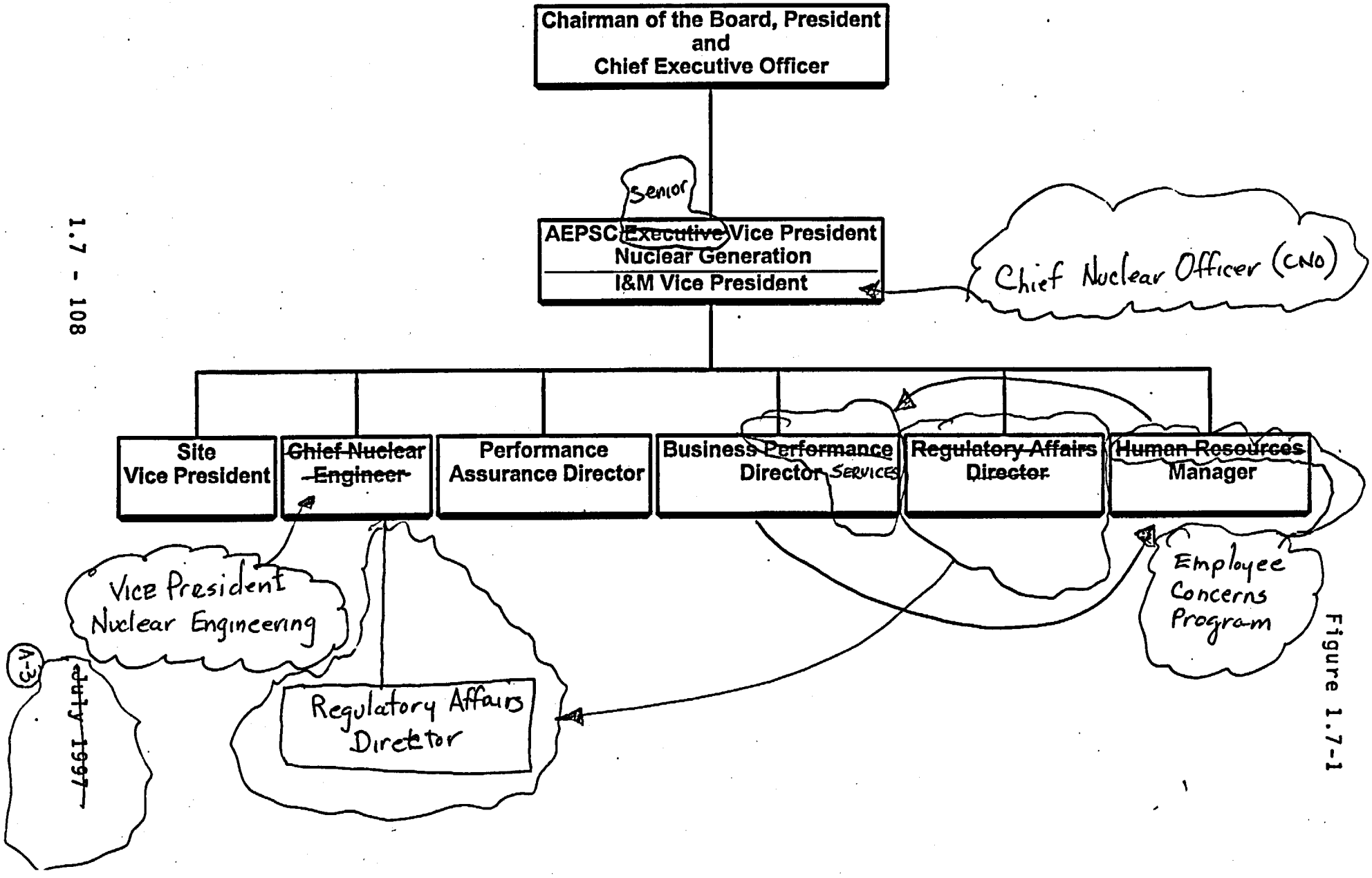

Figure 1.7-1

PERFORMANCE ASSURANCE

Figure 1.7-2

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SITE OPERATIONS

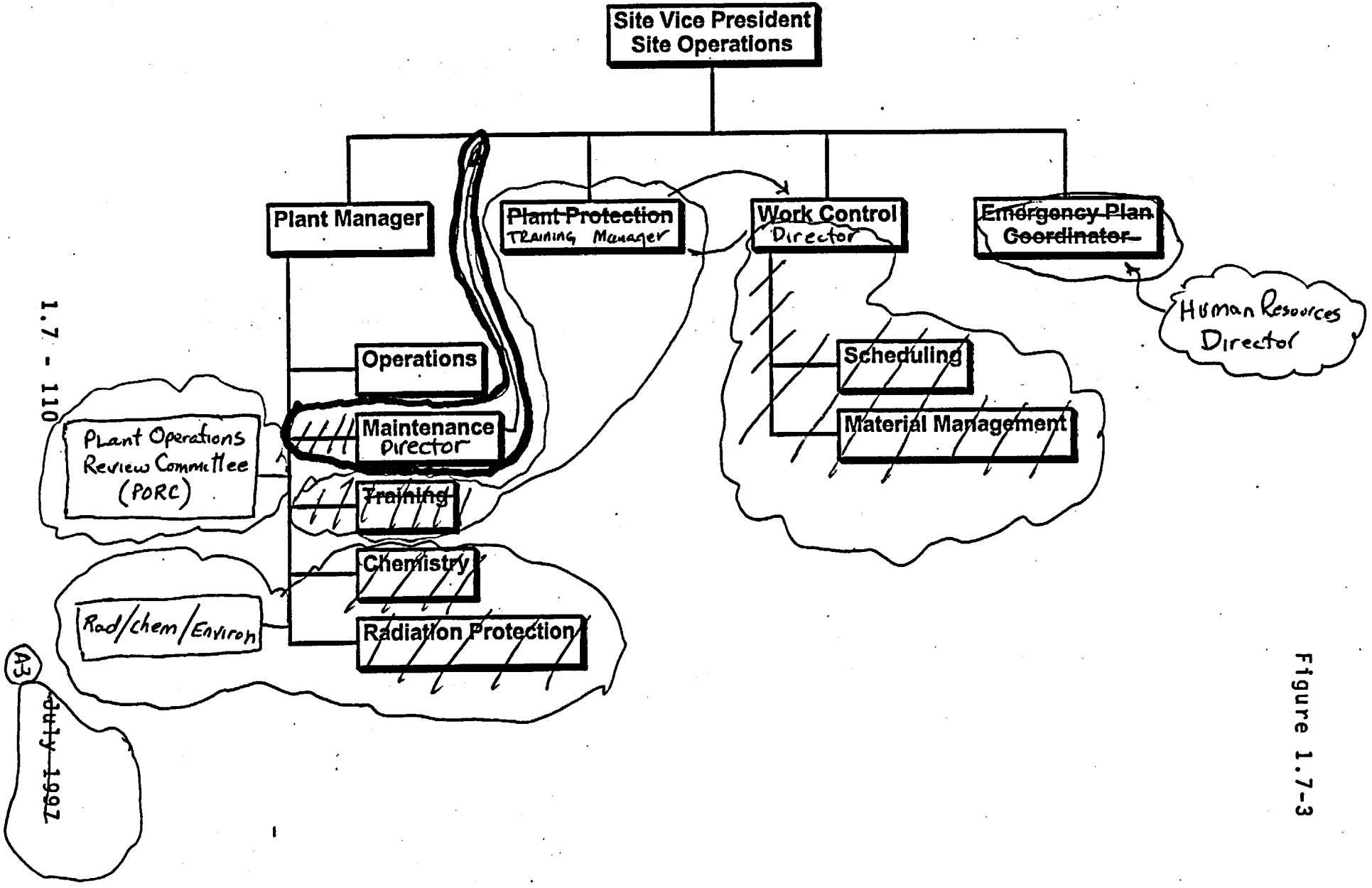

Figure 1.7-3

APPENDIX B

I&M EXCEPTIONS TO OPERATING PHASE

STANDARDS AND REGULATORY GUIDES

1. GENERAL

Requirement

Certain Regulatory Guides invoke, or imply, Regulatory Guides and standards in addition to the standard each primarily endorses.

Certain ANSI Standards invoke, or imply, additional standards.

Exception/Interpretation

The I&M commitment refers to the Regulatory Guides and ANSI Standards specifically identified in Appendix A. Additional Regulatory Guides, ANSI Standards and similar documents implied, or referenced, in those specifically identified are not part of this commitment.

2. N18.7, General

Exception/Interpretation

I&M has established both an on-site and off-site standing committee for independent review activities; together they form the independent review body.

The standard numeric and qualification requirement may not be met by each group individually. Procedures will be established to specify how each group will be involved in review activities. This exception/interpretation is consistent with ~~the plant's Technical Specifications.~~ Appendix C to this QAPD (A2)

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2a. Sec. 4.3.1

Requirement

"Personnel assigned responsibility for independent reviews shall be specified in both number and technical disciplines, and shall collectively have the experience and competence required to review problems in the following areas: ...."

Exception/Interpretation

The Nuclear Safety and Design Review Committee (NSDRC) and Plant ~~Nuclear Safety~~ Operating Review Committee (~~PNSRC~~) will not have members specified by number, nor by technical disciplines, and its members may not have the experience and competence required to review problems in all areas listed in this section. This exception/interpretation is consistent with ~~the plant's Technical Specifications.~~ Appendix C to this QAPD

The NSDRC and ~~PNSRC~~ PORC will not specifically include a member qualified in nondestructive testing, but will use qualified technical consultants to perform this and other functions as determined necessary by the respective committee ~~chairman.~~ Chair.

2b. Sec. 4.3.2.1

Requirement

"When a standing committee is responsible for the independent review program, it shall be composed of no less than five persons of whom no more than a minority are members of site operations. Competent alternates are permitted if designated in advance. The use of alternates shall be restricted to legitimate absences of principals."

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Exception/Interpretation

See Item 2a.

2c. Sec. 4.3.3.1

Requirement

"... recommendations ... shall be disseminated promptly to appropriate members of management having responsibility in the area reviewed."

Exception/Interpretation

Recommendations made as a result of review will generally be conveyed to the on-site, or off-site, standing committee. Procedures will be maintained specifying how recommendations are to be considered.

2d. Sec. 4.3.4

Requirement

"The following subjects shall be reviewed by the independent review body: ...."

Exception/Interpretation

Subjects requiring review will be as specified in the plant Technical Specifications and Appendix C to this QAPD. A-2

2e. Sec. 4.3.4(3)

Requirement

"Changes in the Technical Specifications or License Amendments relating to nuclear safety are to be reviewed by the independent review body prior to implementation, except in those cases where the change is identical to a previously reviewed proposed change."

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Exception/Interpretation

Although the usual practice is to meet this requirement, exceptions are made to NSDRC review and approval prior to implementation in rare cases with the permission of the NSDRC Chairman and Secretary. PNSRC review and approval is always done prior to implementation of Technical Specification changes.

2f. Sec. 4.4

Requirement

"The on-site operating organization shall provide, as part of the normal duties of plant supervisory personnel ...."

Exception/Interpretation

Some of the responsibilities of the on-site operating organization described in Section 4.4 may be carried out by the PNSRC and/or NSDRC as described in plant Technical Specifications. Appendix C to this QAPD.

2g. Sec. 5.2.2

Requirement

"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. At least one of these individuals shall be the supervisor in charge of the shift and hold a senior operator's license on the unit affected."

Exception/Interpretation

I&M considers that this requirement applies only to procedures identified in plant Technical Specifications. Temporary changes to these procedures shall be approved as described in plant Technical Specifications. Appendix C to this QAPD

Exception/Interpretation

Such documents are reviewed by appropriately qualified personnel prior to use to ensure that, when used as instructions, they provide proper and adequate information to ensure the required quality of work. Maintenance procedures which reference these documents receive the same level of review and approval as operating procedures.

3. N45.2.1,

3a. Sec. 3

Requirement

N45.2.1 establishes criteria for classifying items into "cleanness levels," and requires that items be so classified.

Exception/Interpretation

Instead of using the cleanness level classification system of N45.2.1, the required cleanness for specific items and activities is addressed on a case-by-case basis.

Cleanness is maintained, consistent with the work being performed, so as to prevent the introduction of foreign material. As a minimum, cleanness inspections are performed prior to closure of "nuclear" systems and equipment. Such inspections are documented.

3b. Sec. 5

Requirement

"Fitting and tack-welded joints (which will not be immediately sealed by welding) shall be wrapped with polyethylene or other nonhalogenated plastic film until the welds can be completed."

Exceptions/Interpretations

NUREG-0730, Items I.C1 and I.C9 required plants to upgrade and expand guidance for preparation in light of the events at TMI-2. Generic Letter 82-33 Supplement 1 to NUREG-0737 required each plant to submit the technical guidelines for EOP content, preparation and validation. The Cook Plant submitted this material to the NRC in a letter dated September 28, 1984. The NRC responded with a Safety Evaluation Report dated February 14, 1990. Although the EOP content and format is different from the format and content specified in ANSI N18.7-1976, the upgraded EOP format and content were reviewed and approved by the NRC.

Requirement 5.3.9 This section establishes the format and content of Emergency Operating Procedures (EOPs) for prescribing operator actions and observations.

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Exception/Interpretation

Frequently, physical size and/or location of installed plant instrumentation precludes attachment of calibration labels or tags. Instead, each instrument is uniquely identified and is traceable to its calibration record.

A scheduled calibration program assures that each instrument's calibration is current.

7. N45.2.5,

7a. Sec. 2.5.2

Requirement

"When discrepancies, malfunctions or inaccuracies in inspection and testing equipment are found during calibration, all items inspected with that equipment since the last previous calibration shall be considered unacceptable until an evaluation has been made by the responsible authority and appropriate action taken."

Exception/Interpretation

I&M uses the requirements of N18.7, Section 5.2.16, rather than N45.2.5, Section 2.5.2. The N18.7 requirements are more applicable to an operating plant.

7b. Sec. 5.4

Requirement

"Hand torque wrenches used for inspection shall be controlled and must be calibrated at least weekly and more often if deemed necessary. Impact torque wrenches used for inspection must be calibrated at least twice daily."

Exception/Interpretation

Torque wrenches are controlled as measuring and test equipment in accordance with ANSI N18.7, Section 5.2.16. Calibration intervals are based on use and calibration history rather than as per N45.2.5

7c. Sec. 4.9 – Mechanical (Cadweld) Splice Requirement

4.9.1 Qualification of Operators. Prior to the production splicing of reinforcing bars, each member of the splicing crew (or each crew if the members work as a crew) shall prepare two qualification splices for each of the splice positions (e.g., horizontal, vertical, diagonal) to be used. The qualification splices shall be made using the same materials (e.g., bar, sleeve, powder) as those to be used in the structure. To qualify, the completed splices must meet the specified visual inspection acceptance requirements and meet the tensile test requirements of Section 4.9.3. Each member of the splicing crew (or each crew if members work as a crew) is subject to requalification (1) if the specific splice position (e.g., horizontal, vertical, diagonal) has not been used by member or crew for a period of three months or more or (2) if there is another reason to question their ability, such as the completed splices not passing visual inspection or tensile testing. The requalification procedure should be identical to the original qualification procedure.

INSERT 7c. here

This Section was moved verbatim from Page 1.7-130 for editorial adjustment only

INFORMATION ONLY — INSERT PAGE 1.7-129a Following this page

4.9.3 Tensile testing. Splice samples may be production splices (i.e., those cut directly from in place reinforcing) or sister splices (i.e., those removable splices made in place next to production splices and under the same conditions).
4.9.4 Tensile Testing Frequency. Separate test cycles shall be established for mechanical splices in horizontal, vertical, and diagonal bars, for each bar size, and for each splicing crew as follows:

... 2. Test Frequency for Combinations of Production and Sister Splices. If production and sister splices are tested, the sample frequency shall be:
A) One production splice of the first 10 production splices/
B) One production and three sister splices for the next 90 production splices.
C) Three splices, either production of sister splices for the next and subsequent units of 100 splices. At least 1/4 of the total number of splices tested shall be production splices.

Exception/Interpretation
I&M uses the requirements of ASME Sec. III, Div. 2 Sec CC-4333.5.2 and CC-4333.5.3 rather than N45.2.5, Sec. 4.9.3 and 4.9.4. Sec. CC-4333.5.2 and CC-4333.5.3 are more applicable to the restoration and repair of a concrete containment.

CC-4333.4 Initial Qualification Tests
[A95] "Each splicer shall prepare two qualification splices on the largest bar size to be used. In addition, for ferrous filler metal splices, cementitious grouted splices and swaged splices only, each of the splice positions to be used (e.g., horizontal, vertical, diagonal) shall be qualified. The qualification splices shall be made using reinforcing bar identical to that to be used in the structure. The completed qualifications splices shall be tensile tested using the loading rates set forth in SA-370 and the tensile results shall meet those specified in Tables CC-4334-1. [A95]"

CC-4333.5.2 Splice Samples
"Splice samples may be production splices (cut directly from in-place reinforcement) or straight sister splices (removable splices made in place next to production splices and under the same conditions), in accordance with the schedule established in CC-4333.5.3."

CC-4333.5.3 Testing Frequency
"Splice samples shall be tensile tested in accordance with the following schedule for the appropriate splice system.
(a) "Separate test cycles shall be established for sleeve with ferrous filler metal splices... Straight sister splices may be substituted for production test samples on radius bent bars and for splicing sleeves arc welded to structural steel elements or the liner.
(1) For sleeve with ferrous filler metal splices, one splice shall be tested for each unit of 100 production splices."

7d. Table B – In-process Tests

Requirement Material	Requirement	Test Method	Test Frequency
Aggregate	-Compliance with Requirements for Soft fragments	ASTM C235	Monthly during production
	-Potential Reactivity	ASTM C289	Every 6 Months

moved To Page 1.7-129

~~Exception/Interpretation~~

~~Torque wrenches are controlled as measuring and test equipment in accordance with ANSI N18.7, Section 5.2.16. Calibration intervals are based on use and calibration history rather than as per N45.2.5.~~

Exception/Interpretation
No testing of soft fragments is intended. Testing per ASTM C235 changed designations to ASTM C851 which was deleted in 1985. Aggregate is tested for potential reactivity using C289 or ASTM C586 as determined by the results of an examination using ASTM C295.

8. N45.2.6, Sec. 1.2

Requirement

"The requirements of this standard apply to personnel who perform inspections, examinations and tests during fabrication prior to or during receipt of items at the construction site, during construction, during preoperational and start-up testing and during operational phases of nuclear power plants."

Exception/Interpretation

Personnel participating in testing who take data or make observations, where special training is not required to perform this function, need not be qualified in accordance with ANSI N45.2.6, but need only be trained to the extent necessary to perform the assigned function.

9. Reg. Guide 1.58 - General

Requirement

Qualification of nuclear power plant inspection, examination and testing personnel.

9a. C.2.a(7)

Requirement

Regulatory Guide 1.58 endorses the guidelines of SNT-TC-1A as an acceptable method of training and certifying personnel conducting leak tests.

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through 5). The timing of reviews will be the same as for review of the original procurement documents.

13e. Sec. 10.1

Requirement

"Where required by code, regulation, or contract requirement, documentary evidence that items conform to procurement documents shall be available at the nuclear power plant site prior to installation or use of such items, regardless of acceptance methods."

Exception/Interpretation

Refer to Item 2k.

Requirement

"Post-installation test requirements and acceptance documentation shall be mutually established by the purchaser and supplier."

Exception/Interpretation

In exercising its ultimate responsibility for its quality assurance program, [redacted] I&M establishes post-installation test requirements giving due consideration to supplier recommendations.

14. Reg. Guide 1.146/ANSI N45.2.23 and ANSI N45.2.12

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14a. ANSI N45.2.23, Sec. 1.1

Requirement

This standard provides requirements and guidance for the qualification of audit team leaders, henceforth identified as "lead auditors."

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14b. ANSI N45.2.12, Sec. 4.2.2

~~Requirement~~

~~A lead auditor shall be appointed team leader.~~

Exception withdrawn

~~Exception/Interpretation~~

~~The audit program is directed by the performance assurance director and is administered by designated performance assurance managers/supervisors who are certified lead auditors.~~

~~Audits are, in most cases, conducted by individual auditors, not by "audit teams." These auditors are certified in accordance with established procedures and are assigned by the responsible performance assurance manager/supervisor based on their demonstrated audit capability and general knowledge of the audit subject. In certain cases, this results in an individual other than a "lead auditor" conducting the actual audit function.~~

~~Established I&M audit procedures require that, in all cases, the audit functions of preparation/organization, reporting of audit findings and evaluation of corrective actions be reviewed by a performance assurance manager/supervisor, thereby meeting the requirements of ANSI N45.2.23 relative to "lead auditors", and "audit team leaders."~~

15. ANSI N18.1

Section 4.2.2

Requirement

At the time of initial core loading or appointment to the active position the operations manager shall hold a senior reactor operator's license.

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Exception/Interpretation

The requirement implies that only personnel ~~which~~ who currently hold a senior reactor operator's license can be appointed as operations manager. I&M takes the position that the operations superintendent must hold or have held a senior operator license at Cook Nuclear Plant or a similar reactor; ~~and one mid-level operations production supervisor shall hold a current senior operator license.~~ This exception/interpretation is consistent with Technical Specification 6.2.2.K, previously approved by Nuclear Regulatory Commission. A-3

or have been certified for equivalent senior operator knowledge. If the operations superintendent does not hold a senior operator license, then a line (v. staff) operations middle manager shall hold a current senior operator license for the purposes of directing operational activities.

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ADMINISTRATIVE CONTROLS

6.5 REVIEW AND AUDIT A-1

6.5.1 Plant ~~Nuclear Safety~~ operations Review Committee (~~PNSRC~~) PORC

NOTE: The "PORC" may also be referred to as the "PNSRC" in other documents during a transition period. The function of the committee is unaffected by the name.

FUNCTION

6.5.1.1 The ~~PNSRC~~ shall function to advise the Site Vice President [redacted], or designee, on all matters related to nuclear safety. A-1

COMPOSITION

6.5.1.2 ~~The PNSRC shall be composed of a Plant Manager or his designee, Area Manager(s), and Department Superintendent(s) or [redacted] personnel reporting directly to an Area Manager or a Department Superintendent. The membership shall represent the functional areas of the plant, including, but not limited to Operations, Engineering, Licensing, Maintenance, and Radiation Protection.~~

~~The PNSRC membership shall consist of at least one individual from each of the areas designated. All members, including the Chairman and his alternates, the members and their alternates, shall be designated by the Site Vice President [redacted].~~

The PORC shall be composed of senior, experienced, onsite individuals at the Manager level, or equivalent, representing each of the following disciplines: operations, maintenance, chemistry, radiation protection, engineering, licensing, and performance assurance. These members, including Chair(s) and Vice-Chair(s), shall be appointed in writing by the site vice president. Supervisory personnel reporting directly to these Managers (or equivalents) may also serve on this Committee. These personnel must meet the qualifications of ANSI 18.1 - 1971 and shall be designated as alternates, in writing, by the site vice president. The Performance Assurance individual shall be a non-voting member and shall not be included in quorum considerations.

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ADMINISTRATIVE CONTROLS

PNSRC members ~~and alternates~~ shall meet or exceed the minimum qualifications of ANSI N18.1-1971 Section 4.4 for comparable positions. The nuclear power plant operations individual shall meet the qualifications of section 4.2.2 of ANSI N18.1-1971 except for the requirement to hold a current Senior Operator License. The operations individual must hold or have held a Senior Operator License at Cook Nuclear Plant or a similar reactor. The maintenance individual shall meet the qualifications of section 4.2.3 of ANSI N18.1-1971. PORC members in positions not specified in 4.2.1, 4.2.2, or 4.2.3 of ANSI N18.1-1971 shall meet the requirements of 4.2.4 of ANSI N18.1-1971. The plant manager shall meet the qualifications of ANSI N18.1 section 4.2.1

or have been certified for equivalent senior operator knowledge

ALTERNATES

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

MEETING FREQUENCY

6.5.1.4 The PNSRC shall ~~meet at least once per calendar month and as~~ convened by the ~~PNSRC Chairman or his designated alternates.~~ Vice-Chair

QUORUM

6.5.1.5 The quorum of the PNSRC shall consist of the Chairman or ~~his designated alternate~~ and at least ~~three~~ four members including alternates. The Vice-Chair may vote as a member when not acting as the Chair

RESPONSIBILITIES

6.5.1.6 The PNSRC shall be responsible for:

a. Review of all Plant Manager Instructions (PMIs) and revisions thereto.

b. Review of safety evaluations for (1) plant site procedures and revisions thereto which affect the nuclear safety of the plant; (2) changes or modifications to nuclear safety-related structures, systems or components; and (3) tests or experiments which affect plant nuclear safety to verify that such actions did not constitute an unreviewed safety question as defined in 10 CFR 50.59.

c. Review of (1) proposed procedures and revisions to procedures, (2) changes to equipment, systems, or facilities, and (3) proposed tests or experiments which may involve an unreviewed safety question as defined in 10 CFR 50.59.

d. Review of proposed changes to Appendix "A" Technical Specifications or the Operating License and rendering determinations in writing with regard to whether or not the proposed change constitutes a Significant Hazards Consideration.

e. Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Chairman of the NSDRC.

f. Review of all REPORTABLE EVENTS.

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g. Review of facility operations to detect potential nuclear safety hazards.

h. Performance of special reviews, investigations of analyses and reports thereon as requested by the ~~Chairman~~ of the NSDRC.

i. Deleted

j. Deleted

k. Review of any accidental, unplanned, or uncontrolled radioactive release including the preparation of reports covering evaluations, recommendations, and disposition of the corrective action to prevent recurrence and the forwarding of these reports to the ~~Executive Vice President - Nuclear Generation~~ and to the NSDRC.

l. Review of changes to the PROCESS CONTROL PROGRAM, OFFSITE DOSE CALCULATION MANUAL, and radwaste treatment system.

AUTHORITY

6.5.1.7 The ~~P~~NSRC shall:

a. Recommend to the ~~Site Vice President~~ [redacted], or designee, written approval or disapproval of items considered under 6.5.1.6 (a) through (d) above.

b. Render determinations in writing with regard to whether or not each item considered under 6.5.1.6 (a) through (c) and (e) above constitutes an unreviewed safety question.

c. Provide written notification within 24 hours to the ~~Executive Vice President - Nuclear Generation~~ and the NSDRC of disagreement between the ~~P~~NSRC and the ~~Site Vice President~~ [redacted]; however, the ~~Site Vice President~~ shall have responsibility for resolution of such disagreements pursuant to 6.1.1, ~~above~~.

RECORDS

6.5.1.8 The ~~P~~NSRC shall maintain written minutes of each meeting and copies shall be provided to the ~~Chairman~~ of the NSDRC.

6.5.2 NUCLEAR SAFETY AND DESIGN REVIEW COMMITTEE (NSDRC)

FUNCTION

6.5.2.1 The NSDRC shall function to provide independent review and audit of designated activities in the areas of:

a. nuclear power plant operations

b. nuclear engineering

c. chemistry and radiochemistry

d. metallurgy

e. instrumentation and control

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f. radiolcgical safety

g. mechanical and electrical engineering

h. quality assurance practices

COMPOSITION

6.5.2.2 The NSDRC shall be composed ~~of the following regular members:~~ of members that collectively meet the required attributes identified in 6.5.2.1.*

~~1. Executive Vice President - Nuclear generation (NSDRC Chairman)~~

~~2. Director - Regulatory Affairs (NSDRC Secretary)~~

~~3. Site Vice President - Donald C. Cook Nuclear Plant~~

~~4. Plant Manager - Donald C. Cook Nuclear Plant~~

~~5. Chief Nuclear Engineer~~

~~6. Director - Business Performance~~

~~7. Director - Performance Assurance~~

~~8. Director - Plant Engineering~~

~~9. Manager - Performance Engineering and Analysis~~

~~10. Special Assistant - Nuclear Engineering~~

~~11.~~

~~12.~~

~~13.~~

Additional members and Vice Chair~~man~~ may be appointed by the ~~Executive Vice President~~ chief nuclear officer (CNO). A-1 A-1

ALTERNATE MEMBERS

6.5.2.3 Designated alternate members shall be appointed by the ~~Executive Vice President~~ chief nuclear officer (CNO) or such other person as he shall designate. In addition, temporary alternate members may be appointed by the NSDRC Chair~~man~~ to serve on an interim basis, as required. Temporary alternate members are empowered to act on the behalf of the regular or designated alternate members for whom they substitute. A-1

CONSULTANTS

6.5.2.4 Consultants shall be utilized as determined by the NSDRC Chairman to provide expert advice to the NSDRC. A-1

MEETING FREQUENCY

6.5.2.5 The NSDRC shall meet at least once per six months.

* The minimum number of members for compliance shall be ten (10) [Ref: NRC letter dated December 28, 1978]

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QUOROM

6.5.2.6 A quorum, the minimum number of regular members and alternates required to hold a NSDRC meeting shall be eight members, of whom no more than two shall be designated or temporary alternates. The Chairman or acting Chairman shall be present for all NSDRC meetings. If the number of members present* is greater than a quorum, then the majority participating and voting at the meeting shall not have line responsibility for operations of the facility. For the purpose of a quorum, only the Plant Manager is considered to have line responsibility.

REVIEW

6.5.2.7 The NSDRC is responsible for assuring that independent** reviews of the following are performed:

a. The safety 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 constitute an unreviewed safety question.

b. Proposed changes to procedures, equipment or systems which involve an unreviewed safety question as defined in 10 CFR 50.59.

c. Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59.

d. Proposed changes in Technical Specifications or this operating license.

e. Violations of 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. All REPORTABLE EVENTS.

h. All recognized indications of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems, or components.

i. Reports and meeting minutes of the PNSRC.

*Regular NSDRC members are expected to attend the meeting whenever possible, and alternates may attend as voting members only on an irregular basis. If both a regular member and his alternate attend a meeting, only the regular member may participate as a voting member, and the alternate is considered a guest.
**Independent reviews may be performed by groups which report directly to the NSDRC and which must have NSDRC membership participation.

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ADMINISTRATIVE CONTROLS

AUDITS

6.5.2.8 Audits of facility activities shall be performed under the cognizance of the NSDRC. These audits shall encompass:

a. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months.

b. The performance, training, and qualifications of the entire facility staff at least once per 12 months.

c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems or method of operation that affect nuclear safety at least once per 6 months.

d. The performance of activities required by the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR 50, at least once per 24 months.

~~e. Deleted.~~

~~f. Deleted.~~

e. ~~g.~~ The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee QA personnel.

f. ~~h.~~ The fire protection equipment and program implementation at least once per 12 months using either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year.

g. ~~i.~~ The Radiological Environmental Monitoring Program and the results thereof at least once per 12 months.

h. ~~j.~~ The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.

i ~~k.~~ The PROCESS CONTROL PROGRAM and implementing procedures for solidification of radioactive wastes at least once per 24 months.

j ~~l.~~ The performance of activities required by the Quality Assurance Program to meet the criteria of Regulatory Guide 1.21, Rev. 1, June 1974 and Regulatory, Guide 4.1. Rev. 1, April 1975 at least once per 12 months.

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k. ~~m.~~ Any other area of facility operation considered appropriate by the NSDRC.

AUTHORITY

6.5.2.9 The NSDRC shall report to and advise the ~~Executive Vice President Nuclear Generation~~ CNO on those areas of responsibility specified in Sections 6.5.2.7 and 6.5.2.8.

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RECORDS

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

a. Minutes of each NSDRC meeting shall be prepared, approved and issued within 14 days following each meeting.

b. Reports of reviews encompassed by Section 6.5.2.7 above, shall be prepared, approved and issued within 14 days following completion of the review.

c. Audit reports encompassed by Section 6.5.2.8 above, shall be forwarded to the ~~Executive Vice President Nuclear Generation~~ [redacted] and to the management positions responsible for the areas audited within 30 days after completion of the audit.

6.5.3 TECHNICAL REVIEW AND CONTROL

6.5.3.1 Activities which affect nuclear safety shall be conducted as follows:

a. Procedures required by Specification 6.8 and other procedures which affect plant nuclear safety, and changes thereto, shall be prepared, reviewed and approved. Each such procedure or procedure change shall be reviewed by a qualified individual/group other than the individual/group which prepared the procedure or procedure change, but who may be from the same organization as the individual/group which prepared the procedure or procedure change. Procedures other than Plant Manager Procedures shall be approved by the appropriate department head as previously designated in writing by the Site Vice President [redacted], or designee. The Site Vice President [redacted], or designee, shall approve Plant Manager Procedures. Temporary changes to procedures which do not change the intent of the approved procedures shall be approved for implementation by two members of the plant staff, at least one of whom holds a Senior Operator license, and documented. The temporary changes shall be approved by the original approval authority within 14 days of implementation. For changes to procedures which may involve a change in intent of the approved procedures, the person authorized above to approve the procedure shall approve the change prior to implementation.

b. Proposed changes or modifications to plant nuclear safety-related structures, systems and components shall be reviewed as designated by the Site Vice President [redacted], or designee. Each such modification shall be reviewed (reference ~~T/S~~ 6.5.3.1.e) by a qualified (reference ~~T/S~~ 6.5.3.1.d) individual/group other than the individual/group which designed the modification, but who may be from the same organization as the individual/group which designed the modifications. Proposed modifications to plant nuclear safety-related structures, systems and components shall be approved prior to implementation by the Site Vice President [redacted], or designee.

c. Proposed tests and experiments which affect plant nuclear safety and are not addressed in the Final Safety Analysis Report or Technical Specifications shall be prepared, reviewed, and approved. Each such test or experiment shall be reviewed by qualified individuals/groups other than the individual/group which prepared the proposed test or experiment to assure cross disciplinary review as appropriate for the proposed test or experiment. Proposed tests and experiments shall be approved before implementation by the Site Vice President , or designee.

d. Individuals who conducted the reviews performed in the accordance with ~~Specification~~ Section 6.5.3.1a, 6.5.3.1b, and 6.5.3.1c, shall be members of the plant management staff previously designated by the Site Vice President and shall meet or exceed the minimum qualifications of ANSI N18.1-1971 Section 4.4 for comparable positions. Each such review shall include a determination of whether or not additional, cross-disciplinary review is necessary.

If deemed necessary, such review shall be performed by qualified personnel of the appropriate discipline.

e. Each review shall include a determination of whether or not an unreviewed safety question is involved. Pursuant to 10 CFR 50.59, NRC approval of items involving unreviewed safety questions shall be obtained prior to the approval of the Site Vice President , or designee, for implementation.

~~f. Deleted.~~

~~g. Deleted.~~

6.5.3.2 Records of the above activities shall be provided to the Site Vice President or designee, ~~PNSRC~~ and/or the NSDRC as necessary for required reviews.

~~6.6 REPORTABLE EVENT ACTION~~

~~6.6.1 The following actions shall be taken for REPORTABLE EVENTS:~~

~~a. (retained in technical specifications)~~

~~b. Each REPORTABLE EVENT shall be reviewed by the PNSRC, and the results of this review shall be submitted to the NSDRC and the Executive Vice President - Nuclear Generation.~~

~~6.7 SAFETY LIMIT VIOLATION~~

~~6.7.1 The following actions shall be taken in the event a safety limit is violated:~~

~~a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. Within 24 hours notify the Executive Vice President - Nuclear Generation.~~

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~~b. A Safety Limit Violation Report shall be prepared. The report shall be reviewed by FNSRC. This report shall describe (1) applicable circumstances preceding the violation, (2) effects of the violation upon facility components, systems or structures, and (3) corrective action taken to prevent recurrence.~~

~~c. Within 14 days of the violation, the Safety Limit Violation Report shall be submitted to the Commission, and to the Executive Vice President - Nuclear Generation.~~

~~d. (retained in technical specifications)~~

~~6.8 PROCEDURES AND PROGRAMS~~

~~6.8.2 Each procedure and administrative policy of Technical Specification 6.8.1 , and changes thereto, including temporary changes, shall be reviewed prior to implementation as set forth in Specification 6.5 above.~~

6.10 RECORD RETENTION

6.10.1 The following records shall be retained for at least five years:

a. Records and logs of unit operation covering time interval at each power level.

b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.

c. All REPORTABLE EVENTS submitted to the Commission.

d. Records of surveillance activities, inspections and calibrations required by the Technical Specifications.

e. Records of changes made to the procedures required by Technical Specification 6.8.1.

f. Records of sealed source and fission detection leak tests and results.

g. Records of annual physical inventory of all sealed source material on record.

6.10.2 The following records shall be retained for the duration of the Facility Operating License:

a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the Final Safety Analysis Report.

b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.

c. Records of radiation exposure for all individuals entering radiation control areas.

d. Records of gaseous and liquid radioactive material released to the environment.

e. Records of transient or operational cycles for those facility components identified in the Updated Final Safety Analysis Report.

f. Records of reactor tests and experiments.

g. Records of training and qualification for current members of the Plant Staff.

h. Records of in-service inspections performed pursuant to these Technical Specifications. A-3

i. Records of Quality Assurance activities required by the QA Manual.

j. Records of reviews performed for changes made to procedures or equipment or review of tests and experiments pursuant to 10 CFR 50.59.

k. Records of meetings of the ~~PNSRC~~ PORC and the NSDRC.

l. Records of radioactive shipments.

m. Records of the service lives of hydraulic snubbers including the date at which service life commences and associated installation and maintenance records.

n. Records of reviews performed for changes made to the OFFSITE DOSE CALCULATION MANUAL and the PROCESS CONTROL PROGRAM.

~~6.13 PROCESS CONTROL PROGRAM (PCP)~~

~~6.13.1 Changes to the PCP:~~

~~a. Shall be documented and records of reviews performed shall be retained as required by Specification 6.10.2.n. This documentation shall contain:~~

~~1. (retained in technical specifications)~~

~~2. (retained in technical specifications)~~

~~b. Shall become effective after review and acceptance by the PNSRC and approval of the Plant Manager.~~

~~6.14 OFFSITE DOSE CALCULATION MANUAL (ODCM)~~

~~6.14.1 Changes to the ODCM:~~

~~a. Shall be documented and record of reviews performed shall be retained as required by Specification 6.10.2.n. This documentation shall contain:~~

~~1. (retained in technical specifications)~~

~~2. (retained in technical specifications)~~

~~b. Shall become effective after review and acceptance by the PNSRC and the approval of the Plant Manager.~~

~~c. (retained in technical specifications)~~

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ATTACHMENT 3 TO C0900-07

COMPLETE RETYPED QAPD

DONALD C. COOK NUCLEAR PLANT (COOK NUCLEAR PLANT)

UNIT NUMBERS 1 AND 2

DOCKET NOS. 50-135 AND 50-316

LICENSE NOS. DPR-58 AND DPR-74

UPDATED QUALITY ASSURANCE PROGRAM DESCRIPTION

FOR THE

COOK NUCLEAR PLANT

September 2000
Revision 15

Note: This revision is being issued to reflect QAPD changes that have been evaluated in accordance with 10 CFR 50.54(a) and PDP 7021 and have been determined not to reduce commitments to the NRC.

Concurred by Thomas P. Noonan Date: 9-20-00
Performance Assurance Director

Approved by: R. P. Powers Date: 9-22-00
Vice President - Indiana Michigan Power Company

Updated QAPD List of Effective Pages

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QUALITY ASSURANCE PROGRAM DESCRIPTION
For the
COOK NUCLEAR PLANT

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STATEMENT OF POLICY

FOR THE DONALD C. COOK NUCLEAR PLANT

QUALITY ASSURANCE PROGRAM

POLICY

American Electric Power recognizes the fundamental importance of controlling the design, modification, and operation of Indiana Michigan Power Company's Donald C. Cook Nuclear Plant by implementing a planned and documented quality assurance program, including quality control, that complies with applicable regulations, codes, and standards.

The quality assurance program has been established to control activities affecting safety-related functions of structures, systems, and components in Cook Nuclear Plant. The quality assurance program supports the goal of maintaining the safety and reliability of Cook Nuclear Plant at the highest level through a systematic program designed to assure that activities affecting safety-related functions are conducted in compliance with applicable regulations, codes, standards, and established corporate policies and practices.

As chairman of the board, president, and chief executive officer of American Electric Power Company, I maintain the ultimate responsibility for the quality assurance program associated with Cook Nuclear Plant. I have delegated responsibilities for implementation of, and compliance with, the quality assurance program, as outlined in this statement.

IMPLEMENTATION

The performance assurance director, under the direction of the senior vice president nuclear generation, has been assigned the overall responsibility for specifying the quality assurance program requirements for Cook Nuclear Plant and verifying their implementation. The performance assurance director has authority to stop work on any activity affecting safety-related items that does not meet applicable administrative, technical, and/or regulatory requirements. The performance

assurance director does not have the authority to stop unit operations, but shall notify appropriate plant and/or corporate management of conditions not meeting the aforementioned criteria and recommend that unit operations be terminated.

The senior vice president nuclear generation, under my direction, has been delegated responsibility for effectively implementing the quality assurance program. All other AEP divisions and departments having a supporting role for Cook Nuclear Plant are functionally responsible to the senior vice president nuclear generation.

The site vice president, under the direction of the senior vice president nuclear generation, is delegated the responsibility for implementing the quality assurance program at Cook Nuclear Plant.

The performance assurance director is responsible for establishing a quality control program at Cook Nuclear Plant.

The performance assurance director is responsible for providing technical direction to the site vice president for matters relating to the quality assurance program at Cook Nuclear Plant. The performance assurance director is responsible for maintaining a quality assurance group at Cook Nuclear Plant to perform required reviews, audits, and surveillances, and to provide technical liaison services to the site vice president.

The requirements for implementation of the quality assurance program are described in the nuclear generation group policies and procedures.

Each nuclear generation group involved in activities affecting safety-related functions of structures, systems, and components in Cook Nuclear Plant has the responsibility to implement the applicable policies and requirements of the quality assurance program. This responsibility includes being familiar with, and complying with, the applicable quality assurance program requirements.

COMPLIANCE

The performance assurance director shall monitor compliance with the established quality assurance program. Audit programs shall be established to ensure that nuclear generation group activities comply with established program requirements, identify deficiencies or noncompliances, and obtain effective and timely corrective

actions.

Any employee engaged in activities affecting safety-related functions of structures, systems, and components in Cook Nuclear Plant who believes the quality assurance program is not being complied with, or that a deficiency in quality exists, should notify his/her supervisor, the performance assurance director, and/or the site vice president. If the notification does not, in the employee's opinion, receive prompt or appropriate attention, the employee should contact successively higher levels of management. An employee reporting such conditions shall not be discriminated against by companies of the American Electric Power System, nor shall any supplier under contract with any of the companies of the American Electric Power System discriminate against any employee of the supplier for reporting such conditions. Discrimination includes discharge or other actions relative to compensation, terms, conditions, or privileges of employment.

E. Linn Draper, Jr.
Chairman of the Board, President,
and Chief Executive Officer

1.7.1 ORGANIZATION

1.7.1.1 SCOPE

Indiana Michigan Power Company's nuclear generation group (I&M) is responsible for establishing and implementing the Quality Assurance (QA) program for the operational phase of the Donald C. Cook Nuclear Plant. Although authority for development and execution of various portions of the program may be delegated to others, such as contractors, agents or consultants, I&M retains overall responsibility. I&M shall evaluate work delegated to such organizations. Evaluations shall be based on the status of safety importance of the activity being performed and shall be initiated early enough to assure effective quality assurance during the performance of the delegated activity.

This section of the Quality Assurance Program Description (QAPD) identifies the organizational responsibilities for activities affecting the quality of safety-related nuclear power plant structures, systems, and components, and describes the authority and duties assigned to them. It addresses responsibilities for both attaining quality objectives and for the functions of establishing the QA program, and verifying that activities affecting the quality of safety-related items are performed effectively in accordance with QA program requirements.

1.7.1.2 IMPLEMENTATION

1.7.1.2.1 Source of Authority

The chairman of the board, president, and chief executive officer of American Electric Power Company, Inc. (AEP), through its wholly owned subsidiary I&M is responsible for safe operation of the Cook Nuclear Plant. Authority and responsibility for effectively implementing the QA program

for plant modification operations and maintenance are delegated to the I&M vice president responsible for nuclear generation. The I&M vice president also serves as the American Electric Power Service Corporation (AEPSC) senior vice president nuclear generation (currently designated in Technical Specification 6.2.1.c as vice president – nuclear operations).

In the operation of a nuclear power plant, the licensee is required to establish clear and direct lines of responsibility, authority and accountability. This requirement is applicable to the organization providing support to the plant, as well as to the plant staff.

The responsibility for the support of Cook Nuclear Plant rests with I&M which includes the onsite and offsite AEP organizations that administer, operate, maintain, and modify the plant. The I&M vice president responsible for nuclear generation has primary responsibility for Cook Nuclear Plant. All nuclear generation group organizations are functionally responsible to the I&M vice president (reference Figure 1.7-1). The I&M vice president functions as the chief nuclear officer (CNO).

In order to facilitate a more thorough understanding of the support functions, some of the responsibilities, authorities, and accountabilities within the organization are as follows:

1) The responsibilities of the chief nuclear officer (CNO) shall be dedicated to the area of Cook Nuclear Plant operations and support.

2) The CNO shall be responsible for, and has the authority to direct, all Cook Nuclear Plant operational and support matters and shall make, or concur, in all final decisions regarding significant nuclear safety matters.

3) I&M managers shall be familiar with activities within their scope of responsibility that affect plant safety and reliability. They shall be cognizant of, and sensitive to, internal and external factors that might affect the operations of Cook Nuclear Plant.

4) I&M managers have a commitment to seek and identify problem areas and take corrective action to eliminate unsafe conditions, or to improve trends that will upgrade plant safety and reliability.

5) The CNO shall ensure that Cook Nuclear Plant personnel are not requested to perform inappropriate work or tasks by corporate personnel, and shall control assignments and request that have the potential for diverting the attention of the site vice president from the primary responsibility for safe and reliable plant operation.

6) I&M managers shall be familiar with the policy statements from higher management concerning nuclear safety and operational priorities. They shall be responsible for ensuring that activities under their direction are performed in accordance with these policies.

1.7.1.2.2 Responsibility for Attaining Quality Objectives in I&M Nuclear Generation

The AEP chairman of the board, president, and chief executive officer has assigned the overall responsibility for specifying QA program requirements and verifying their implementation to the performance assurance director.

The chief nuclear officer under the direction of the AEP chairman of the board, president, and chief executive officer, is responsible for effectively implementing the QA program.

The performance assurance director, under the direction of the chief nuclear officer is responsible for establishing the Cook Nuclear Plant quality control program.

Each I&M manager involved in activities affecting safety-related functions of structures, systems, and components in Cook Nuclear Plant, has the responsibility to implement the applicable policies and requirements of the quality assurance program. This responsibility includes being familiar with and complying with, the applicable quality assurance program requirements.

I&M has an independent off-site Nuclear Safety and Design Review Committee (NSDRC) which has been established pursuant to the requirements of the Technical Specifications, Appendix C to this QAPD, for the Cook Nuclear Plant. The function of the NSDRC is to oversee the engineering, design, operation, and maintenance of the Cook Nuclear Plant by performing audits and independent reviews of activities which are specified in Appendix C to this QAPD.

The Cook Nuclear Plant on-site review group is the Plant Operations Review Committee (PORC). This committee has also been established pursuant to the requirements of Appendix C to this QAPD. The function of

the (PORC) is to review plant operations on a continuing basis and advise the site vice president on matters related to nuclear safety.

1.7.1.2.3 Corporate Organization

American Electric Power Company

AEP, the parent holding company, wholly owns the common stock of all AEP System subsidiary (operating) companies. The chairman of the board, president, and chief executive officer of AEP is the chief executive officer of AEP and all operating companies. The responsibility for the functional management of the major operating companies is vested in the president of each operating company reporting to the AEP chairman of the board, president, and chief executive officer.

Operating Companies

The operating facilities of the AEP System are owned and operated by the respective operating companies. The responsibility for executing the engineering, design, construction, specialized technical training, and certain operations' supervision is vested in AEPSC, while all, or part, of the administrative functional responsibility is assigned to the operating companies. In the case of Cook Nuclear Plant, AEPSC provides limited public affairs, accounting, and industrial safety direction.

The Cook Nuclear Plant is owned and operated by I&M which is part of the AEP System.

1.7.1.2.4 Quality Assurance Responsibility of I&M

1) I&M provides the technical direction for the Cook Nuclear Plant, and as such makes the final decisions pertinent to safety-related changes in plant design. Further, I&M reviews Nuclear Regulatory Commission (NRC) letters, bulletins, notices, etc., for impact on plant design, and the need for design changes or modifications.

2) I&M furnishes quality assurance, engineering, design, construction, licensing, NRC correspondence, fuel management and radiological support activities.

3) I&M provides additional service in matters such as supplier qualification, procurement of original equipment and replacement parts, and the process of dedicating commercial grade items or services to safety-related applications.

4) The performance assurance organization provides technical direction in quality assurance matters to the nuclear organization and oversees the adequacy, effectiveness and implementation of the QA Program through review and audit activities.

5) Cognizant engineer (e.g., system engineer, equipment engineer, lead engineer, responsible engineer, procurement engineer etc.) is that individual who provides the engineering/design expertise for a particular area of responsibility. This

responsibility includes the implementation of the quality assurance and quality control measures for systems, equipment, structures, or functional areas included in that individual's responsibility. The various titles used for the identification of an individual's responsibility and assignment shall be understood to mean the same as cognizant engineer in the respective areas of responsibility.

Quality Assurance Responsibility - Cook Nuclear Plant

The Cook Nuclear Plant staff operates the Cook Nuclear Plant in accordance with licensing requirements, including the Technical Specifications and such other commitments as established by the operating licenses. The categories of procedures identified in section 1.7.5.2.2 describe the means by which compliance is achieved and responsibilities are assigned. Figure 1.7-1 indicates the organizations pertaining to the operation and support of the Cook Nuclear Plant.

1.7.1.2.5 Organization

The chairman of the board, president, and chief executive officer is ultimately responsible for the QA program associated with the Cook Nuclear Plant. This responsibility is administered through the I&M vice president responsible for nuclear generation, the chief nuclear officer (CNO).

Nuclear Generation

Nuclear generation is comprised of regulatory affairs, nuclear engineering, performance assurance, business services, site operations, and employee concerns.

Performance Assurance

The performance assurance director, reporting to the chief nuclear officer (CNO) is responsible for the performance assurance organization. The performance assurance organization is shown in Figure 1.7-2.

Performance Assurance is organizationally independent and is responsible to perform the following:

- Specify QA program requirements.
- Identify quality problems.
- Initiate, recommend, or provide solutions through designated channels.
- Verify implementation of solutions, as appropriate.
- Prepare, issue and maintain QA program documents, as required.
- Verify the implementation of the QA program through scheduled audits and surveillances.
- Verify the implementation of computer software quality assurance through reviews, surveillances and audits.

- Audit engineering, design, procurement, construction and operational documents for incorporation of, and compliance with, applicable quality assurance requirements to the extent specified by the management-approved QA program.
- Organize and conduct the QA auditor orientation, training, certification and qualification of audit personnel.
- Provide direction for the collection, storage, maintenance, and retention of quality assurance records.
- Maintain, on data base, a list of suppliers of nuclear (N) items and services, plus other selected categories of suppliers.
- Identify noncompliances of the established QA program to the responsible organizations for corrective actions, and report significant occurrences that jeopardize quality to senior management.
- Follow up on selected corrective actions, taken in response to adverse conditions, to confirm effectiveness.
- Review the disposition of selected condition adverse to quality to assure that action taken will preclude recurrence.
- Conduct in-process QA audits or surveillances at supplier's facilities, as required.
- Assist and advise other groups in matters related to the QA program.
- Conduct audits as directed by the NSDRC.
- Maintain cognizance of industry and governmental quality assurance requirements such that the QA program is compatible with requirements, as necessary.
- Recommend for revision to, or improvements in, the established QA Program to senior management.

- Audit dedication plans for commercial grade items and services.
- Issue "Stop Work" orders when significant conditions adverse to safety-related items are identified to prevent unsafe conditions from occurring and/or continuing.
- Provide management with periodic reports concerning the status, adequacy and implementation of the QA program.
- Prepare and conduct special verification and/or surveillance programs on in-house activities, as required or requested.
- Routinely attend, and participate in, daily plant work schedule and status meetings.
- Provide adequate QA coverage relative to procedural and inspection controls, acceptance criteria, and QA staffing and qualification of personnel to carry out QA assignments.
- Determine the acceptability of vendors to supply products and services for safety-related application.

- Develop and implement an effective Quality Control (QC) Program. This encompasses, but is not limited to, the planning and directing of quality control activities to assure that industry codes, NRC regulations, and company instructions and policies

regarding quality control for Cook Nuclear Plant are implemented, qualified personnel perform the work, and that these activities are properly documented.

- Direct the activities of contractor QC/nondestructive examination (NDE) personnel assigned to the plant performance assurance department and provide oversight of work performed.
- Qualification and certification of I&M personnel performing inspections or test of major modifications and non-routine maintenance to the requirements of Regulatory Guide 1.58 and ANSI N45.2.6, except as noted in Appendix B hereto, item 9.
- Proper certification of contractor inspection, test and examination personnel in accordance with Regulatory Guide 1.58, ANSI N45.2.6, ASME B&PV Code and/or SNT-TC-1A, as applicable.
- Selection of a qualification and certification administrator (NDE administrator) to certify personnel in accordance with ANSI N45.2.6 and SNT-TC-1A, as applicable.

Amplification of Specific Responsibilities

- Qualification of the performance assurance director

  The performance assurance director shall possess the following position requirements:
- Bachelor's degree in engineering, scientific, or related discipline. The performance assurance director may have equivalent educational qualifications in accordance with ANSI/ANS 3.1-1993, paragraph 4.1 to 4.1.2.4.
- At least four years experience in the field of nuclear quality assurance or an equivalent number of years of nuclear power plant experience in a supervisory position or a combination of the two.

- Knowledge of QA regulations, policies, practices and standards.
- The same, or higher, organization reporting level as the highest line manager directly responsible for performing activities affecting the quality of safety-related items, such as engineering, procurement, construction, and operation, and is sufficiently independent from cost and schedule.
- Effective communication channels with other senior management positions.
- Responsibility for approval of QA Manual(s).
- Performance of no other duties or responsibilities unrelated to QA that would prevent full attention to QA matters.
- <u>Stop Work Orders</u>

  The performance assurance organization is responsible for ensuring that activities affecting the quality of safety-related items are performed in a manner that meets applicable administrative, technical, and regulatory requirements. In order to carry out this responsibility, the AEP chairman of the board, president and chief executive officer has given the performance assurance director the authority to stop work on any activity affecting the quality of safety-related items that does not meet the aforementioned requirements. Stop work authority has been further delegated by the performance assurance director to direct report managers and supervisors.

The performance assurance director and direct report managers and supervisors do not have the authority to stop unit operations, but will notify appropriate management of conditions which do not meet the aforementioned criteria, and recommend that unit operations be terminated.

- QA Auditor, Qualification and Certification Program
- I&M has established and maintains a QA auditor training and certification program for all QA auditors.
- Condition Identification, Reporting and Escalation
- I&M has established mechanisms for the identification, reporting and escalation of conditions affecting the quality of safety-related items to a level of management whereby satisfactory resolutions can be obtained.

Regulatory Affairs

The regulatory affairs director, reporting to the vice president – nuclear engineering is responsible for the following:

- Formulate policies and practices relative to, licensing, fuel management, and radiological support.
- Maintain liaison with the performance assurance director.
- Implement the requirements of the QA program.

- Maintain knowledge of the latest licensing, and regulatory requirements, codes, standards, and federal regulations applicable to the operation of Cook Nuclear Plant.
- Accomplish the procurement, economic, technical, licensing and quality assurance activities dealing with the reactor core and its related fuel assemblies and components.
- Prepare bid specifications, evaluate bids, and negotiate and administer contracts for the procurement of all nuclear fuel and related components and services.
- Maintain a special nuclear material accountability system.
- Provide analyses to support nuclear steam supply system operation, including fuel economics, fuel mechanical behavior, furnish plant Technical Specification changes and other licensing work, and participate in NRC and NSDRC meetings as required by these analyses.
- Perform reactor core operation follow-up activities and other reactor core technical support activities as requested, and arrange for support from the fuel fabricator, when needed.
- Contract for, and provide technical support for, disposal of both high level and low level radioactive waste.
- Obtain and maintain the NRC Operating Licenses and Technical Specifications for the Cook Nuclear Plant.
- Act as the communication link between the NRC and I&M.

- Perform and coordinate efforts involved in gathering information, performing calculations and generic studies; preparing criteria, reports, and responses; reviewing items affecting safety; and interpreting regulations.
- The preparation of changes to, and appropriate interpretation of, the plant Technical Specification submittals of license amendments; and the analysis of plant compliance with regulatory requirements.
- Primary corporate contact for most oral and written communication with the NRC.
- Review, evaluate, and respond to NRC requests for information and NRC notifications of regulatory changes resulting in plant modifications or new facilities. Such responses are generated in accordance with appropriate administrative procedures.
- Review, on a conceptual basis, plant reports, to the extent that they are related to the ultimate safe operation of the plant, for compliance with safety regulations, plant Technical Specifications, the Updated FSAR design basis, and with any other requirements under the Operating License, to determine if there are any unreviewed safety questions as defined in 10CFR50.59.
- Perform reviews of Condition Reports and 10CFR21 reviews in accordance with corporate requirements.
- Operate the Action Item Tracking (AIT) system for internal commitment tracking.

- Contribute to the annual FSAR updates through reviews of Licensee Event Reports, and the Annual Operating Report.
- Serve as technical advisors on plant audits.
- Remain cognizant of current decommissioning practices and developments.
- Provide working-level coordination with the Institute of Nuclear Power Operations (INPO) in the areas of INPO training, seminars, and workshops. This effort includes providing the nuclear generation organization access to INPO resources, such as NUCLEAR NETWORK.

Nuclear Engineering

The vice president - engineering reporting to the chief nuclear officer (CNO) is responsible for certain engineering, design, procurement, and construction functions. Nuclear engineering is comprised of plant engineering, design engineering, and production engineering.

Certain organizations within the AEP power generation group and energy delivery provide occasional technical assistance for the Cook Nuclear Plant. The administrative and quality assurance controls for this assistance are controlled through documented interface agreements.

Nuclear engineering is responsible for the following:

- Provide planning, engineering and design of the electrical facilities inside Cook Nuclear Plant up to the high voltage (HV) bushings of the main generator transformers and mechanical facilities inside Cook Nuclear Plant including:
  * determination of general layout and design;
  * selection of equipment;

* preparation of one-line and flow diagrams; and,
* coordination of inside and outside plant facilities.

- Provide engineering and design of all controls for operation and protection of nuclear steam supply, steam generator, turbine generator, auxiliary equipment and general plant protection, including checking and approving elementary, one-line, and flow drawings.
- Ensure that all purchased equipment conforms to accepted standards and fulfills the desired function.
- Closely follow manufacturer's engineering and design processes to assure provision of adequate and reliable equipment upon which depend the safety, reliability, and performance of the unit and plant.
- Prepare, review and/or approve design changes, sketches, drawings, calculations, and design verifications, as required.
- Perform safety reviews of design changes pursuant to 10CFR50.59.
- Prepare and/or approve dedication plans, specifications and procurement documents.
- Perform drawing review of equipment, as appropriate.
- Develop, review and/or approve procedures or correspondence as appropriate.
- Obtain, review and perform engineering and design evaluations, including environmental equipment qualification (EQ).
- Establish and maintain a central file for equipment environmental qualification documentation.
- Coordinate operations that support the Cook Nuclear Plant Facility Data Base (FDB).

- Perform calculations for proper application of equipment.
- Perform and evaluate investigations, analyses and reports for facilities pertaining to the engineering design, operation and maintenance of the Cook Nuclear Plant.
- Assist field personnel in installation, start-up, and subsequent locating of problems in equipment, and in determining proper operation of equipment, during normal or after emergency operations.
- Maintain a constant awareness for improvements and more reliable design of equipment and facilities, maintenance and operating methods or procedures.
- Maintain a constant awareness of activities to ensure compliance with all applicable policies and procedures, initiating, when required, training or retraining programs.
- Participate, as assigned, on the NSDRC and NSDRC subcommittees, and participate in matters covered in the committee's charter.
- Provide responses to NRC correspondence, as required.
- Participate in the evaluation and remedy of any situation requiring activation of the Emergency Response Organization.
- Provide support personnel for the Emergency Response Organization.
- Provide technical support in areas of operation and maintenance, including: the Inservice Inspection (ISI) program; the QA program; the fire protection QA program; the ALARA program covering radiation protection; and, the corporate and plant industrial safety program.

- Provide technical direction and assistance in the layout and arrangement of equipment piping, systems, controls, etc., for the development of drawings.
- Develop System Descriptions.
- Provide analytical support in engineering and design disciplines (e.g., heat transfer, thermodynamics, fluid dynamics).
- Provide engineering and design evaluations for CRs, LERs, INPO SOERs, and NRC Bulletins.
- Participate, as assigned, on the Condition Assessment Group (CAG).
- Make recommendations and assist in the formulation of policies and practices relating to the design and engineering of office and service buildings, miscellaneous structures and material handling equipment, and provide the general supervision of the engineering of such facilities, structures and equipment.
- Initiate and/or review, approve and control laboratory and field investigations and feasibility studies.
- Arrange for outside engineering, design and consulting assistance, as required.
- Perform shop and field surveillance on equipment being manufactured, fabricated, or installed.
- Provide field services to the Cook Nuclear Plant, including the assigning of personnel, as are required, during construction, normal or forced outages, or as requested.

- Assist in the planning and execution of maintenance work on equipment, facilities, buildings and other structures.
- Supervise maintenance and repairs of all masonry and concrete work at Cook Nuclear Plant, including supplying qualified inspection personnel.
- Direct testing of materials used in concrete and testing of soils to be used in work at the Cook Nuclear Plant.
- Review and recommend concrete mix formulations for all new construction.
- Implement the corrective action program, with regard to activities affecting the quality of safety-related items and services, that controls and documents items, services or activities which do not conform to requirements.
- Assist in the preparation of applications for federal, state and local permits relative to installations being made which require such permits.
- Conduct periodic management reviews of the activities of the department to ensure compliance with the objectives of the QA Program, and external technical surveillance, as necessary, of consultants, outside organizations and vendors over which the department is cognizant.
- Establish and maintain a file for QA records.
- Develop, review and approve designs and drawings for mechanical, electrical and structural systems, equipment and facilities of the Cook Nuclear Plant.
- Perform required calculations and analyses, including pipe stress, pipe support design, cable sizing, conduit and cable tray support and structural steel and concrete.

- Assist field personnel in the resolution of problems stemming from the installation of design changes, or from as-found plant conditions, including assigning personnel to the plant.
- Formulate, administer, and implement policies and practices relating to the engineering, and design of the Cook Nuclear Plant.
- Conduct functions so as to be in conformance with the operating licenses of the Cook Nuclear Plant.
- Investigate evaluate and correct problems.
- Coordinate special projects and studies, as required.
- Coordinate the development and maintenance of the Vendor Drawing Control (VDC) programs which include coordinating the programs with interfacing divisions/departments.
- Control the issuance and distribution of drawings for the Cook Nuclear Plant, including monitoring of the Aperture Card Microfilm Program.
- Supervise and control the work of consultants, architect/engineers and outside engineering and design agencies supplying services to I&M in their discipline and process notification of defects in accordance with company requirements. Also perform detailed reviews of engineering and design work submitted by outside agencies.
- Review and update applicable sections of Cook Nuclear Plant Updated FSAR as assigned.
- Participate, as members and as assigned, on committees and ad hoc task forces that review nuclear activities.

- Coordinate Cook Nuclear Plant activities associated with the initiation, review, approval, engineering, design, production, examination, inspection, test, turnover, and close out of design changes.
- Administer and implement job orders issued by the Cook Nuclear Plant organization for major modifications, replacement and maintenance work with outside contractors.
- Administer and monitor contractor's industrial safety programs and performance.
- Manage construction labor relations with the international building and construction trades unions.
- Plan, organize and control major construction projects, as assigned by the chief nuclear officer (CNO).
- Maintain cognizance on matters pertaining to the Cook Nuclear Plant emergency response organization.
- Prepare labor estimates.
- Provide constructability guidance when requested in support of engineering and design changes.
- Formulate Policies and practices relative to nuclear safety.
- Maintain knowledge of the latest safety requirements, codes, standards, and federal regulations applicable to the operation of Cook Nuclear Plant.
- Provide analysis to support reactor physics, core thermal hydraulic and LOCA and non-LOCA transient safety analysis

and other analysis activities as requested, and participate in NRC and NSDRC meetings related to these analyses.

- Coordinate the development of neutronics and thermal hydraulic safety codes and conduct safety analysis
- Coordinate computer code development, and provide the interface control for AEPSC information systems and I&M nuclear generation.
- Review, coordinate, and resolve all matters pertaining to nuclear safety for Cook Nuclear Plant. This includes, but is not limited to: the preparation of safety evaluations, or reviews, for a designated subject.
- Provide support in key areas of expertise, such as nuclear engineering, probabilistic analysis, thermohydraulic analysis, chemical engineering, mechanical engineering, electrical engineering, and technical writing.
- Interface with vendors and other outside organizations on matters connected with the nuclear steam supply system and other areas affecting the safe design and operation of nuclear plants.
- Participate, as appropriate, in the review of nuclear plant operating experiences, and relate those experiences to the design and safe operation of Cook Nuclear Plant.

- Develop, specify and/or review conceptual nuclear safety criteria for Cook Nuclear Plant in accordance with established regulations. This includes all information contained in the FSAR, as well as specialized information such as environmental qualification and seismic criteria.
- Review and evaluate performance requirements for systems, equipment and materials for compliance with specified safety criteria.
- Coordinate Equipment Performance and Information Exchange (EPIX) with INPO.
- Recommend facility engineering modification and initiate and approve plant improvement requisitions.
- Plan and direct engineering and technical studies, equipment performance, and instrument and control maintenance for Cook Nuclear Plant.
- Direct programs related to on-site fuel management and reactor core physics testing, and ensure satisfactory completion.
- Coordinate the maintenance of design drawings.

Site Operations

The site vice president reports to the chief nuclear officer (CNO) and is responsible for the Cook Nuclear Plant activities (Figure 1.7-1). Reporting to the site vice president is the plant manager who shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for safe operation and maintenance of the plant. Also reporting to the CNO is the business services director.

The site operations organization is responsible for the following:

- Ensure the safety of all facility employees and the general public relative to general plant safety, as well as radiological safety, by maintaining strict compliance with plant Technical Specifications, procedures and instructions.
- Recommend facility engineering modification and initiate and approve plant improvement requisitions.
- Ensure that work practices in all site operations organizations are consistent with regulatory standards, safety, approved procedures, and plant Technical Specifications.
- Provide membership, as required, on the PORC.
- Maintain close working relationships with the NRC, as well as local, state, and federal government regulatory officials regarding conditions which could affect, or are affected, by Cook Nuclear Plant activities.
- Set up plant load schedules and arrange for equipment outages.
- Develop and efficiently implement all site centralized training activities.

- Administer the centralized facility training complex, simulator, and programs ensuring that program development is consistent with the systematic approach to training, maintain INPO accreditations, regulatory and corporate requirements.
- Ensure that human resource activities include employee support programs (i.e., fitness for duty) consistent with INPO/NUMARC guidelines, company policies, and regulatory requirements and standards.
- Administer the NRC approved physical Security Program in compliance with regulatory standards, Modified Amended Security Plan (MASP), and company policy.
- Supervise, plan, and direct the activities related to the maintenance and installation of all Cook Nuclear Plant equipment, structures, grounds, and yards.
- Prepare and maintain records and reports pertinent to equipment maintenance and regulatory agency requirements.
- Enforce and coordinate Cook Nuclear Plant regulations, procedures, policies, and objectives to assure safety, efficiency, and continuity in the operation of the Cook Nuclear Plant within the limits of the operating license and the Technical Specifications and formulation of related policies and procedures.
- Plan, schedule, and direct activities relating to the operation of the Cook Nuclear Plant and associated switchyards; cooperate in planning and scheduling of work and procedures for refueling and maintenance of the Cook Nuclear Plant; and direct and coordinate fuel loading operations.

- Review reports and records, direct general inspection of operating conditions of plant equipment, and investigate any abnormal conditions, making recommendations for repairs. Establish and administer equipment clearance procedures consistent with company, plant, and radiation protection standards; authorize and arrange for equipment outages to meet normal or emergency conditions. Provide the shift operating crews with appropriate procedures and instructions to assist them in operating the Cook Nuclear Plant safely and efficiently.
- Approve operator training programs administered by the Cook nuclear plant training department designed to provide operating personnel with the knowledge and skill required for safe operation of the facility, and for obtaining and holding NRC operator licenses. Coordinate training programs in plant safety and emergency procedures for Cook Nuclear Plant operating department personnel to ensure that each shift group will function properly in the event of injury of personnel, fire, nuclear incident, or civil disorder.
- Advance planning and overall conduct of scheduled and forced outages, including the scheduling and coordination of all plant activities associated with refueling, preventive maintenance, corrective maintenance, equipment overhaul, Technical Specification surveillance, and design change installations.
- Prepare reports of reportable events which are mandated by the NRC and the Technical Specifications.
- Prepare statistical reports utilized in NRC Appraisal Meetings and Enforcement Conference.

- Coordinate the efforts of outside agencies, such as American Nuclear Insurers (ANI), INPO, and third-party inspector programs.

- Maintain knowledge of developments and changes in NRC requirements, industry standards and codes, regulatory compliance activities, and quality control disciplines and techniques.
- Stop plant operation, as appropriate, in the event that conditions are found which are in violation of the Technical Specifications or adverse to quality.
- Maintain and renew accreditation of training programs.
- Qualification of I&M personnel performing inspection of normal operating activities to ANSI N18.1.
- Perform peer inspections of work completed by I&M personnel by independent persons qualified to ANSI N18.7.
- Conduct of the Inservice Inspection (ISI) Program.
- Plan and direct on-site computer systems, shift technical advisors, and emergency planning. These activities support daily on-site operations in a safe, reliable, and efficient manner in accordance with all corporate policies, applicable laws, regulations, licenses, and Technical Specification requirements.
- Implement station performance testing and monitor programs to ensure optimum plant efficiency.
- Establish testing and preventive maintenance programs related to station instrumentation, electrical systems, and computers.
- Recommend alternative to Cook Nuclear Plant operation, technical or emergency procedures, and

design of equipment to improve safety of operations and overall plant efficiency.

- Implement the Emergency Plan as it pertains to the Cook Nuclear Plant site.
- Provide technical and engineering services in the fields of chemistry, radiation protection, ALARA, and environmental in support of the safe operation of the plant and the health and safety of the employees and the public.
- Plan and schedule the activities of the radiation protection department of the Cook Nuclear Plant in support of operations and maintenance.
- Establish chemistry, radiochemistry, and health physics criteria which ensure maximum equipment life, and the protection of the health and safety of the workers and the public.
- Establish sampling and analysis programs which ensure the chemistry, radiochemistry, and health physics criteria are within the established criteria.
- Establish and direct investigations, responses, and corrective actions when outside the established criteria.
- Administer and direct the Cook Nuclear Plant's radioactive waste programs, including volume reduction, packaging and shipping.
- Maintain the Cook Nuclear Plant Facility Data Base.
- Procurement, receiving, quality control receipt inspection, storage, handling, issue, stock level maintenance, and overall control of stores items.

- Provide material service and support in accordance with policies and procedures required by AEPSC purchasing and materials management, QA, and the NRC, which are administered and enforced in a total effort to ensure safety and plant reliability.
- Provide nuclear General Employee Training (GET) for nuclear generation personnel.

- Prepare and administer equipment, labor and service contracts.
- Administer contracts and schedule outside contractors' work forces.
- Administration of the QA records program.
- Scope, bid, recommend awards and administer construction labor and service contracts.
- Process incoming vendor information.

Purchasing and Materials Management Department (not charted)

The AEP executive vice president administration and chief accounting officer, reporting to the AEP chairman of the board, president, and chief executive officer, is responsible for purchasing and materials management department through the vice president – procurement & supply chain services.

Procurement & supply chain services is responsible for the following:

- Procurement of safety-related items from only qualified and approved suppliers.
- Provide supervision to Cook Nuclear Plant purchasing organization.
- Provide ordering and stocking descriptions (Material & Equipment database) for safety-related items and include these descriptions in the Cook Nuclear Plant inventory catalog, including necessary communications with suppliers, cognizant engineers, the Cook Nuclear Plant stores supervisor and other appropriate personnel.

- Establish computerized inventory status reports, on line inventory and purchase order inquiry capabilities and other procedures to order, track and control materials.
- Coordinate procurement activities with I&M.
- Prepare and issue requests for quotations, contracts, service orders, blanket orders, and purchase orders for safety-related items.
- Implement corrective action as described in the I&M procedures for Cook Nuclear Plant.

- Establish a system of document keeping and transmittal.
- Establish a system of document control for controlled procedures, instructions, and purchasing documents for safety-related items.
- The maintenance and control of selected procurement document standard phrases as identified by the performance assurance director or designee.
- Conduct training sessions involving purchasing personnel and others on an annual basis, or more frequently, as required, and ascertain that training sessions include complete responsibilities associated with the purchase of safety-related items and services.

1.7.2 QUALITY ASSURANCE PROGRAM

1.7.2.1 SCOPE

Policies that define and establish the Cook Nuclear Plant QA Program are summarized in the individual sections of this document. The program is implemented through procedures and instructions responsive to provisions of the QAPD, and will be carried out for the life of the Cook Nuclear Plant.

Quality assurance controls apply to activities affecting the quality of safety-related structures, systems and components to an extent based on the importance of those structures, systems, components, etc., (items) to safety. Such activities are performed under controlled conditions, including the use of appropriate equipment, environmental conditions, assignment of qualified personnel, and assurance that all applicable prerequisites have been met.

Safety-related items are defined as items:

- Which are associated with the safe shutdown (hot) of the reactor; or isolation of the reactor; or maintenance of the integrity of the reactor coolant system pressure boundary.

OR

- Whose failure might cause or increase the severity of a design basis accident as described in the Updated FSAR; or lead to a release of radioactivity in excess of 10CFR100 guidelines.

In general, safety-related items are those which are classified Seismic Class I, or Electrical Class 1E; or associated with the Engineered Safety Features Actuation System (ESFAS); or associated with the Reactor Protection System (RPS). Note: Some nonsafety-related items have been designed to Seismic Class I and/or Electrical Class 1E requirements. For example: post accident monitoring instrumentation is not safety-related but is qualified Seismic Class 1 and Electrical Class 1E to meet the requirements of Reg. Guide 1.97.

A special QA Program has been implemented for Fire Protection items (Section 1.7.19 herein).

The QA Program also includes provision for Radwaste QA in accordance with the requirements of 10CFR71, Subpart H.

QA Program status, scope, adequacy, and compliance with 10CFR50, Appendix B, are regularly reviewed by management through reports, meetings, and review of audit results.

The implementation of the QA program may be accomplished by I&M or delegated in whole or in part to other AEP System companies or outside parties. However, I&M retains full responsibility for all activities affecting safety-related items. The performance of the delegated organization is evaluated by audit or surveillances on a frequency commensurate with their scope and importance of assigned work.

1.7.2.2 IMPLEMENTATION

1.7.2.2.1

The chairman of the board, president, and chief executive officer of AEP has stated in a signed, formal "Statement of Policy", that it is the corporate policy to comply with the provisions of applicable codes, standards and regulations pertaining to quality assurance for nuclear power plants as required by the Cook Nuclear Plant operating licenses.

The statement makes this QAPD and the associated implementing procedures and instructions mandatory, and requires compliance by all responsible organizations and

individuals. The statement also identifies the management positions within the companies vested with responsibility and authority for implementing the program and assuring its effectiveness.

A summary document shall be compiled to identify source documents, to index such source documents to the requirements of ANSI N18.7-1976 and to provide a consolidated base for description of the QA program.

1.7.2.2.2

The QA program at I&M consists of controls exercised by organizations responsible for attaining quality objectives, and by organizations responsible for assurance functions.

The QA Program effectiveness is continually assessed through management review of various reports, NSDRC review of the audit program and shall also be periodically reviewed by independent outside parties as deemed necessary by management.

The QA program described in the QAPD is intended to apply for the life of the cook Nuclear Plant.

The QA program applies to activities affecting the quality of safety-related structures, components, and related consumables during plant operations, maintenance, testing and all design changes. Safety-related structures, systems and components are identified in the Facility Data Base and other documents which are developed and maintained for the plant.

As deemed necessary by management, applicable portions of the QA program controls will be applied to nonsafety-related activities associated with the implementation of the QA program to ensure that commitments are met (e.g., off-site records storage, training services etc.).

1.7.2.2.3

This QAPD, organized to present the QA Program for the Cook Nuclear Plant in the order of the 18 criteria of 10CFR50, Appendix B, states I&M policy for each of the criteria and describes how the controls pertinent to each are carried out. Any changes made to this QAPD that do not reduce the commitments previously accepted by the NRC must be submitted to the NRC at least annually. Any changes made to this QAPD that do reduce the commitments previously accepted by the NRC must be submitted to the NRC and receive NRC approval prior to implementation. The submittal of the changes described above shall be made in accordance with the requirements of 10CFR50.54.

Changes made to this QAPD that do not reduce commitments and do not require prior approval by the NRC before implementation will be identified by an alpha-numeric addendum for each changed page and be issued to the organization. All addenda generated since the last QAPD submitted to the NRC for review and approval will be included in the next revision submitted to the NRC. Each page of this QAPD will carry an applicable revision level and date.

The program described in this QAPD will not be intentionally changed in any way that would prevent it from meeting the criteria of 10CFR50, Appendix B and other applicable operating license requirements.

1.7.2.2.4

Documents used for implementing the provisions of this QAPD include the following:

Plant Manager Instructions (PMIs) establish the policy at the plant for compliance with specified criteria, and assign responsibility to the various departments, as required, for implementation. Performance Assurance Department Policies (POLs) establish policies for the Performance Assurance Department for compliance with specified criteria and to assign responsibility to the various sections, as required, for implementation. Plant Manager Procedures (PMPs), Department Head Procedure (DHPs), and in some cases Department Head Instructions (DHIs), have been

prepared to describe the detailed activities required to support safe and effective plant operation as per the PMIs.

The PMIs are reviewed by performance assurance for concurrence that they will satisfactorily implement regulatory requirements and commitments. PMIs and PMPs are reviewed by the PORC prior to approval by the site vice president.

DHPs and DHIs are reviewed within the departments prior to approval by the department head of origination. DHPs and DHIs that might involve an unreviewed safety question as defined in 10CFR50.59 are reviewed by PORC prior to approval by the department head of origination.

AEP Nuclear Organization Policy & Procedure Manual and General Procedures (GP's) are utilized to define policies and requirements for quality assurance, and to implement certain QA program requirements. Division/department and/or section procedures are also used to implement QA program requirements.

When contractors perform work on-site under their own quality assurance programs, the programs are audited for compliance and consistency with the applicable requirements of the Cook Nuclear Plant's QA Program and the contract, and are approved by performance assurance prior to the start of work. Implementation of on-site contractor's QA programs, will be audited to assure that the contractor's programs are effective.

1.7.2.2.5

Provisions of the QA program for the Cook Nuclear Plant apply to activities affecting the quality of safety-related items. Appendix A to this QAPD lists the Regulatory/Safety Guides and ANSI Standards that identify I&M commitment. Appendix B describes necessary exceptions and clarifications to the requirements of those documents. The scope of the program, and the extent to which its controls are applied, are established as follows:

a) I&M uses the criteria specified in the Cook Nuclear Plant Updated FSAR for identifying structures, systems and components to which the QA program applies.

b) This identification process results in the Facility Data Base for the Cook Nuclear Plant. This Facility Data Base is controlled by authorized personnel. Facility Data Base items are determined by engineering analysis of the function(s) of plant items in relation to safe operation and shutdown.

c) The extent to which controls specified in the QA program are applied to Facility Data Base items is determined for each item considering its relative importance to safety. Such determinations are based on data in such documents as the Cook Nuclear Plant Technical Specifications and the Updated FSAR.

Appendix C to this QAPD identifies administrative controls, such as onsite and offsite review committee activities which either supplement or complement the quality assurance program, described herein.

1.7.2.2.6

Activities affecting safety-related items are accomplished under controlled conditions. Preparations for such activities include consideration of the following:

a) Assigned personnel are qualified.

b) Work has been planned to applicable engineering and/or Technical Specifications.

c) Specified equipment and/or tools are available.

d) Items are in an acceptable status.

e) Items on which work is to be performed are in the proper condition for the task.

f) Proper approved instructions/procedures for the work are available for use.

g) Items and facilities that could be damaged by the work have been protected, as required.

h) Provisions have been made for special controls, processes, tests and verification methods.

1.7.2.2.7

Responsibility and authority for planning and implementing indoctrination and training of I&M personnel are specifically designated, as follows:

a) The training and indoctrination program provides for on-going training and periodic familiarization with the QA program for the Cook Nuclear Plant.

b) Personnel who perform inspection and examination functions are qualified in accordance with requirements of Regulatory Guide 1.8, ANSI N18.1, Regulatory Guide 1.58, ANSI N45.2.6, the ASME B&PV Code, or SNT-TC-1A, as applicable, and with exceptions as noted in Appendix B hereto.

c) Performance assurance auditors are qualified in accordance with Regulatory Guide 1.146 and ANSI N45.2.23.

d) Personnel assigned duties such as special cleaning processes, welding, etc., are qualified in accordance with applicable codes, standards, regulatory guides and/or plant procedures.

e) The training, qualification and certification program includes, as applicable, provisions for retraining, reexamination and recertification to ensure that proficiency is maintained.

f) Training, qualification, and certification records including documentation of objectives, waivers/exceptions, attendees and dates of attendance, are maintained at least as long as the personnel involved are performing activities to which the training, qualification and certification is relevant.

g) Personnel responsible for performing activities that affect safety-related items are instructed as to the purpose, scope and implementation of the applicable manuals, instructions and procedures.

Management/supervisory personnel receive functional training to the level necessary to plan, coordinate and administer the day-to-day verification activities of the QA Program for which they are responsible.

Training of I&M personnel is performed employing the following techniques, as applicable: 1) on the job and formal training administered by the department or section the individual works for; 2) formal training conducted by qualified instructors from the training department or other entities (internal and external to the AEP System); and 3) formal, INPO accredited training conducted by the training department. Records of training sessions for such training are maintained. Where personnel qualifications or certifications are required, these certifications are performed on a scheduled basis (consistent with the appropriate code or standard).

Cook Nuclear Plant employees receive introductory training in quality assurance usually within the first two weeks of employment. In addition, I&M personnel receive training prior to being allowed unescorted access to the plant. This training includes management's policy for implementation of the QA program through plant manager and department head instructions and procedures. These instructions also include a description of the QA program, the use of instructions and procedures, personnel requirements for procedure compliance and the systems and components controlled by the QA program.

1.7.3 DESIGN CONTROL

1.7.3.1 SCOPE

Design changes are accomplished in accordance with approved design. Activities to develop such designs are controlled. Depending on the scope of the design change, these activities include design and field engineering; the performance of physics, seismic, stress, thermal, hydraulic and radiation evaluations; update of the FSAR; review of accident analyses; the development and control of associated computer programs; studies of material compatibility; accessibility for inservice inspection and maintenance; determination of quality standards; and requirement for equipment qualification. The controls apply to preparation and review of design documents, including the correct translation of applicable regulatory requirements and design bases into design, procurement and procedural documents.

1.7.3.2 IMPLEMENTATION

1.7.3.2.1

Design changes are controlled by procedures and instructions and are reviewed as required by 10CFR50.59 and Appendix C to this QAPD.

A documented evaluation is made of safety related and non-safety related design changes to determine which approved change process is most appropriate for implementation.

1.7.3.2.2

Design changes are reviewed to determine their impact on nuclear safety and to determine if the proposed changes

involve an unreviewed safety question as defined by 10CFR50.59. If a design change were to involve an unreviewed safety question, it would not be approved for implementation until the required NRC approval was received.

Design Change Packages (DCPs) are reviewed and approved prior to implementation, by the DCP team members and cognizant managers. The PORC also reviews those DCPs, for which safety evaluations are deemed necessary, pursuant to 10CFR50.59 and paragraph 6.5.1.6. of Appendix C to this QAPD.

1.7.3.2.3

When DCPs involve design interfaces between internal or external design organizations, or across technical disciplines, these interfaces are controlled. Procedures are used for the review, approval, release, distribution and revision of documents involving design interfaces to ensure that structures, systems and components are compatible geometrically and functionally with processes and the environment. Lines of communication are established for controlling the flow of needed design information across design interfaces, including changes to the information as work progresses. Decisions and problem resolutions involving design interfaces are made by the organization having responsibility for engineering direction of the design effort.

1.7.3.2.4

Checks are performed and documented to verify the dimensional accuracy and completeness of design drawings and specifications.

1.7.3.2.5

Design change document packages are audited by performance assurance to assure that the documents have been prepared, verified, reviewed and approved in accordance with company procedures.

1.7.3.2.6

The extent of, and methods for, design verification are documented. The extent of design verification performed is a function of the importance of the item to safety, design complexity, degree of standardization, the state-of-the-art, and similarity with previously proven designs. Methods for design verification include evaluation of the applicability of standardized or previously proven designs, alternate calculations, qualification testing and design reviews. These methods may be used singly or in combination, depending on the needs for the design under consideration.

When design verification is done by evaluating standardized or previously proven designs, the applicability of such designs is confirmed. Any differences from the proven design are documented and evaluated for the intended application.

Qualification testing of prototypes, components, or features is used when the ability of an item to perform an essential safety function cannot otherwise be adequately substantiated. This testing is performed before plant equipment installation, where possible, but always before reliance upon the item to perform a safety-related function. Qualification testing is performed under conditions that simulate the most adverse design conditions, considering all relevant operating modes. Test requirements, procedures and results are documented. Results are evaluated to assure that test requirements have been satisfied. Design changes shown to be necessary through testing are made, and any necessary retesting or other verification is performed. Test configurations are clearly documented.

Design reviews are performed by multi-organizational or interdisciplinary groups, or by single individuals. Criteria are established to determine when a formal group review is required, and when review by an individual is sufficient.

1.7.3.2.7

Persons representing applicable technical disciplines are assigned to perform design verifications. These persons are qualified by appropriate education or experience, but are not directly responsible for the design. The designer's immediate supervisor may perform the verification, provided that:

1) The supervisor is the only technically qualified individual.

<u>or</u>

2) The supervisor has not specified a singular design approach, ruled out design considerations, nor established the design inputs.

and

3) The need is documented and approved by the supervisor's management.

Regularly scheduled QA audits verify conformance to previous items 1 through 3.

Design verification of safety-related design changes shall be completed prior to declaring a design change, or portions thereof, operational.

1.7.3.2.8

Implementation of design changes is coordinated on site by nuclear engineering. Material to perform the design change must meet the specifications established for the original system, or as specified by the DCP. For those design changes where testing after completion is required, the testing documentation is reviewed by the organization performing the test and, when specified, by the DCP. Further, completed design changes are audited/surveilled by performance assurance following installation and testing.

1.7.3.2.9

Changes to design documents, including field changes, are reviewed, approved and controlled in a manner commensurate with that used for the original design. Such changes are

evaluated for impact. Information on approved changes is transmitted to all affected organizations.

1.7.3.2.10

Error and deficiencies in, and deviations from, approved design documents are identified and dispositioned in accordance with established design control and/or corrective action procedures.

1.7.3.2.11

Established design control procedures provide for:

1) controlled submission of design changes,
2) engineering evaluation,
3) review for impact on nuclear safety,
4) audit by performance assurance,
5) design modification,
6) managerial review, and
7) approval and record keeping for the implemented design change.

1.7.4 PROCUREMENT DOCUMENT CONTROL

1.7.4.1 SCOPE

Procurement documents define the characteristics of item(s) to be procured, identify applicable regulatory and industry codes/standards requirements, and specify supplier QA Program requirements to the extent necessary to assure adequate quality.

1.7.4.2 IMPLEMENTATION

1.7.4.2.1

Procurement control is established by instructions and procedures. These documents require that procurement documents be sufficiently detailed to ensure that purchased safety-related items and services are: 1) purchased to specification and code requirements equivalent to those of the original equipment or service (except when the Code of Federal Regulations requires upgrading), 2) properly documented to show compliance with the applicable specifications, codes and standards, and 3) purchased from vendors or contractors who have been evaluated and deemed qualified, or by the commercial grade dedication process.

Procedures establish the review of procurement documents to determine that: appropriate technical and quality requirements are correctly stated, inspectable and controllable; there are adequate acceptance criteria; and procurement documents have been prepared, reviewed and approved in accordance with established requirements.

The manager of the originating group, with support of the cognizant engineering group, is responsible for assuring that applicable requirements are set forth in procurement documents.

I&M may use cognizant engineers in any procurement activity.

1.7.4.2.2

The Facility Data Base, in conjunction with other sources, is used for equipment safety classification and procurement grade. Engineering specifications are used to determine requirements, codes or standards that items must fulfill, and define the documentation that must accompany the item to the plant.

Procurement documents for safety-related items and services are reviewed to ensure that: correct classification is made; the requirements are properly stated; and that measures have been, or will be, implemented to assure the requirements are met and adequately provided for.

Procurement documents for new safety-related items are initiated by the cognizant engineering group which establishes initial requirements.

Replacement/spares are purchased to requirements equivalent to the original unless upgrading is required by federal regulations, or deemed necessary by the cognizant engineering group.

1.7.4.2.3

The contents of procurement documents vary according to the item(s) being purchased and its function(s) in the Cook Nuclear Plant. Provisions of this QAPD are considered for application to service contractors, also. As applicable, procurement documents include:

a) Scope of work to be performed.

b) Technical requirements, with applicable drawings, specifications, codes and standards identified by title, document number, revision and date, with any required procedures, such as special process instructions identified in such a way as to indicate source and need. Imposition of guides/standards on I&M suppliers and subtier suppliers will be on a case-by-case basis depending upon the item or service to be supplied and upon the degree that I&M relies on suppliers to invoke guides/standards. I&M recognizes that certain suppliers have acceptable 10CFR50, Appendix B QA programs, even though, the suppliers are not committed to Regulatory Guides or industry standards (e.g. ANSI N45.2.6.). In those cases, in which suppliers are not committed to the same guides/standards as I&M, I&M will assure that (1) the supplier's QA program provides adequate QA controls, regardless of the lack of specific commitment, or (2) controls will be invoked directly by I&M to assure adequate quality of items/services received by suppliers.

c) Regulatory, administrative and reporting requirements.

d) Quality requirements appropriate to the complexity and scope of the work, including necessary tests and/or inspections.

e) A requirement for a documented QA Program, subject to QA review and written concurrence prior to the start of work.

f) A requirement for the supplier to invoke applicable quality requirements on subtier suppliers.

g) Provisions for access to supplier, and subtier suppliers', facilities and records for inspections, surveillances and audits.

h) Identification of documentation to be provided by the supplier, the schedule of submittals and documents requiring I&M approval.

1.7.4.2.4

Performance assurance performs audits of procurement documents to assure that QA program requirements have been met. These audits are conducted in accordance with performance assurance procedures.

1.7.4.2.5

Changes to procurement documents are controlled in a manner commensurate with that used for the original documents.

1.7.5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

1.7.5.1 SCOPE

Activities affecting the quality of safety-related structures, systems and components are accomplished using instructions, procedures and drawings appropriate to the circumstances, including acceptance criteria for determining if an activity has been satisfactorily completed.

1.7.5.2 IMPLEMENTATION

1.7.5.2.1

Instructions and procedures incorporate: 1) A description of the activity to be accomplished, and 2) appropriate quantitative (such as tolerances and operating limits) and qualitative (such as workmanship and standards) acceptance criteria sufficient to determine that the activity has been satisfactorily accomplished. Hold points for inspection are established when required.

Instructions and procedures pertaining to the specification of, and/or implementation of, the QA Program receive multiple reviews for technical adequacy and inclusion of appropriate quality requirements. Top tier instructions and procedures that define the quality assurance program requirements are reviewed and/or approved by performance assurance. Lower tier documents are reviewed and approved, as a minimum, by management/supervisory personnel trained to the level necessary to plan, coordinate and administer those day-to-day verification activities of the QA Program for which they are responsible.

Special procedures may be issued for activities which have short-term applicability.

1.7.5.2.2

I&M activities are outline by procedures which provide the controls for the implementation of these activities. I&M has the following categories of QA program implementation instructions and procedures:

- Policy statements
- Administrative documents
- Technical documents

1.7.5.2.3

Instructions and procedures identify the regulatory requirements and commitments which pertain to the subject that it will control and establish responsibilities for implementation. Instructions and procedures may either provide the guidance necessary for the development of supplemental instructions and/or procedures to implement their requirements, or provide comprehensive guidance based on the subject matter.

1.7.5.2.4

Cook Nuclear Plant drawings are produced, controlled and distributed under the control of I&M. I&M design drawings are produced by, or under the control of, nuclear engineering under a set of procedures which direct their development and review. These procedures specify requirements for inclusion of quantitative and qualitative acceptance criteria. Specific drawings are reviewed and approved by the cognizant engineering organization.

1.7.5.2.5

I&M technical procedures developed for extensive or complex tasks where reliance on memory cannot be trusted are designated as "Continuous Use." These procedures are continuously used at the controlling job site to ensure verification of completion of significant steps and recording of necessary data as the task is completed.

1.7.6 DOCUMENT CONTROL

1.7.6.1 SCOPE

Documents controlling activities within the scope defined in 1.7.2 herein are issued and changed according to established procedures. Documents such as instructions, procedures and drawings, including changes thereto, are reviewed for adequacy, approved for release by authorized personnel, and are distributed and used at the location where a prescribed activity is performed.

Changes to controlled documents are reviewed and approved by the same organizations that performed the original review and approval, or by other qualified, responsible organizations specifically designated in accordance with the procedures governing these documents. Obsolete or superseded documents are controlled to prevent inadvertent use.

1.7.6.2 IMPLEMENTATION

1.7.6.2.1

Controls are established for approval, issue and change of documents in the following categories:

a) Design documents (e.g., calculations, specifications, analyses)

b) Drawings and related documents

c) Procurement documents

d) Instructions and procedures

e) Updated Final Safety Analysis Report (UFSAR)

f) Plant Technical Specifications

g) Safeguards documents

1.7.6.2.2

The review, approval, issuance and change of documents are controlled by:

a) Establishment of criteria to ensure that adequate technical and quality requirements are incorporated.

b) Identification of the organization responsible for review, approval, issue and maintenance.

c) Review of changes to documents by the organization that performed the initial review and approval, or by the organization designated in accordance with the procedure governing the review and approval of specific types of documents.

1.7.6.2.3

Documents are issued and controlled so that:

a) The documents are available prior to commencing work.

b) Obsolete documents are replaced by current documents in a timely manner.

1.7.6.2.4

Master lists, or equivalent controls, are used to identify the current revision of instructions, procedures, specifications and drawings. These control documents are updated and distributed to designated personnel who are responsible for maintaining current copies of the applicable documents. The distribution of controlled documents is performed under procedures requiring receipt acknowledgement and in accordance with established distribution lists.

1.7.6.2.5

In the event a drawing is developed on-site to reflect an as-built configuration, the marked-up drawing is maintained in the Master Plant File and all holders of the drawing are issued appropriate notification to inform them the revision they hold is not current, cannot be used and, if required, reference must be made to the Master Plant File drawing.

1.7.6.2.6

Documents prepared for use in training are appropriately marked to indicate that they cannot be used to operate or maintain the facility or to conduct activities affecting the quality of safety-related items. At the Cook Nuclear Plant, unless a document is identified as 'controlled' or 'working copy' only, it is automatically assumed that the document is for information use only.

1.7.7 CONTROL OF PURCHASED ITEMS AND SERVICES

1.7.7.1 SCOPE

Activities that implement approved procurement requests for items and services are controlled to assure conformance with procurement document requirements. Controls include a system of supplier evaluation and selection audits, acceptance of items and documentation upon delivery, and periodic assessment of supplier performance. Objective evidence of quality that demonstrates conformance with specified procurement document requirements is available to the Cook Nuclear Plant site prior to use of equipment, material, or services.

1.7.7.2 IMPLEMENTATION

1.7.7.2.1

I&M qualifies suppliers (including distributors to the extent they perform quality related activities) by performing a documented evaluation of their capability to provide items or services specified by procurement documents. Items and services designated as safety-related are purchased from suppliers whose QA programs have been accepted in accordance with I&M requirements, or from commercial grade suppliers through the I&M dedication program. Suppliers of other items/services are subject to evaluation and approval based on acceptance criteria applicable to those items/services.

Qualification of such suppliers is determined performance assurance. In the discharge of this responsibility, performance assurance may use information generated by other utilities. The supplier must be

approved before procurement can be completed. I&M is a member of the Nuclear Procurement Issues Committee (NUPIC), participates in joint supplier audits, and shares audit information consistent with NUPIC requirements. The supplier must be acceptable, or acceptable subject to follow-up, before a procurement can be approved and processed. Additional audits will be conducted, as necessary, to meet requirements. Acceptance is not complete until it has been determined that the suppliers' QA program can meet the requirements for the item(s)/service(s) offered.

1.7.7.2.2

For items that are not unique to a nuclear power plant ("Commercial Grade") where application-specific requirements cannot be contractually imposed in a practical manner at the time of procurement, programs for dedication to safety-related standards are established by engineering personnel and accomplished prior to the item being accepted for safety-related use.

1.7.7.2.3

In-process audits of suppliers' activities during fabrication, inspection, testing and shipment of items are performed when deemed necessary, depending upon supplier qualification status, complexity of the item(s) being furnished, the items' importance to safety, and/or previous supplier history. These audits are performed by performance assurance. The cognizant engineer and/or responsible Cook Nuclear Plant personnel may also participate, if deemed necessary.

1.7.7.2.4

Spare and replacement parts are procured in such a manner that their performance and quality are at least equivalent to those of the parts that will be replaced.

a) Specifications and codes referenced in procurement documents for spare or replacement items are at least equivalent to those for the original items or to properly reviewed and approved revisions.

b) Parts intended as spares or replacement for "off-the-shelf" items, or other items for which quality requirements were not originally specified, are evaluated for performance at least equivalent to the original.

c) Where quality requirements for the original items cannot be determined, requirements and controls are established by engineering evaluation performed by qualified individuals. The evaluation assures there is no adverse effect on interfaces, safety, interchangeability, fit, form, function, or compliance with applicable regulatory or code requirements. Evaluation results are documented.

d) Any additional or modified design criteria, imposed after previous procurement of the item(s), are identified and incorporated.

1.7.7.2.5

Instructions and procedures address the requirements for supplier selection and control, as well as procurement document control. The program for receipt inspection of safety-related items addresses inspection of incoming items, including a review of the documentation required under the procurement. Receipt inspection personnel are qualified and certified in accordance with the requirements of ANSI N45.2.6. Provisions for receipt inspection apply regardless of where the procurement originates. Additional inspections may apply if required by the procurement document.

Items, which have special procurement requirements (such as nuclear fuel and nuclear fuel components), may involve detailed source evaluations or audits at the supplier's facility prior to shipment to supplement receipt inspection. Personnel performing these evaluations and audits will be qualified in accordance with ANSI N18.1 and/or ANSI N45.2.23. Receipt inspections at the site will be performed by personnel certified to ANSI N45.2.6. In addition, reviews of special procurement documents or shipping manifests will be performed by personnel trained in the procurement and qualified in accordance with ANSI N18.1.

Where items and/or services are safety-related and procurement is accomplished without assistance of I&M, supplier selection is limited to those companies identified as being qualified.

1.7.7.2.6

Items received at the site are tagged with a "HOLD" tag and/or placed in a designated area (e.g. new nuclear fuel) until receipt inspected. During receipt inspection, designated material characteristics and attributes are checked, and documentation is checked against the procurement documents. When the receipt inspection of items is supplemented by source evaluations or audits at the vendor prior to shipment, appropriate visual and/or mechanical inspections will be completed to ensure that shipping damage has not occurred. If found acceptable, the "HOLD" tag is removed and replaced with an "ACCEPTED" tag and/or the item is placed in a designated area.

Item traceability to procurement documents and to end use is maintained through recording of identification numbers or, "HOLD" and "ACCEPTED" tag numbers on applicable documents.

Nonconforming items, or missing or questionable documentation results in items being placed on "HOLD" and maintained in a designated, controlled area. If the nonconformance cannot be cleared, the item is either scrapped, returned to manufacturer, or dispositioned through engineering analysis.

1.7.7.2.7

Contractors providing services (on-site) for safety-related components are required to have either a formal quality assurance program and procedures, or they must abide by the I&M QA Program and procedures. Prior to their working at

the Cook Nuclear Plant, contractors working under their own quality assurance programs must be audited and approved by performance assurance. Contractor procedures must be reviewed and approved by the originating/sponsoring department head. Further, periodic audits of site contractor activities are conducted under the direction of performance assurance.

1.7.7.2.8

To the extent prescribed in specific procurement documents, suppliers furnish quality records; documentary evidence that material and equipment either conforms to requirements or identifies any requirements that have not been met; and descriptions of those nonconformances from the procurement requirements, which have been dispositioned "use-as-is" or "repair." This evidence is retained by I&M.

To the extent prescribed in specific procurement agreements, suppliers are required to maintain additional (backup) documents in their record system.

In some cases, such as with NSSS, suppliers are designated primary record retention responsibility.

1.7.7.2.9

The capability of suppliers to furnish valid documentation is evaluated during procurement document reviews, annual supplier evaluations, and during audits.

1.7.8 IDENTIFICATION AND CONTROL OF ITEMS

1.7.8.1 SCOPE

Items are identified and controlled to prevent their inadvertent use. Identification of items is maintained either on the items, their storage areas or containers, or on records traceable to the items.

1.7.8.2 IMPLEMENTATION

1.7.8.2.1

Controls are established that provide for the identification and control of items (including partially fabricated assemblies).

1.7.8.2.2

Items are identified by physically marking the item or its container, and by maintaining records traceable to the item. The method of identification is such that the quality of the item is not degraded.

1.7.8.2.3

Items are traceable to applicable drawings, specifications, or other pertinent documents to ensure that only correct and acceptable items are used. Verification of traceability is performed and documented prior to release for fabrication, assembly, or installation.

1.7.8.2.4

Requirements for the identification by use of heat number, part number, serial number, etc., are included in engineering specifications and/or the procurement document.

1.7.8.2.5

Separate storage is provided for incorrect or defective items that are on hold and material which has been accepted for use. All safety-related items are appropriately tagged or identified (stamping, etc.) to provide easy identification as to the items' usage status. Records are maintained for the issue of items to provide traceability from storage to end use in the Cook Nuclear Plant.

1.7.8.2.6

When materials are subdivided, appropriate identification numbers are transferred to each section of the material, or traceability is maintained through documentation.

1.7.9 CONTROL OF SPECIAL PROCESSES

1.7.9.1 SCOPE

Special processes are controlled and accomplished by qualified personnel using approved procedures and equipment in accordance with applicable codes, standards, specifications, criteria and other special requirements.

1.7.9.2 **IMPLEMENTATION**

1.7.9.2.1

Processes subject to special process controls are those for which full verification or characterization by direct inspection is impossible or impractical. Such processes include welding, heat treating, chemical cleaning, application of protective coatings, concrete placement and NDE.

1.7.9.2.2

Special process requirements for chemical cleaning, application of protective coatings and concrete placement are set forth in engineering specifications and/or directives prepared by the responsible cognizant engineer. These documents are reviewed and approved by other personnel with the necessary technical competence.

Special process requirements for welding, heat treating and NDE are set forth in engineering specifications, the Welding Manual and plant procedures. Special process requirements for welding and heat treating are prepared by, or are reviewed and approved by, the cognizant engineer welding. Special process requirements for NDE are prepared by, or are reviewed and approved by, the NDE administrator and/or Cook Nuclear Plant NDE Level III personnel.

Special process procedures, with the exception of welding and heat treating, are prepared by Cook Nuclear Plant personnel with technical knowledge in the discipline

involved. These procedures, which are also reviewed by other personnel with the necessary technical competence, are qualified by testing.

Welding is performed in accordance with procedures contained in the Welding Manual, or by approved contractor's procedures. These procedures are qualified in accordance with applicable codes, and Procedure Qualification Records are prepared. Weld procedure specifications are reviewed and approved by the cognizant engineer - welding. Weld procedure qualification documentation is retained in the AEP Welding Manual, or the approved contractor's manual.

Contractor welding procedures are qualified by the contractor. These procedures and the qualification documentation are reviewed and approved by the cognizant engineer welding. This documentation is retained by the contractor.

1.7.9.2.3

NDE personnel are qualified and certified by a Cook Nuclear Plant NDE Level III who has been qualified and certified by the designated NDE administrator. Certification is by examination. Personnel qualification is kept current by re-examination at time intervals specified in qualification/ certification procedures which are in accordance with the ASME Code.

Cook Nuclear Plant welders are qualified by the maintenance organization, and/or the project management and installation services organization using approved welding procedure specifications. Administration of Cook Nuclear Plant welder qualifications is performed by the maintenance, and/or the project management and installation services organizations. Examination of qualification specimens is performed under the supervision of the performance assurance organization in accordance with the Welding Manual and nuclear engineering specifications covering welder qualification. Cook Nuclear Plant welder qualification records are maintained for maintenance and contractor welders by nuclear engineering. Contractor welders are qualified by the contractor using procedures approved by the cognizant engineer welding in accordance with I&M procedures. Contractor qualification records are maintained by the contractor.

1.7.9.2.4

QC/NDE technicians assigned to performance assurance perform nondestructive testing for work performed by Cook Nuclear Plant and contractor personnel. These individuals are qualified to either SNT-TC-1A, or ANSI N45.2.6, and records of the qualifications/certifications are maintained by I&M.

1.7.9.2.5

For special processes that require qualified equipment, such equipment is qualified in accordance with applicable codes, standards and specifications.

1.7.9.2.6

Special process qualifications are reviewed during regularly scheduled QA audits. Qualification records are maintained in accordance with 1.7.17 herein.

1.7.9.2.7

The documentation resulting from welding and nondestructive testing is reviewed by appropriate personnel.

1.7.10 INSPECTION

1.7.10.1 SCOPE

Activities affecting the quality of safety-related structures, systems and components are inspected to verify their conformance with requirements. These inspections are performed by personnel other than those who perform the activity. Inspections are performed by qualified personnel utilizing written procedures which establish prerequisites and provide documentation for evaluating test and inspection results. Direct inspection, process monitoring, or both, are used as necessary. When applicable, hold points are used to ensure that inspections are accomplished at the correct points in the sequence of activities.

1.7.10.2 IMPLEMENTATION

1.7.10.2.1

Inspections are applied to appropriate activities to assure conformance to specified requirements.

Hold points are provided in the sequence of procedures to allow for the inspection, witnessing, examination, measurement, or review necessary to assure that the critical, or irreversible, elements of an activity are being performed as required. Note that hold points may not apply to all procedures but each procedure which includes inspections must be reviewed for this attribute.

Hold points specify exactly what is to be done (e.g., type of inspection or examination, etc.), acceptance criteria, or reference to another procedure, etc., for the satisfactory completion of the hold point. When hold points are included in the sequence of a procedure, the activities required by hold points are completed prior to continuing work beyond that point.

Process monitoring is used in whole, or in part, where direct inspection alone is impractical or inadequate.

1.7.10.2.2

Training, qualification and certification programs for personnel who perform inspections are established, implemented and documented in accordance with 1.7.2 herein and as described in Appendix B hereto, item 9b, with exceptions as noted therein.

1.7.10.2.3

Inspection requirements are specified in procedures, instructions, drawings or checklists as applicable. They provide for the following, as appropriate:

a) Identification of applicable revisions of required instructions,drawings and specifications.

b) Identification of characteristics and activities to be inspected.

c) Inspection methods.

d) Specification of measuring and test equipment having the necessary accuracy.

e) Identification of personnel responsible for performing the inspection.

f) Acceptance and rejection criteria.

g) Recording of the inspection results and the identification of the inspector.

1.7.10.2.4

Inspections are conducted using the following programs:

a. Peer Inspection Program. The Peer Inspection Program is based on the premise that I&M personnel are qualified to ANSI N18.1 (1971), Selection and Training of Nuclear Power Plant Personnel, and are periodically trained in their skill area using INPO accredited training. As a result of their experience, qualifications, and training, I&M personnel may perform inspections of work functions associated with normal operation of the Plant, routine maintenance, and certain routine technical

activities which are routinely performed by I&M personnel (peers). Peer inspection personnel are independent in that they do not perform or directly supervise the work being inspected, but they may be from the same work group.

b. ANSI N45.2.6 Inspection Program. Major modification and non-routine maintenance work on safety-related equipment is inspected per ANSI N45.2.6, Qualifications of Inspection, Examination, and Testing Personnel for Nuclear Power Plants, whether it is performed by I&M or contractor personnel. All safety-related work performed by contract personnel is inspected per ANSI N45.2.6. Inspections of these work activities are performed by inspectors qualified and certified in accordance with Regulatory Guide 1.58 and ANSI N45.2.6. Contractors performing work on safety-related equipment are required to comply with the applicable requirements of Regulatory Guide 1.33 and ANSI N45.2.

1.7.10.2.5

Inspections associated with the packaging and shipment of radioactive waste and materials are conducted using the following program:

a) NRC Licensed Packagings - Inspections of NRC licensed radioactive material packagings shall be performed by individuals independent from the work being performed. The independent inspectors shall be I&M personnel, qualified in accordance with Regulatory Guide 1.8 and ANSI N18.1, as a minimum.

Additionally, the inspector shall be familiar with the activities being performed.

b) Non-NRC Licensed Packagings and Containers - Inspections of non-NRC licensed radioactive material packagings and containers (shipping and/or burial) shall be performed by I&M personnel, qualified in accordance with Regulatory Guide 1.8 and ANSI N18.1, as a minimum.

c) Transportation Vehicles - Inspection of transportation vehicles being shipped as "exclusive use", shall be performed by I&M personnel, qualified in accordance with Regulatory Guide 1.8 and ANSI N18.1, as a minimum.

d) Other inspections and Verification - Inspections and verifications of other activities associated with the packaging and shipment of radioactive materials and waste shall be performed by I&M personnel, qualified in accordance with Regulatory Guide 1.8 and ANSI N18.1, as a minimum.

1.7.10.2.6

Inspections are performed, documented, and the results evaluated by designated personnel in order to ensure that the results substantiate the acceptability of the item or work. Evaluation and review results are documented.

1.7.11 TEST CONTROL

1.7.11.1 SCOPE

Testing is performed in accordance with established programs to demonstrate that structures, systems and components will perform satisfactorily in service. The testing is performed by qualified personnel in accordance with written procedures that incorporate specified requirements and acceptance criteria. Types of tests are:

Scheduled

Surveillance, preventive maintenance, post-design, qualification.

Unscheduled

Pre-maintenance and post-maintenance.

Test parameters (including any prerequisites), instrumentation requirements, and environmental conditions are specified in test procedures. Test results are documented and evaluated.

1.7.11.2 IMPLEMENTATION

1.7.11.2.1

Tests are performed in accordance with programs, procedures and criteria that designate when tests are required and how they are to be performed. Such testing includes the following:

a) Qualification tests, as applicable, to verify design adequacy.

b) Acceptance tests of equipment and components to assure their operation prior to delivery or installation.

c) Post-design tests to assure proper and safe operation of systems and equipment prior to unrestricted operation.

d) Surveillance tests to assure continuing proper and safe operation of systems and equipment. The PMI on surveillance testing controls the periodic testing of equipment and systems to fulfill the surveillance requirements established by the Technical Specifications and the Administrative Technical Requirements. Controls have been established to identify uncompleted surveillance testing to assure it is rescheduled for completion to meet Technical Specification and the Administrative Technical Requirements frequency requirements. Data taken during surveillance testing is reviewed by appropriate management personnel to assure that acceptance criteria is fulfilled, or corrective action is taken to correct deficiencies.

e) Maintenance tests after preventive or corrective maintenance.

1.7.11.2.2

Test procedures, as required, provide mandatory hold points for witness or review.

1.7.11.2.3

Testing is accomplished after installation, maintenance, or repair, by surveillance test procedures, or performance tests, which must be satisfactorily completed prior to determining the equipment is in an operable status, or as specified by the governing technical specification for the equipment addressed. All data resulting from these tests is retained at the Cook Nuclear Plant after review by appropriate management personnel.

1.7.12 CONTROL OF MEASURING AND TEST EQUIPMENT

1.7.12.1 SCOPE

Measuring and testing equipment used in activities affecting the quality of safety-related structures, systems and components are properly identified, controlled, calibrated and adjusted at specified intervals to maintain accuracy within necessary limits.

1.7.12.2 IMPLEMENTATION

1.7.12.2.1

Established procedures and instructions are used for calibration and control of measuring and test equipment utilized in the measurement, inspection and monitoring of

structures, systems and components. These procedures and instructions describe calibration techniques and frequencies, and maintenance and control of the equipment.

Performance assurance periodically assesses the effectiveness of the calibration program via the audit program.

1.7.12.2.2

Measuring and test equipment is uniquely identified and is traceable to its calibration source.

1.7.12.2.3

A system has been established for attaching, or affixing labels, to measuring and test equipment to display the date calibrated and the next calibration due date, or a control system is used that identifies to potential users any equipment beyond the calibration due date.

1.7.12.2.4

Measuring and test equipment is calibrated at specified intervals. These intervals are based on the frequency of use, stability characteristics and other conditions that could adversely affect the required measurement accuracy. Calibration standards are traceable to nationally recognized standards; or where such standards do not exist, provisions are established to document the basis for calibration.

The primary standards used to calibrate secondary standards have, except in certain instances, an accuracy of at least four (4) times the required accuracy of the secondary standard. In those cases where the four (4) times accuracy cannot be achieved, the basis for acceptance is documented and is authorized by the responsible manager. The secondary standards have an accuracy that assures equipment being calibrated will be within required tolerances. The basis for acceptance is documented and authorized by the responsible manager.

1.7.12.2.5

Cook Nuclear Plant procedures define the requirements for the control of standards, test equipment and process equipment.

1.7.12.2.6

When measuring and testing equipment used for inspection and testing is found to be outside of required accuracy limits at the time of calibration, evaluations are conducted to determine the validity of the results obtained since the most recent calibration. Retests, or reinspections, are performed on suspect items. The results of evaluations are documented.

1.7.13 HANDLING, STORAGE, AND SHIPPING

1.7.13.1 SCOPE

Activities with the potential for causing contamination or deterioration, by environmental conditions such as temperature or humidity that could adversely affect the

ability of an item to perform its safety-related functions and activities necessary to prevent damage or loss, are identified and controlled. These activities are cleaning, packaging, preserving, handling, shipping and storing. Controls are effected through the use of appropriate procedures and instructions.

1.7.13.2 **IMPLEMENTATION**

1.7.13.2.1

Procedures are used to control the cleaning, handling, storing, packaging, preserving and shipping of materials, components and systems in accordance with designated procurement requirements. These procedures include, but are not limited to, the following functions:

a) Cleaning - to assure that required cleanness levels are achieved and maintained.

b) Packaging and preservation - to provide adequate protection against damage or deterioration. When necessary, these procedures provide for special environments, such as inert gas atmosphere, specific moisture content levels and temperature levels.

c) Handling - to preclude damage or safety hazards.

d) Storing - to minimize the possibility of loss, damage or deterioration of items in storage, including consumables such as chemicals, reagents and lubricants.

1.7.13.2.2

Controls have been established for limited shelf life items such as "O" rings, epoxy, lubricants, solvents and chemicals to assure they are correctly identified, stored and controlled to prevent shelf life expired materials from being used in the Cook Nuclear Plant. Controls are established in plant procedures.

1.7.13.2.3

Packaging and shipping requirements are provided to vendors in engineering specifications (DCCs) which are a part of the procurement document, or are otherwise specified in the procurement document. Controls for receipt inspection, damaged items and special handling requirements at the Cook Nuclear Plant are established by plant procedures. Special controls are provided to assure that stainless steel components and materials are handled with approved lifting slings.

1.7.13.2.4

Storage and surveillance requirements have been established to assure segregation of storage. Special controls have been implemented for critical, high value, or perishable items. Routine surveillance is conducted on stored material to provide inspection for damage, rotation of stored pumps and motors, inspection for protection of exposed surfaces and cleanness of the storage area.

1.7.13.2.5

Special handling procedures have been implemented for the processing of nuclear fuel during refueling outages. These procedures minimize the risk of damage to the new and spent fuel and the possible release of radioactive material when placing the spent fuel into the spent fuel pool.

1.7.14 INSPECTION, TEST, AND OPERATING STATUS

1.7.14.1 SCOPE

Operating status of structures, systems and components is indicated by tagging of valves and switches, or by other specified means, in such a manner as to prevent inadvertent operation. The status of inspections and tests performed on individual items is clearly indicated by markings and/or logging under strict procedural controls to prevent inadvertent bypassing of such inspections and tests.

1.7.14.2 IMPLEMENTATION

1.7.14.2.1

For design change activities, including item fabrication, installation and test, a program exists which specifies the degree of control required for the identification of inspection and test status of structures, systems and components.

Physical identification is used to the extent practical to indicate the status of items requiring inspections, tests, or examinations. Procedures exist which provide for the use of calibration and rejection stickers, tags, stamps and other forms of identification to indicate test and

inspection status. The Clearance Permit System uses various tags to identify equipment and system operability status. Another program establishes a tagging system for lifted leads, etc. For those items requiring calibration, the program provides for physical indication of calibration status by calibration stickers, or a control system is used.

1.7.14.2.2

Application and removal of inspection and welding stamps, and of such status indicators as tags, markings, labels, etc., is controlled by plant procedures.

The inspection status of materials received at the Cook Nuclear Plant is identified in accordance with established instructions. The status is identified as Hold, Hold for Quality Control Clearance, Reject, or Accept.

The inspection status of work in progress is controlled by the use of hold points in procedures. Performance assurance, or departmental ANSI N18.1 qualified personnel (reference 1.7.10.2.4 herein), inspect an activity at various stages and sign off the procedural inspection steps.

The status of welding is controlled through the use of a weld data block which identifies the inspection and NDE status of each weld.

1.7.14.2.3

Required surveillance test procedures are defined in PMIs. These instructions provide for documenting bypassed tests and rescheduling of the test.

The status of testing after minor maintenance is recorded as part of the Job Order and/or procedure. The status of testing after major maintenance is included as part of the procedure, and includes the performance of functional testing and approval of data by supervisory personnel.

Testing, inspection and other operations important to safety are conducted in accordance with properly reviewed and approved procedures. The PMI for plant procedures requires that procedures be followed as written. Alteration to the sequence of a procedure can only be accomplished by a procedure change which is subject to the same controls as the original review and approval. When an immediate procedure change is required to continue in-process work or testing and the required complete review and approval process cannot be accomplished, an "On The Spot" change is processed in accordance with the PMI on plant procedures.

1.7.14.2.4

Nonconforming, inoperable, or malfunctioning structures, systems and components are clearly identified by tags, stickers, stamps, etc., and documented to prevent inadvertent use.

1.7.15 NONCONFORMING ITEMS

1.7.15.1 SCOPE

Materials, parts, or components that do not conform to requirements are controlled in order to prevent their inadvertent use. Nonconforming items are identified, documented, segregated when practical and dispositioned. Affected organizations are notified of nonconformances.

1.7.15.2 IMPLEMENTATION

1.7.15.2.1

Items, services, or activities that are deficient in characteristic, documentation, or procedure, which render the quality unacceptable or indeterminate, are identified as nonconforming and any further use is controlled. Nonconformances are documented and dispositioned, and notification is made to affected organizations. Personnel authorized to disposition, conditionally release and close out nonconformances are designated.

The Job Order System and/or the Condition Reports (refer to 1.7.16 herein) are used at Cook Nuclear Plant to identify nonconforming items and initiate corrective action for items which are installed or have been released to the Cook Nuclear Plant. Systems, components, or materials which require repair or inspection are controlled under the Job Order System. In addition, the various procedures identified in 1.7.14 herein provide for identification, segregation and documentation of nonconforming items.

1.7.15.2.2

Nonconforming items are identified by marking, tagging, segregating, or by documented administrative controls. Documentation describes the nonconformance, the disposition of the nonconformance and the inspection requirements. It also includes a signature approval of the disposition.

Completed Job Order activities are reviewed by the supervisor responsible for accomplishing the work. Performance assurance periodically audits the Job Order System, and on a sample basis, Job Orders.

1.7.15.2.3

Items that have been repaired or reworked are inspected and tested in accordance with the original inspection and test requirements, or alternatives, that have been documented.

Items that have the disposition of "repair" or "use-as-is" require documentation justifying acceptability. The changes are recorded to denote the as-built condition.

When required by established procedures, surveillance or operability tests are conducted on an item after rework, repair or replacement.

1.7.15.2.4

Disposition of conditionally released items are closed out before the items are relied upon to perform safety-related functions.

1.7.16 CORRECTIVE ACTION

1.7.16.1 SCOPE

Conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are identified promptly and corrected as soon as practical in accordance with the approved QA program and incorporate safety reviews, as necessary.

For significant conditions adverse to quality, the cause of the condition is determined, immediate and/or interim corrective action is taken to correct the condition, as well as long term action to prevent recurrence. In these cases, the condition, cause and corrective action taken is documented and reported to appropriate levels of management.

1.7.16.2 IMPLEMENTATION

1.7.16.2.1

Instructions are established that define the corrective action program. These instructions are reviewed and concurred with by performance assurance. Procedures that implement the corrective action program are reviewed and approved, as a minimum, by management/supervisory personnel trained to the level necessary to plan, coordinate and administer those day-to-day activities of the corrective action program.

1.7.16.2.2

Condition Reports and audit/surveillance reports provide the mechanism for personnel to notify management of conditions adverse to quality. Condition Reports are also used to report violations to codes, regulations and the Technical Specifications. A screening committee assesses reported conditions for significance, and assignment to responsible organizations. Results of the screening committee's activities are provided to management to help management maintain cognizance of reported conditions and assignments. For conditions adverse to quality, Condition Reports are used to document the corrective actions taken and any investigation requested by the screening committee. In the case of significant conditions adverse to quality, Condition Reports are used to identify corrective actions, investigations and those actions necessary to prevent recurrence of the reported condition.

Corrective Action Program data is analyzed to identify potential trends and the results are provided in regular reports to management. Those trends determined to be adverse are considered significant conditions adverse to quality.

The Corrective Action Review Board (CARB) evaluates actions taken or being taken to correct and prevent recurrence of significant conditions adverse to quality. This review will contain but will not be limited to:

a. a violation of Technical Specification

b. a reportable event

c. any accidental, unplanned, or uncontrolled radioactive release

d. a safety-related adverse trend

e. a potential nuclear safety hazard

f. an entry into Technical Specification LCO 3.0.3 (failure to comply with LCO's not containing specific shutdown schedule)

g. Technical Specification LCO entry that was the result of personnel error.

The CARB will provide a report of review activities to the NSDRC.

The NSDRC is responsible for assuring that independent reviews of violations (as specified in Appendix C) are performed. These violations are considered significant conditions that are documented on Condition Reports. The reviews will provide an independent evaluation of the reported conditions and corrective actions.

Performance assurance periodically audits the corrective action system for compliance and effectiveness.

1.7.17 QUALITY ASSURANCE RECORDS

1.7.17.1 SCOPE

Records that furnish evidence of activities affecting the quality of safety-related structures, systems and components are maintained. They are accurate, complete, legible and are protected against damage, deterioration, or loss. They are identifiable and retrievable.

1.7.17.2 IMPLEMENTATION

1.7.17.2.1

Documents that furnish evidence of activities affecting the quality of safety-related items are generated and controlled in accordance with the procedure that governs those activities. Upon completion, these documents are considered records. These records include:

a) Results of reviews, inspections, surveillances, tests, audits and material analyses.
b) Qualification of personnel, procedures and equipment.
c) Operation logs.
d) Maintenance and modification procedures and related inspection results.
e) Reportable occurrences.
f) Records required by the plant Technical Specifications and Appendix C to this QAPD.
g) Condition Reports.
h) Other documentation such as drawings, specifications, dedication plans, procurement documents, calibration procedures and reports.
i) Radiographs.

1.7.17.2.2

Instructions and procedures establish the requirements for the identification and preparation of records for systems and equipment under the QA Program, and provide the controls for retention of these records.

Criteria for the storage location of quality related records, and a retention schedule for these records, has been established.

File Indexes have been established to provide direction for filing, and to provide for the retrievability of the records.

Controls have been established for limiting access to the Plant Master File to prevent unauthorized entry, unauthorized removal, and for use of the records under emergency conditions. The Nuclear Records Management Supervisor is responsible for the control and operation of the Plant Master File Room.

1.7.17.2.3

Within I&M, each manager is responsible for the identification, collection, maintenance and storage of records generated by their organization. Procedures ensure the maintenance of records sufficient to furnish objective evidence that activities affecting quality are in compliance with the established QA Program.

1.7.17.2.4

When a document becomes a record, it is designated as permanent, or nonpermanent, and then transmitted to file. Nonpermanent records have specified retention times. Permanent records are maintained for the life of the plant or equipment, as applicable.

1.7.17.2.5

Only authorized personnel may issue corrections or supplements to records.

1.7.17.2.6

Traceability between the record and the item or activity to which it applies is provided.

1.7.17.2.7

Except for records that can only be stored as originals, such as radiographs and some strip charts, or micrographs thereof, records are stored in remote, dual facilities to prevent damage, deterioration, or loss due to natural or unnatural causes. When only the single original can be retained, special fire-rated facilities are used.

When optical disk technology is used for records storage, the following quality controls are used:

- The optical disk technology does not allow deletion or modification of record images.
- The image of each record is written onto two optical disks.

- The legibility of each record image is verified to ensure that the image is legible on both disks. If the image is illegible, the hard copy record is maintained as the record copy.
- One optical disk is stored in the document imaging system for on-line retrieval.
- The second (backup) optical disk is stored in a special fire-rated facility or in a separate remote location.
- To ensure permanent retention of records, the records stored on an optical disk are acceptably copied onto a new optical disk before the manufacturer's certified useful life of the original disk is exceeded. This includes verification of the records so copied.
- Periodic random inspections of images stored on optical disks are performed to verify that there has been no degradation of image quality.
- If the optical disk document imaging system in use is to be replaced by an incompatible new system, the records stored on the old system's disks are acceptably converted into the new system before the old system is taken out of service. This includes verification of the records so copied.

1.7.18 AUDITS

1.7.18.1 SCOPE

A comprehensive system of audits is carried out to provide independent evaluation of compliance with, and the effectiveness of, the QA Program including those elements of the program implemented by suppliers and contractors.

The system of audits includes limited scope surveillances, which provide flexibility for more timely coverage of certain activities. Audits are performed in accordance with written procedures or checklists by qualified personnel not having direct responsibility in the areas audited. Audit results are documented and reviewed by management. Follow-up action is taken where indicated.

1.7.18.2 **IMPLEMENTATION**

1.7.18.2.1 Performance Assurance Responsibilities

The basic responsibility for the assessment of the QA Program is vested in performance assurance. Performance assurance is primarily responsible for ensuring that proper QA programs are established and for verification of their implementation. These responsibilities are discharged in cooperation with I&M management and their staffs.

1.7.18.2.2

Internal audits are performed in accordance with established schedules that reflect the status and importance of safety to the activities being performed. All areas where the requirements of 10CFR50, Appendix B apply are audited within a period of one to two years.

1.7.18.2.3

Performance assurance conducts audits to verify the adequacy and implementation of the QA Program at I&M and within the AEP System. QA audit reports are distributed to the appropriate management and the NSDRC (all audits).

1.7.18.2.4

The independent off-site review and audit organization is the NSDRC. This committee is described in Appendix C to this QAPD. An NSDRC Manual has been developed for this committee which contains the NSDRC Charter and procedures. The NSDRC conducts periodic audits of Cook Nuclear Plant operations pursuant to Appendix C to this QAPD.

NSDRC audit reports are submitted for review to the NSDRC membership and the Chair of the NSDRC. Condition Reports and/or audit reports provide for the recording of actions taken to correct deficiencies found during these audits.

1.7.18.2.5

The I&M on-site review group is the PORC. This committee reviews plant operations as a routine evaluation and serves to advise the site vice president on matters related to nuclear safety. The composition of the committee is defined in Appendix C to this QAPD.

The PORC also reviews instructions, procedures, and design changes for safety-related systems prior to approval by the site vice president. In addition, this committee serves to conduct investigations of violations of Technical Specifications. The Corrective Action Review Board (CARB) reviews significant Condition Reports to determine if appropriate action has been taken.

1.7.18.2.6

Audits of suppliers and contractors are scheduled based on the status of safety importance of the activities being performed, and are initiated early enough to assure effective quality assurance during design, procurement, manufacturing, construction, installation, inspection and testing.

Principal contractors are required to audit their suppliers systematically in accordance with the criteria established within their quality assurance programs.

1.7.18.2.7

Regularly scheduled audits are supplemented by "special audits" when significant changes are made in the QA program, when it is suspected that quality is in jeopardy, or when an independent assessment of program effectiveness is considered necessary.

1.7.18.2.8

Audits include an objective evaluation of practices, procedures, instructions, activities and items related to quality; and a review of documents and records to confirm that the QA Program is effective and properly implemented.

1.7.18.2.9

Audit procedures and the scope, plans, checklists and results of individual audits are documented.

1.7.18.2.10

Personnel selected for auditing assignments have experience, or are given training commensurate with the needs of the audit, and have no direct responsibilities in the areas audited.

1.7.18.2.11

Management of the audited organization identifies and takes appropriate action to correct observed deficiencies. In the case of significant conditions adverse to quality, appropriate action is taken to prevent recurrence. Follow-up is performed by the auditing organization on selected adverse conditions, to ensure that the appropriate actions were taken. Such follow-up actions may include, but are not limited to, re-audits, subsequent audits, surveillances, or other appropriate means.

1.7.18.2.12

The adequacy of the QA Program is regularly assessed by management. The following activities constitute formal elements of that assessment:

a) Audit reports, including follow-up on corrective action accomplishment and effectiveness, are distributed to appropriate levels of management.

b) Individuals independent from the QA organization, but knowledgeable in auditing, and quality assurance, periodically review the effectiveness of the QA programs. Conclusions and recommendations are reported to the I&M vice president.

1.7.19 FIRE PROTECTION QA PROGRAM

1.7.19.1 Introduction

The Cook Nuclear Plant Fire Protection QA Program has been developed using the guidance of NRC Branch Technical Position (APCSB) 9.5-1, Appendix A, Section C, "Quality Assurance Program," and NRC clarification "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance," dated June 14, 1977. As such, the Fire Protection QA Program is part of the overall QA Program for the plant. The Fire Protection QA Program encompasses design, procurement, fabrication, construction, surveillance, inspection, operation, maintenance, modification, and audits.

Implementation and assessment of the Fire Protection QA Program is the responsibility of I&M.

1.7.19.2 Organization

The Fire Protection QA Program is under the management and control of I&M. This control consists of:

1) Verifying the effectiveness of the Fire Protection QA Program through review, surveillance, and audits.

2) Directing formulation, implementation, and assessment of the Fire Protection QA Program by procedural controls.

3) Assuring the QA program is acceptable to the management responsible for fire protection.

The site vice president has delegated responsibility to various Cook Nuclear Plant departments for the following fire protection activities:

a) Maintenance of fire protection systems.
b) Testing of fire protection equipment.
c) Fire safety inspections.
d) Fire pre-plans.
e) Fire drills.
f) Emergency remote shutdown procedures.
g) Emergency repair procedures (10CFR50, Appendix R).

The Fire Protection QA Program at the Cook Nuclear Plant also provides for inspection of fire hazards, explosion hazards, and training of fire brigade and responding fire departments.

The plant protection department's fire protection shift supervisor on duty, or designee, is designated as the fire brigade leader and coordinates the fire fighting efforts of the fire brigade. The operations department provides an individual with plant systems knowledge to serve as an advisor to the fire brigade leader.

1.7.19.3 Design Control and Procurement Document Control

Quality standards are specified in the design documents such as appropriate fire protection codes and standards, and, as necessary, deviations and changes from these quality standards are controlled.
The Cook Nuclear Plant design was reviewed by qualified personnel to ensure inclusion of appropriate fire protection requirements. These reviews include items such as:

1) Verification as to the adequacy of electrical isolation and cable separation criteria.

2) Verification of appropriate requirements for room isolation (sealing penetrations, floors and other fire barriers).

3) Determination for increase in fire loadings.

4) Determination for the need of additional fire detection and suppression equipment.

Procurement of fire protection equipment and related items are subject to the requirements of the fire protection

procurement documents. A review of these documents is performed to assure fire protection requirements and quality requirements are correctly stated, verifiable, and controllable, and that there is adequate acceptance and rejection criteria. Procurement documents must be prepared, reviewed, and approved according to QA Program requirements.

Design and procurement document changes, including field changes and design deviations, are controlled by procedure.

1.7.19.4 Instructions, Procedures and Drawings

Inspections, tests, administrative controls, fire drills and training that assist in implementing the fire protection program are prescribed by approved instructions or procedures.

Indoctrination and training programs for fire prevention and fire fighting are implemented in accordance with approved procedures. Activities associated with the fire protection systems and fire protection related systems are prescribed and accomplished in accordance with documented instructions, procedures, and drawings. Instructions and procedures for design, installation, inspection, tests, maintenance, modification and administrative controls are reviewed through audits to assure that the fire protection program is maintained.

Operation and maintenance information has been provided to the plant in the form of System Descriptions and equipment supplier information.

1.7.19.5 Control of Purchased Items and Services

Measures are established to assure that purchased items and services conform to procurement documents. These measures include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor, inspections at suppliers, or receipt inspection.

Source or receipt inspection is provided, as a minimum, for those items where quality cannot be verified after installation.

1.7.19.6 Inspection

A program for independent inspection of the fire protection activities has been established and implemented.

These inspections are performed by personnel other than those responsible for implementation of the activity. The inspections include:

a) Inspection of installation, maintenance and modification of fire protection systems and equipment.

b) Inspections of penetration seals and fire retardant coating installations to verify the activity is satisfactorily completed in accordance with installation specifications.

c) Inspections of cable routing to verify conformance with design requirements as specified in engineering specifications and/or plant procedures.

d) Inspections to verify that appropriate requirements for fire barriers are satisfied following installation, modification, repair or replacement activities.

e) Measures to assure that inspection personnel are independent from the individuals performing the activity being inspected and are knowledgeable in the design and installation requirements for fire protection.

f) Inspection procedures, instructions or checklists for required inspections.

g) Periodic inspections of fire protection systems, emergency breathing and auxiliary equipment.

h) Periodic inspections of materials subject to degradation, such as fire stops, seals and fire retardant coating as required by the Administrative Technical Requirements or manufacturer's recommendations.

1.7.19.7 Test and Test Control

a) Installation testing - Following installation, modification, repair, or replacement, sufficient testing is performed to demonstrate that the fire protection systems and equipment will perform

satisfactorily. Written test procedures for installation tests incorporate the requirements and acceptance limits contained in applicable design documents.

b) Periodic testing - Periodic testing occurs to document that fire protection equipment functions in accordance with its design.

c) Programs have been established to verify the testing of fire protection systems, and to verify that test personnel are effectively trained.

d) Test results are documented, evaluated, and their acceptability determined by a qualified responsible individual or group.

1.7.19.8 Inspection, Test and Operating Status

The inspection, test and operating status for plant Administrative Technical Requirements fire protection systems are performed as described in 1.7.14 herein.

1.7.19.9 Nonconforming Items

Administrative Technical Requirements fire protection equipment nonconformances are identified and dispositioned as described in 1.7.15 herein.

1.7.19.10 Corrective Action

The corrective action mechanism described in 1.7.16 herein applies to the Administrative Technical Requirements fire protection equipment.

1.7.19.11 Records

Records that furnish evidence of the quality of activities, and of systems, structures and components associated with the fire protection program are maintained. The maintenance of the records includes assuring that records are accurate, complete, legible, and protected against damage, deterioration, or loss. The records are identifiable and retrievable. The records include results of reviews, inspections, tests, audits, monitoring of work performance, and qualifications of personnel and equipment. Inspection and test records identify the inspector or data recorder, the type of observations, results, acceptability, and actions taken in connection with any deficiencies noted. Records provide for traceability of activities that occur at the plant that affect the quality of fire protection systems, structures and components.

1.7.19.12 Audits

Audits are conducted and documented to verify compliance with the Fire Protection QA Program as described in 1.7.18.1 herein.

Audits are periodically performed to verify compliance with the administrative controls and implementation of fire

protection quality assurance criteria. The audits are performed in accordance with pre-established written procedures or checklists. Audit results are documented and reviewed by management having responsibility in the area audited. Follow-up action is taken by responsible management to correct the deficiencies revealed by the audit.

Figure 1.7-1

AMERICAN ELECTRIC POWER

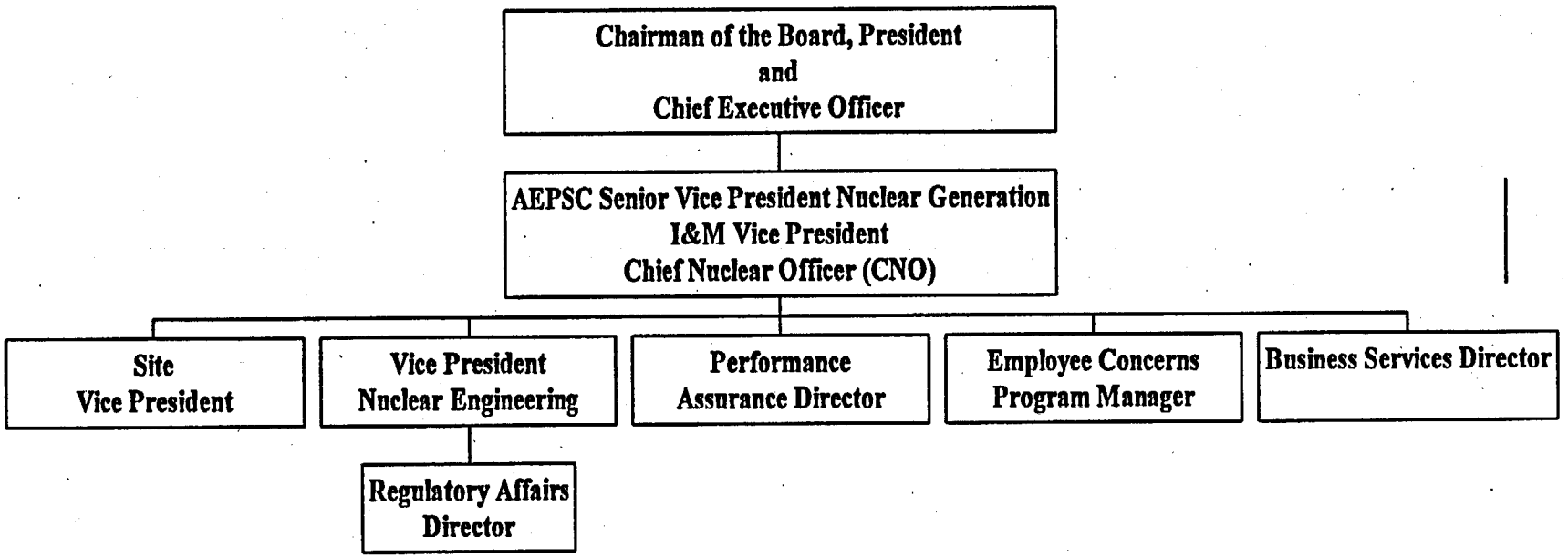


Figure 1.7-2

PERFORMANCE ASSURANCE

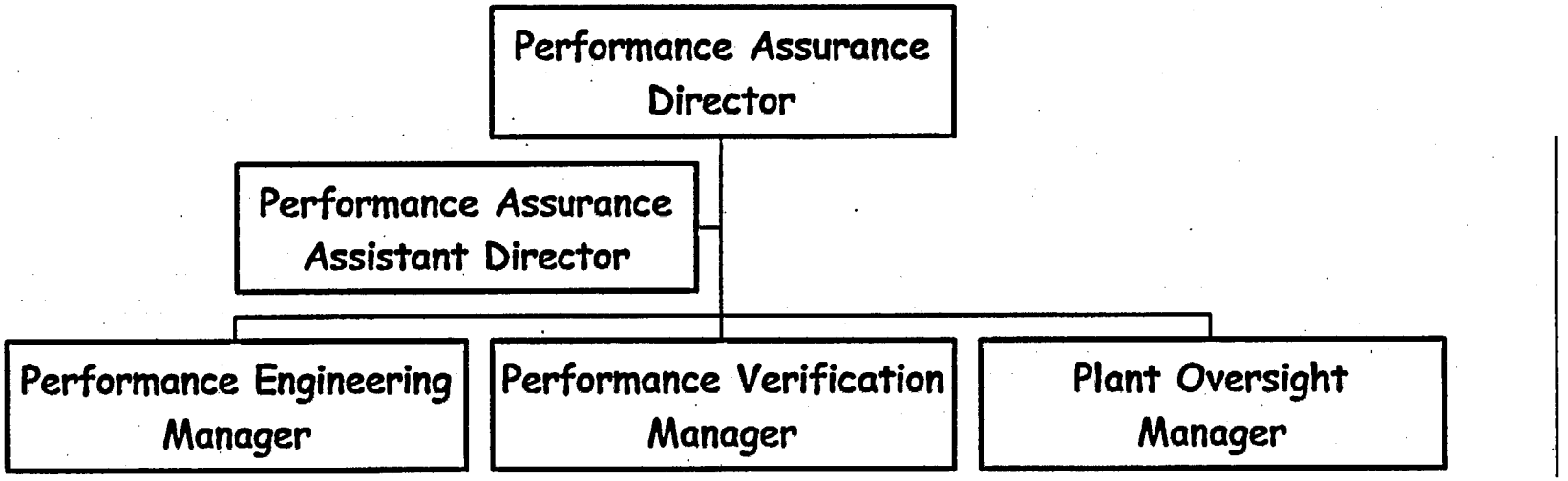
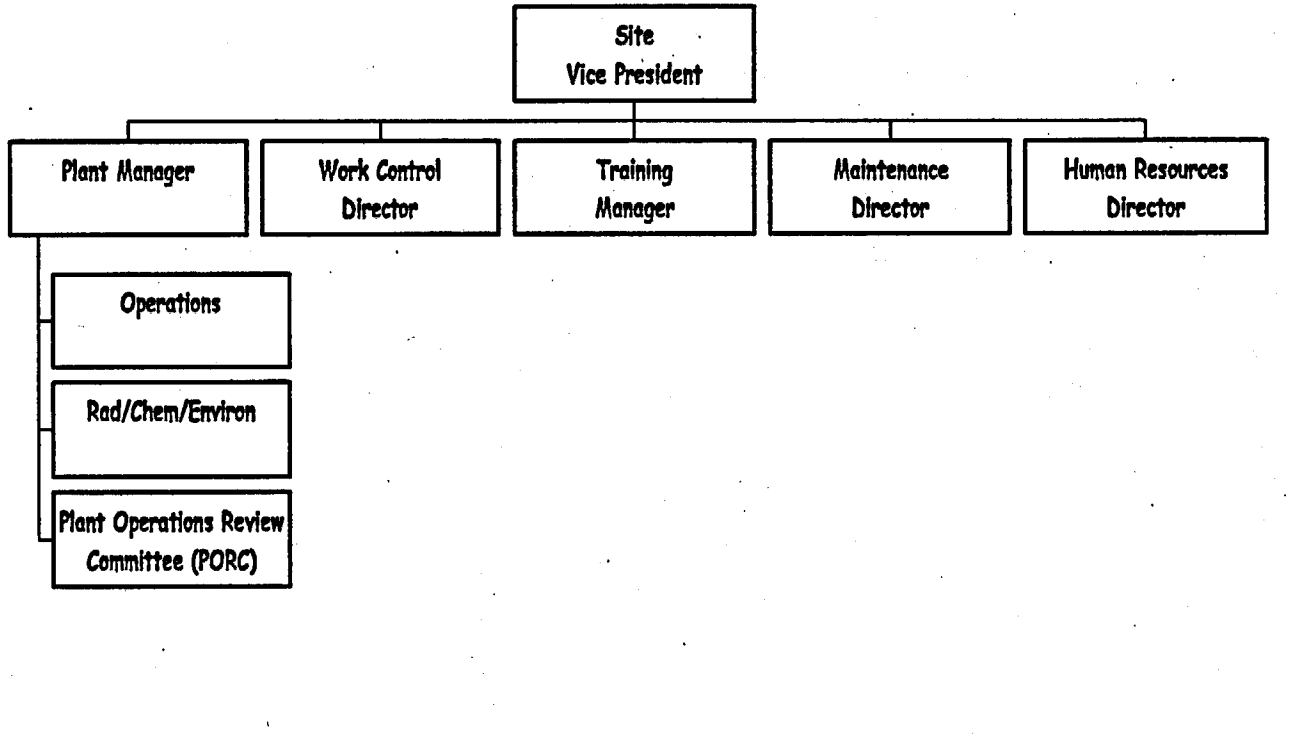


Figure 1.7-3

Site Operations



APPENDIX A

REGULATORY AND SAFETY GUIDES/ANSI STANDARDS

1.	Reg. Guide 1.8 (9/75)	-	Personnel Selection and Training
	ANSI N18.1 (1971)	-	Selection and Training of Nuclear Power Plant Personnel
2.	Reg. Guide 1.14 (8/75)	-	Reactor Coolant Pump Flywheel Integrity
3.	Reg. Guide 1.16 (8/75)	-	Reporting of Operating Information, Appendix A - Technical Specifications
4.	Safety Guide 30 (8/72)	-	Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment
	ANSI N45.2.4 (1972)	-	Installation, Inspection, and Testing Requirements for Instrumentation and Electric Equipment During the Construction of Nuclear Power Generating Stations
5.	Reg. Guide 1.33 (02/78)	-	Quality Assurance Program Requirements (Operation)
	ANSI N18.7 (1976)	-	Administrative Controls and Quality

	(ANS 3.2 1976)		Assurance for the Operational Phase of Nuclear Power Plants
	ANSI N45.2 (1977)	-	Quality Assurance Program Requirements for Nuclear Facilities
6.	Reg. Guide 1.37 (3/73)	-	Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants
	ANSI N45.2.1 (1973)	-	Cleaning of Fluid Systems and Associated Components During Construction Phase of Nuclear Power Plants
7.	Reg. Guide 1.38 (10/76)	-	Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water-Cooled Nuclear Power Plants
	ANSI N45.2.2 (1972)	-	Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants (During the Construction Phase)

8.	Reg. Guide 1.39 (10/76)	-	Housekeeping Requirements for Water-Cooled Nuclear Power Plants
	ANSI N45.2.3 (1973)	-	Housekeeping During the Construction Phase of Nuclear Power Plants
9.	Reg. Guide 1.54 (6/73)	-	Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants
	ANSI N101.4 (1972)	-	Quality Assurance for Protective Coatings Applied to Nuclear Facilities
10.	Reg. Guide 1.58 (9/80)	-	Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel
	ANSI N45.2.6 (1978)	-	Qualifications of Inspection, Examination, and Testing Personnel for Nuclear Power Plants
11.	Reg. Guide 1.63 (7/78)	-	Electric Penetration Assemblies in Containment Structures for Light-Water-Cooled Nuclear Power Plants

12.	Reg. Guide 1.64 (10/73)	-	Quality Assurance Requirements for the Design of Nuclear Power Plants
	ANSI N45.2.11 (1974)	-	Quality Assurance Requirements for the Design of Nuclear Power Plants
13.	Reg. Guide 1.74 (2/74)	-	Quality Assurance Terms and Definitions
	ANSI N45.2.10 (1973)	-	Quality Assurance Terms and Definitions
14.	Reg. Guide 1.88 (10/76)	-	Collection, Storage, and Maintenance of Nuclear Power Plant Quality Assurance Records
	ANSI N45.2.9 (1974)	-	Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants
15.	Reg. Guide 1.94 (4/76)	-	Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants

	ANSI N45.2.5 (1974)	-	Supplementary Quality Assurance Requirements for Installation, Inspection, and Testing of Structural Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants
16.	Reg. Guide 1.123 (7/77)	-	Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants
	ANSI N45.2.13 (1976)	-	Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants
17.	Reg. Guide 1.144 (1/79)	-	Auditing of Quality Assurance Programs for Nuclear Power Plants
	ANSI N45.2.12 (1977)	-	Requirements for Auditing of Quality Assurance Programs for Nuclear Power Plants
18.	Reg. Guide 1.146 (8/80)	-	Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants

	ANSI N45.2.23 (1978)	-	Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants
19.	ANSI N45.2.8 (1975)	-	Supplementary Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems for the Construction Phase of Nuclear Power Plants
20.	ANSI N45.4 (1972)	-	Leakage-Rate Testing of Containment Structures for Nuclear Reactors

APPENDIX B

I&M EXCEPTIONS TO OPERATING PHASE STANDARDS AND REGULATORY GUIDES

1. GENERAL

Requirement

Certain Regulatory Guides invoke, or imply, Regulatory Guides and standards in addition to the standard each primarily endorses.

Certain ANSI Standards invoke, or imply, additional standards.

Exception/Interpretation

The I&M commitment refers to the Regulatory Guides and ANSI Standards specifically identified in Appendix A. Additional Regulatory Guides, ANSI Standards and similar documents implied, or referenced, in those specifically identified are not part of this commitment.

2. N18.7, General

Exception/Interpretation

I&M have established both an on-site and off-site standing committee for independent review activities; together they form the independent review body.

The standard numeric and qualification requirement may not be met by each group individually. Procedures will be established to specify how each group will be involved in review activities. This exception/interpretation is consistent with Appendix C to this QAPD.

2a. Sec. 4.3.1

Requirement

"Personnel assigned responsibility for independent reviews shall be specified in both number and technical disciplines, and shall collectively have the experience and competence required to review problems in the following areas:...."

Exception/Interpretation

The Nuclear Safety and Design Review Committee (NSDRC) and Plant Operating Review Committee (PORC) will not have members specified by number, nor by technical disciplines, and its members may not have the experience and competence required to review problems in all areas listed in this section. This exception/interpretation is consistent with Appendix C to this QAPD.

The NSDRC and PORC will not specifically include a member qualified in nondestructive testing, but will use qualified technical consultants to perform this and other functions as determined necessary by the respective committee chair.

2b. Sec. 4.3.2.1

Requirement

"When a standing committee is responsible for the independent review program, it shall be composed of no less than five persons of whom no more than a minority are members of site operations. Competent alternates are permitted if designated in advance. The use of alternates shall be restricted to legitimate absences of principals."

Exception/Interpretation

See Item 2a.

2c. Sec. 4.3.3.1

Requirement

"... recommendations ... shall be disseminated promptly to appropriate members of management having responsibility in the area reviewed."

Exception/Interpretation

Recommendations made as a result of review will generally be conveyed to the on-site, or off-site, standing committee. Procedures will be maintained specifying how recommendations are to be considered.

2d. Sec. 4.3.4

Requirement

"The following subjects shall be reviewed by the independent review body: ...."

Exception/Interpretation

Subjects requiring review will be as specified in the plant Technical Specifications and Appendix C to this QAPD

2e. Sec. 4.3.4(3)

Requirement

"Changes in the Technical Specifications or License Amendments relating to nuclear safety are to be reviewed by the independent review body prior to implementation, except in those cases where the change is identical to a previously reviewed proposed change."

Exception/Interpretation

Although the usual practice is to meet this requirement, exceptions are made to NSDRC review and approval prior to implementation in rare cases with the permission of the NSDRC Chair and Secretary. PORC review and approval is always done prior to implementation of Technical Specification changes.

2f. Sec. 4.4

Requirement

"The on-site operating organization shall provide, as part of the normal duties of plant supervisory personnel...."

Exception/Interpretation

Some of the responsibilities of the on-site operating organization described in Section 4.4 may be carried out by the PORC and/or NSDRC as described in Appendix C to this QAPD.

2g. Sec. 5.2.2

Requirement

"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. At least one of these individuals shall be the supervisor in charge of the shift and hold a senior operator's license on the unit affected."

Exception/Interpretation

I&M considers that this requirement applies only to procedures identified in plant Technical Specifications. Temporary changes to these procedures shall be approved as described in Appendix C to this QAPD.

2h. Sec. 5.2.6

Requirement

"In cases where required documentary evidence is not available, the associated equipment or materials must be considered nonconforming in accordance with Section 5.2.14. Until suitable documentary evidence is available to show the equipment or material is in conformance, affected systems shall be considered to be inoperable and reliance shall not be placed on such systems to fulfill their intended safety functions."

Exception/Interpretation

I&M initiates appropriate corrective action when it is discovered that documentary evidence does not exist for a test or inspection which is a requirement to verify equipment acceptability. This action includes a technical evaluation of the equipment's operability status.

2i. Sec. 5.2.

Requirement

"A surveillance testing and inspection program ... shall include the establishment of a master surveillance schedule reflecting the status of all planned in-plant surveillance tests and inspections."

Exception/Interpretation

Separate master schedules may exist for different programs, such as ISI, pump and valve testing, and Technical Specification surveillance testing.

2j. Sec. 5.2.13.1

Requirement

"To the extent necessary, procurement documents shall require suppliers to provide a Quality Assurance Program consistent with the pertinent requirements of ANSI N45.2 - 1977."

Exception/Interpretation

To the extent necessary, procurement documents require that the supplier has a documented Quality Assurance Program consistent with the pertinent requirements of 10CFR50, Appendix B; ANSI N45.2; or other nationally recognized codes and standards.

2k. Sec. 5.2.13.2

Requirement

ANSI N18.7 and N45.2.13 specify that where required by code, regulation, or contract, documentary evidence that items conform to procurement requirements shall be available at the nuclear power plant site prior to installation or use of such items.

Exception/Interpretation

The required documentary evidence is available at the site prior to use, but not necessarily prior to installation. This allows installation to proceed while any missing documents are being obtained, but precludes dependence on the item for safety purposes.

2l. Sec. 5.2.15

Requirement

"Plant procedures shall be reviewed by an individual knowledgeable in the area affected by the procedure no less

frequently than every two years to determine if changes are necessary or desirable."

Exception/Interpretation

Biennial reviews are not performed in that I&M has programmatic control requirements in place that make the biennial review process redundant from a regulatory perspective. These programmatic controls were effected in an effort to ensure that plant instructions and procedures are reviewed for possible revision when pertinent source material is revised, therefore maintaining the procedures current. We believe that this approach, in addition to an annual random sampling of procedures, better addresses the intent of the biennial review process and is more acceptable from both a technical and practical perspective than a static two-year review process.

2m. Sec. 5.2.16

Requirement

Records shall be made, and equipment suitably marked, to indicate calibration status.

Exception/Interpretation

See Item 6b.

2n. Sec. 5.3.5(4)

Requirement

This section requires that where sections of documents such as vendor manuals, operating and maintenance instructions, or drawings are incorporated directly, or by reference into a maintenance procedure, they shall receive the same level of review and approval as operating procedures.

Exception/Interpretation
Such documents are reviewed by appropriately qualified personnel prior to use to ensure that, when used as instructions, they provide proper and adequate information to ensure the required quality of work. Maintenance procedures which reference these documents receive the same level of review and approval as operating procedures.

2o. Sec 5.3.9
Requirement
This section establishes the format and content of Emergency Operating Procedures (EOPs) for prescribing operator actions and observations.

Exceptions/Interpretations
NUREG-0730, Items 1.C1 and 1.C9 required plants to upgrade and expand guidance for preparation in light of the events at TMI-2. Generic Letter 82-33, Supplement 1 to NUREG-0737 required each plant to submit the technical guidelines for EOP content, preparation and validation. The Cook Plant submitted this material to the NRC in a letter dated September 28, 1984. The NRC responded with a Safety Evaluation Report dated February 14, 1990. Although the EOP content and format is different from the format and content specified in ANSI N18.7-1976, the upgraded EOP format and content were reviewed and approved by the NRC.

3. N45.2.1,
3a. Sec. 3
Requirement
N45.2.1 establishes criteria for classifying items into "cleanness levels," and requires that items be so classified.

Exception/Interpretation
Instead of using the cleanness level classification system of N45.2.1, the required cleanness for specific items and activities is addressed on a case-by-case basis.

Cleanness is maintained, consistent with the work being performed, so as to prevent the introduction of foreign material. As a minimum, cleanness inspections are performed prior to closure of "nuclear" systems and equipment. Such inspections are documented.

3b. Sec. 5
Requirement
"Fitting and tack-welded joints (which will not be immediately sealed by welding) shall be wrapped with polyethylene or other nonhalogenated plastic film until the welds can be completed."

Exception/Interpretation

I&M sometimes uses other nonhalogenated material, compatible with the parent material, since plastic film is subject to damage and does not always provide adequate protection.

4. N45.2.2, General

Requirement

N45.2.2 establishes requirements and criteria for classifying safety-related items into protection levels.

Exception/Interpretation

Instead of classifying safety-related items into protection levels, controls over the packaging, shipping, handling and storage of such items are established on a case-by-case basis with due regard for the item's complexity, use and sensitivity to damage. Prior to installation or use, the items are inspected and serviced, as necessary, to assure that no damage or deterioration exists which could affect their function.

4a. Sec. 3.9 and Appendix A3.9

Requirement

"The item and the outside of containers shall be marked."
(Further criteria for marking and tagging are given in the Appendix.)

Exception/Interpretation

These requirements were originally written for items packaged and shipped to construction projects. Full compliance is not always necessary in the case of items shipped to operating plants and may, in some cases, increase the probability of damage to the item. The

requirements are implemented to the extent necessary to assure traceability and integrity of the item.

4b. Sec. 5.2.2

Requirement

"Receiving inspections shall be performed in an area equivalent to the level of storage."

Exception/Interpretation

Receiving inspection area environmental controls may be less stringent than storage environmental requirements for an item. However, such inspections are performed in a manner and in an environment which do not endanger the required quality of the item.

4c. Sec. 6.2.4

Requirement

"The use or storage of food, drinks and salt tablet dispensers in any storage area shall not be permitted."

Exception/Interpretation

Packaged food for emergency or extended overtime use may be stored in material stock rooms. The packaging assures that materials are not contaminated. Food will not be "used" in storage areas.

4d. Sec. 6.3.4

Requirement

"All items and their containers shall be plainly marked so that they are easily identified without excessive handling or unnecessary opening of crates and boxes."

Exception/Interpretation

See N45.2.2, Section 3.9 (Exception 4a. above).

4e. Sec. 6.4.1

Requirement

"Inspections and examinations shall be performed and documented on a periodic basis to assure that the integrity of the item and its container ... is being maintained."

Exception/Interpretation

The requirement implies that all inspections and examinations of items in storage are to be performed on the same schedule. Instead, the inspections and examinations are performed in accordance with material storage procedures which identify the characteristics to be inspected and include the required frequencies. These procedures are based on technical considerations which recognize that inspections and frequencies needed vary from item to item.

5. N45.2.3,

5a. Sec. 2.1

Requirement

Cleanliness requirements for housekeeping activities shall be established on the basis of five zone designations.

Exception/Interpretation

Instead of the five-level zone designation system referenced in ANSI N45.2.3, I&M bases its controls over housekeeping activities on a consideration of what is necessary and appropriate for the activity involved. The controls are effected through procedures or instructions. Factors considered in developing the procedures and

instructions include cleanliness control, personnel safety, fire prevention and protection, radiation control and security. The procedures and instructions make use of standard janitorial and work practices to the extent possible. However, in preparing these procedures, consideration is also given to the recommendations of Section 2.1 of ANSI N45.2.3.

6. N45.2.4,

6a. Sec. 2.2

Requirement

Section 2.2 establishes prerequisites which must be met before the installation, inspections and testing of instrumentation and electrical equipment may proceed. These prerequisites include personnel qualification, control of design, conforming and protected materials and availability of specified documents.

Exception/Interpretation

During the operations phase, this requirement is considered to be applicable to modifications and initial start-up of electrical equipment. For routine or periodic inspection and testing, the prerequisite conditions will be achieved, as necessary.

6b. Sec. 6.2.1

Requirement

"Items requiring calibration shall be tagged or labeled on completion, indicating date of calibration and identity of person that performed calibration."

Exception/Interpretation
Frequently, physical size and/or location of installed plant instrumentation precludes attachment of calibration labels or tags. Instead, each instrument is uniquely identified and is traceable to its calibration record.

A scheduled calibration program assures that each instrument's calibration is current.

7. N45.2.5,
7a. Sec. 2.5.2

Requirement
"When discrepancies, malfunctions or inaccuracies in inspection and testing equipment are found during calibration, all items inspected with that equipment since the last previous calibration shall be considered unacceptable until an evaluation has been made by the responsible authority and appropriate action taken."

Exception/Interpretation
I&M uses the requirements of N18.7, Section 5.2.16, rather than N45.2.5, section 2.5.2. The N18.7 requirements are more applicable to an operating plant.

7b. Sec. 5.4

Requirement
"Hand torque wrenches used for inspection shall be controlled and must be calibrated at least weekly and more often if deemed necessary. Impact torque wrenches used for inspection must be calibrated at least twice daily."

Exception/Interpretation
Torque wrenches are controlled as measuring and test equipment in accordance with ANSI N18.7, Section 5.2.16. Calibration intervals are based on use and calibration history rather than as per N45.2.5.

7c. Sec. 4.9 – Mechanical (Cadweld) Splice

Requirement
4.9.1 Qualification of Operators. Prior to the production splicing of reinforcing bars, each member of the splicing crew (or each crew if the members work as a crew) shall prepare two qualification splices for each of the splice positions (e.g., horizontal, vertical, diagonal) to be used. The qualification splices shall be made using the same materials (e.g., bar, sleeve, powder) as those to be used in the structure. To qualify, the completed splices must meet the specified visual inspection acceptance requirements and meet the tensile test requirements of Section 4.9.3. Each member of the splicing crew (or each crew if members work as a crew) is subject to requalification (1) if the specific splice position (e.g., horizontal, vertical, diagonal) has not been used by member or crew for a period of three months or more or (2) if there is another reason to question their ability, such as the completed splices not passing visual inspection or tensile testing. The requalification procedure should be identical to the original qualification procedure.

4.9.3 Tensile testing. Splice samples may be production splices (i.e., those cut directly from in place reinforcing) or sister splices (i.e., those removable splices made in place next to production splices and under the same conditions).
4.9.4 Tensile Testing Frequency. Separate test cycles shall be established for mechanical splices in horizontal, vertical, and diagonal bars, for each bar size, and for each splicing crew as follows:

... 2. Test Frequency for Combinations of Production and Sister Splices. If production and sister splices are tested, the sample frequency shall be:
   A) One production splice of the first 10 production splices/
   B) One production and three sister splices for the next 90 production splices.
   C) Three splices, either production of sister splices for the next and subsequent units of 100 splices. At least 1/4 of the total number of splices tested shall be production splices.

Exception/Interpretation
I&M uses the requirements of ASME Sec. III, Div. 2 Sec CC-4333.5.2 and CC-4333.5.3 rather than N45.2.5, Sec. 4.9.3 and 4.9.4. Sec. CC-4333.5.2 and CC-4333.5.3 are more applicable to the restoration and repair of a concrete containment.

CC-4333.4 Initial Qualification Tests
[A95] "Each splicer shall prepare two qualification splices on the largest bar size to be used. In addition, for ferrous filler metal splices, cementitious grouted splices and swaged splices only, each of the splice positions to be used (e.g., horizontal, vertical, diagonal) shall be qualified. The qualification splices shall be made using reinforcing bar identical to that to be used in the structure. The completed qualifications splices shall be tensile tested using the loading rates set forth in SA-370 and the tensile results shall meet those specified in Tables CC-4334-1. [A95]"

CC-4333.5.2 Splice Samples
"Splice samples may be production splices (cut directly from in-place reinforcement) or straight sister splices (removable splices made in place next to production splices and under the same conditions), in accordance with the schedule established in CC-4333.5.3."

CC-4333.5.3 Testing Frequency
"Splice samples shall be tensile tested in accordance with the following schedule for the appropriate splice system.
(a) "Separate test cycles shall be established for sleeve with ferrous filler metal splices... Straight sister splices may be substituted for production test samples on radius bent bars and for splicing sleeves arc welded to structural steel elements or the liner.
(1) For sleeve with ferrous filler metal splices, one splice shall be tested for each unit of 100 production splices."

7d. Table B – In-process Tests

Requirement Material	Requirement	Test Method	Test Frequency
Aggregate	-Compliance with Requirements for Soft fragments	ASTM C235	Monthly during production
	-Potential Reactivity	ASTM C289	Every 6 Months

Exception/Interpretation
No testing of soft fragments is intended. Testing per ASTM C235 changed designations to ASTM C851 which was deleted in 1985. Aggregate is tested for potential reactivity using C289 or ASTM C586 as determined by the results of an examination using ASTM C295.

8. N45.2.6, Sec. 1.2

Requirement
"The requirements of this standard apply to personnel who perform inspections, examinations and tests during fabrication prior to or during receipt of items at the construction site, during construction, during preoperational and start-up testing and during operational phases of nuclear power plants."

Exception/Interpretation
Personnel participating in testing who take data or make observations, where special training is not required to perform this function, need not be qualified in accordance with ANSI N45.2.6, but need only be trained to the extent necessary to perform the assigned function.

9. Reg. Guide 1.58 - General

Requirement
Qualification of nuclear power plant inspection, examination and testing personnel.

9a. C.2.a(7)

Requirement
Regulatory Guide 1.58 endorses the guidelines of SNT-TC-1A as an acceptable method of training and certifying personnel conducting leak tests.

Exception/Interpretation

I&M takes the position that the "Level" designation guidelines as recommended in SNT-TC-1A, paragraph 4 do not necessarily assure adequate leak test capability. I&M maintains that departmental supervisors are best able to judge whether engineers and other personnel are qualified to direct and/or perform leak tests. Therefore, I&M does not implement the recommended "Level" designation guidelines.

It is I&M's opinion that the training guidelines of SNT-TC-1A, Table I-G, paragraph 5.2 specifically are oriented towards the basic physics involved in leak testing, and further, towards individuals who are not graduate engineers. I&M maintains that it meets the essence of these training guidelines. The preparation of leak test procedures and the conduct of leak tests at Cook Nuclear Plant is under the direct supervision of performance engineers who hold engineering degrees from accredited engineering schools. The basic physics of leak testing have been incorporated into the applicable test procedures. The review and approval of the data obtained from leak tests is performed by department supervisors who are also graduate engineers.

I&M does recognize the need to assure that individuals involved in leak tests are fully cognizant of leak test procedural requirements and thoroughly familiar with the test equipment involved. Plant performance engineers receive routine, informal orientation on testing programs to ensure that these individuals fully understand the requirements of performing a leak test.

9b. C5, C6, C7, C8, C10

Exception/Interpretation

I&M takes the position that the classification of inspection, examination and test personnel (inspection personnel) into "Levels" based on the requirements stated in Section 3.0 of ANSI N45.2.6 does not necessarily assure adequate inspection capability. I&M maintains that departmental and first line supervisors are best able to judge the inspection capability of the personnel under their supervision, and that "Level" classification would require an overly burdensome administrative work load, could inhibit inspection activities, and provides no assurance of inspection capabilities. Therefore, I&M does not implement the "Level" classification concept for inspection, examination and test personnel.

The methodology under which inspections, examinations and tests are conducted at the Cook Nuclear Plant requires the involvement of first line supervisors, engineering personnel, departmental supervisors and plant management. In essence, the last seven (7) project functions shown in Table 1 to ANSI N45.2.6 are assigned to supervisory and engineering personnel, and not to personnel of the inspector category. These management supervisory and engineering personnel, as a minimum, meet the educational and experience requirements of "Level II and Level III" personnel, as required, to meet the criteria of ANSI 18.1 which exceeds those of ANSI N45.2.6. In I&M's opinion, no useful purpose is served by classification of management, supervisory and engineering personnel into "Levels."

Therefore, I&M takes the following positions relative to regulatory positions C5, 6, 7, 8 and 10 of Regulatory Guide 1.58.

C-5 Based on the discussion in 9b, this position is not applicable to the Cook Nuclear Plant.

C-6 Replacement personnel for Cook Nuclear Plant management, supervisory and engineering positions subject to ANSI 18.1 will meet the educational and experience requirements of ANSI 18.1 and therefore, those of ANSI N45.2.6.

Replacement inspection personnel will, as a minimum, meet the educational and experience requirements of ANSI N45.2.6, Section 3.5.1 - "Level I."

C-7 I&M, as a general practice, complies with the training recommendations as set forth in this regulatory position.

C-8 All I&M inspection, examination and test personnel are instructed in the normal course of employee training in radiation protection and the means to minimize radiation dose exposure.

C-10 I&M maintains documentation to show that inspection personnel meet the minimum requirements of "Level I," and that management, supervisory and engineering personnel meet the minimum requirements of ANSI 18.1.

10. N45.2.8,

10a. Sec. 2.9e

Requirement

Section 2.9e of N45.2.8. lists documents relating to the specific stage of installation activity which are to be available at the construction site.

Exception/Interpretation

All of the documents listed are not necessarily required at the construction site for installation and testing. AEPSC and I&M assure that they are available to the site, as necessary.

10b. Sec. 2.9e

Requirement

Evidence that engineering or design changes are documented and approved shall be available at the construction site prior to installation.

Exception/Interpretation

Equipment may be installed before final approval of engineering or design changes. However, the system is not placed into service until such changes are documented and approved.

10c. Sec. 4.5.1

Requirement

"Installed systems and components shall be cleaned, flushed and conditioned according to the requirements of ANSI N45.2.1. Special consideration shall be given to the following requirements: ...." (Requirements are given for chemical conditioning, flushing and process controls.)

Exception/Interpretation

Systems and components are cleaned, flushed and conditioned as determined on a case-by-case basis. Measures are taken to help preclude the need for cleaning, flushing and conditioning through good practices during maintenance or modification activities.

11. N45.2.9

11a. Sec. 5.4, Item 2

Requirement

Records shall not be stored loosely. "They shall be firmly attached in binders or placed in folders or envelopes for storage on shelving in containers." Steel file cabinets are preferred.

Exception/Interpretation

Records are suitably stored in steel file cabinets, or on shelving in containers. Methods other than binders, folders, or envelopes (for example, dividers) may be used to organize the records for storage.

11b. Sec. 6.2

Requirement

"A list shall be maintained designating those personnel who shall have access to the files".

Exception/Interpretation

Rules are established governing access to and control of files as provided for in ANSI N45.2.9, Section 5.3, Item 5. These rules do not always include a requirement for a list of personnel who are authorized access. It should be noted that duplicate files and/or microforms may exist for general use.

11c. Sec. 5.6

Requirement

When a single records storage facility is maintained, at least the following features should be considered in its construction: etc.

Exception/Interpretation

The Cook Nuclear Plant Master File Room and other off-site record storage facilities comply with the requirements of NUREG-0800 (7/81), Section 17.1.17.4.

12. Reg. Guide 1.144/ANSI N45.2.12

12a. Sec. C3a(2)

Requirement

Applicable elements of an organization's Quality Assurance program for "design and construction phase activities should be audited at least annually or at least once within the life of the activity, whichever is shorter."

Exception/Interpretation

Since most modifications are straight forward, they are not audited individually. Instead, selected controls over modifications are audited periodically.

12b. Sec. C3b(1)

Requirement

This section identifies procurement contracts which are exempted from being audited.

Exception/Interpretation

In addition to the exemptions of Reg. Guide 1.144, I&M considers that the National Institute of Standards and Technology, or other State and Federal Agencies which may provide services to I&M, are not required to be audited.

12c. Sec. 3.3

Requirement

An effective audit system shall be established and maintained and shall include the following essential elements.....

3.3.7 Provision for verification of effective corrective action on a timely basis.

Exception/Interpretation

Verification of the implementation of effective corrective action is performed as indicated in Section 1.7.18.2.11 of this QAPD. Only selected corrective/preventive actions, determined by the auditing organization, will be verified by the auditing organization.

12d. 4.5.1

Requirement

...In the event that corrective action cannot be completed within thirty days, the audited organization's response shall include a scheduled date for the corrective action. The audited organization shall provide a follow-up report stating the corrective action taken and the date corrective action was completed.

Exception/Interpretation

The auditing organization will determine when it is necessary for the audited organization to provide a response within thirty days. If the auditing organization does not designate that the response must be completed within the thirty day timeframe and forwarded to the auditing organization, the corrective action document will

be processed in accordance with the corrective action program. The program determines the safety significance, extent of the investigation required, investigation due date, and required level of management review and approval. The audited organization will provide follow-up documentation to the appropriate level of management as to the status of the corrective/preventive action. Documentation of follow-up will be provided to the auditing organization when specified by the auditing organization.

13. N45.2.13,

13a. Sec. 3.2.2

Requirement

N45.2.13 requires that technical requirements be specified in procurement documents by reference to technical requirement documents. Technical requirement documents are to be prepared, reviewed and released under the requirements established by ANSI N45.2.11.

Exception/Interpretation

For replacement parts and materials, AEPSC/I&M follow ANSI N18.7, Section 5.2.13, Subitem 1, which states: "Where the original item or part is found to be commercially 'off the shelf' or without specifically identified QA requirements, spare and replacement parts may be similarly procured, but care shall be exercised to ensure at least equivalent performance."

13b. Sec. 3.2.3

Requirement

"Procurement documents shall require that the supplier have a documented quality assurance program that implements parts or all of ANSI N45.2 as well as applicable quality assurance program requirements of other nationally recognized codes and standards."

Exception/Interpretation

Refer to Item 2j

13c. Sec. 3.3(a)

Requirement

Reviews of procurement documents shall be performed prior to release for bid and contract award.

Exception/Interpretation

Documents may be released for bid or contract award before completing the necessary reviews. However, these reviews are completed before the item or service is put into service, or before work has progressed beyond the point where it would be impractical to reverse the action taken.

13d. Sec. 3.3(b)

Requirement

Review of changes to procurement documents shall be performed prior to release for bid and contract award.

Exception/Interpretation

This requirement applies only to quality related changes (i.e., changes to the procurement document provisions identified in ANSI N18.7, Section 5.2.13.1, Subitems 1

through 5). The timing of reviews will be the same as for review of the original procurement documents.

13e. Sec. 10.1

Requirement

"Where required by code, regulation, or contract requirement, documentary evidence that items conform to procurement documents shall be available at the nuclear power plant site prior to installation or use of such items, regardless of acceptance methods."

Exception/Interpretation

Refer to Item 2k.

Requirement

"Post-installation test requirements and acceptance documentation shall be mutually established by the purchaser and supplier."

Exception/Interpretation

In exercising its ultimate responsibility for its quality assurance program, I&M establishes post-installation test requirements giving due consideration to supplier recommendations.

14. Reg. Guide 1.146/ANSI N45.2.23 and ANSI N45.2.12

14a. ANSI N45.2.23, Sec. 1.1

Requirement

This standard provides requirements and guidance for the qualification of audit team leaders, henceforth identified as "lead auditors."

14b. ANSI N45.2.12, Section 4.2.2

Exception withdrawn.

15. ANSI N18.1

Sec. 4.2.2

Requirement

At the time of initial core loading or appointment to the active position the operations manager shall hold a senior reactor operator's license.

Exception/Interpretation

The requirement implies that only personnel who currently hold a senior reactor operator's license can be appointed as operations manager. I&M takes the position that the operations superintendent must hold or have held a senior operator license at Cook Nuclear Plant or a similar reactor; or have been certified for equivalent senior operator knowledge. If the operations superintendent does not hold a senior operator license, then a line (v. staff) operations middle manager shall hold a current senior operator license for the purposes of directing operational activities. This exception/interpretation is consistent with Technical Specification 6.2.2.g, previously approved by Nuclear Regulatory Commission.

Appendix C

INDEX ADMINISTRATIVE CONTROLS

ADMINISTRATIVE CONTROLS

6.5 REVIEW AND AUDIT

6.5.1 Plant Operations Review Committee (PORC)

NOTE: The "PORC" may also be referred to as the "PNSRC" in other documents during a transition period. The function of the committee is unaffected by the name.

FUNCTION

6.5.1.1 The PORC shall function to advise the site vice president, or designee, on all matters related to nuclear safety.

COMPOSITION

6.5.1.2 The PORC shall be composed of senior, experienced, onsite individuals at the Manager level, or equivalent, representing each of the following disciplines: operations, maintenance, chemistry, radiation protection, engineering, licensing, and performance assurance. These members, including Chair(s) and Vice-Chair(s), shall be appointed in writing by the site vice president. Supervisory personnel reporting directly to these Managers (or equivalents) may also serve on this Committee. These personnel must meet the qualifications of ANSI 18.1 - 1971 and shall be designated as alternates, in writing, by the site vice president. The Performance Assurance individual shall be a non-voting member and shall not be included in quorum considerations.

PORC members shall meet or exceed the minimum qualifications of ANSI N18.1-1971 Section 4.2 for comparable positions. The nuclear power plant operations individual shall meet the qualifications of section 4.2.2 of ANSI N18.1-1971 except for the requirement to hold a current Senior Operator License. The operations individual must hold or have held a Senior Operator License or have been certified for equivalent senior operator knowledge at Cook Nuclear Plant or a similar reactor. The maintenance individual shall meet the qualifications of section 4.2.3 of ANSI N18.1-1971. PORC members in positions not specified in 4.2.1, 4.2.2, or 4.2.3 of ANSI N18.1-1971 shall meet the requirements of 4.2.4 of ANSI N18.1-1971. The Plant Manager shall meet the qualifications of ANSI N18.1 section 4.2.1.

ALTERNATES

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

MEETING FREQUENCY

6.5.1.4 The PORC shall meet at least once per calendar month and as convened by the Chair or the Vice-Chair.

QUORUM

6.5.1.5 The quorum of the PORC shall consist of the Chair or the Vice-Chair and at least four members including alternates. The Vice-Chair may vote as a member when not acting as the Chair.

RESPONSIBILITIES

6.5.1.6 The PORC shall be responsible for:

a. Review of all Plant Manager Instructions (PMIs) and revisions thereto.
b. Review of safety evaluations for (1) plant site procedures and revisions thereto which affect the nuclear safety of the plant; (2) changes or modifications to nuclear safety-related structures, systems or components; and (3) tests or experiments which affect plant nuclear safety to verify that such actions did not constitute an unreviewed safety question as defined in 10CFR50.59.
c. Review of (1) proposed procedures and revisions to procedures, (2) changes to equipment, systems, or facilities, and (3) proposed test or experiments which may involve an unreviewed safety question as defined in 10CFR50.59.
d. Review of proposed changes to Appendix "A" Technical Specifications or the Operating License and rendering determinations in writing with regard to whether or not the proposed change constitutes a Significant Hazards Consideration.
e. Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Chair of the NSDRC.
f. Review of all REPORTABLE EVENTS.

g. Review of facility operations to detect potential nuclear safety hazards.

h. Performance of special reviews, investigations of analyses and reports thereon as requested by the Chair of the NSDRC.

i. Deleted

j. Deleted

k. Review of any accidental, unplanned, or uncontrolled radioactive release including the preparation of reports covering evaluations, recommendations, and disposition of the corrective action to prevent recurrence and the forwarding of these reports to the chief nuclear officer (CNO) and to the NSDRC.

l. Review of changes to the PROCESS CONTROL PROGRAM, OFFSITE DOSE CALCULATION MANUAL, and radwaste treatment system.

AUTHORITY

6.5.1.7 The PORC shall:

a. Recommend to the site vice president, or designee, written approval or disapproval of items considered under 6.5.1.6 (a) through (d) above.

b. Render determinations in writing with regard to whether or not each item considered under 6.5.1.6 (a) through (c) and (e) above constitutes an unreviewed safety question.

c. Provide written notification within 24 hours to the chief nuclear officer (CNO) and the NSDRC of disagreement between the PORC and the site vice president; however, the site vice president shall have responsibility for resolution of such disagreements pursuant to Technical Specification 6.1.1.

RECORDS

6.5.1.8 The PORC shall maintain written minutes of each meeting and copies shall be provided to the Chair of the NSDRC.

6.5.2 NUCLEAR SAFETY AND DESIGN REVIEW COMMITTEE (NSDRC)

FUNCTION

6.5.2.1 The NSDRC shall function to provide independent review and audit of designated activities in the areas of:

a. nuclear power plant operations

b. nuclear engineering

c. chemistry and radiochemistry

d. metallurgy

e. instrumentation and control

f. radiological safety

g. mechanical and electrical engineering

h. quality assurance practices

COMPOSITION

6.5.2.2 The NSDRC shall be composed of members that collectively meet the required attributes identified in 6.5.2.1. *

Additional members and Vice-Chair may be appointed by the chief nuclear officer (CNO).

* The minimum number of members for composition shall be ten (10) [ref: NRC letter dated December 28, 1998].

ALTERNATE MEMBERS

6.5.2.3 Designated alternate members shall be appointed by the chief nuclear officer (CNO) or such other person as he shall designate. In addition, temporary alternate members may be appointed by the NSDRC Chair to serve on an interim basis, as required. Temporary alternate members are empowered to act on the behalf of the regular or designated alternate members for whom they substitute.

CONSULTANTS

6.5.2.4 Consultants shall be utilized as determined by the NSDRC Chair to provide expert advice to the NSDRC.

MEETING FREQUENCY

6.5.2.5 The NSDRC shall meet at least once per six months.

ADMINISTRATIVE CONTROLS

QUORUM

6.5.2.6 A quorum, the minimum number or regular members and alternates required to hold a NSDRC meeting shall be eight members, of whom no more than two shall be designated or temporary alternates. The Chair or acting Chair shall be present for all NSDRC meetings. If the number of members present* is greater than a quorum, then the majority participating and voting at the meeting shall not have line responsibility for operations of the facility. For the purpose of a quorum, only the Plant Manager is considered to have line responsibility.

REVIEW

6.5.2.7 The NSDRC is responsible for assuring that independent** reviews of the following are performed:

a. The safety evaluations for 1) changes to procedures, equipment or systems and 2) tests or experiments completed under the provision of 10CFR50.59 to verify that such actions did not constitute an unreviewed safety question.

b. Proposed changes to procedures, equipment or systems which involve an unreviewed safety question as defined in 10CFR50.59.

c. Proposed tests or experiments which involve an unreviewed safety question as defined in 10CFR50.59.

d. Proposed changes in Technical Specifications or this operating license.

e. Violations of 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. ALL REPORTABLE EVENTS.

h. All recognized indications of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems, or components.

i. Reports and meeting minutes of the PORC

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* Regular NSDRC members are expected to attend the meeting whenever possible, and alternates may attend as voting members only on an irregular basis. If both a regular member and his alternate attend a meeting, only the regular member may participate as a voting member and the alternate is considered a guest.

** Independent reviews may be performed by groups which report directly to the NSDRC and which must have NSDRC membership participation.

ADMINISTRATIVE CONTROLS

AUDITS

6.5.2.8 Audits of facility activities shall be performed under the cognizance of the NSDRC. These audits shall encompass:

a. The conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 12 months.

b. The performance, training, and qualifications of the entire facility staff at least once per 12 months.

c. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems or method of operation that affect nuclear safety at least once per 6 months.

d. The performance of activities required by the Quality Assurance Program to meet the criteria of Appendix "B", 10CFR50, at least once per 24 months.

e. The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee QA personnel.

f. The fire protection equipment and program implementation at least once per 12 months using either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year.

g. The Radiological Environmental Monitoring Program and the results thereof at least once per 12 months.

h. The OFFSITE DOSE CALCULATION MANUAL and implementing procedures at least once per 24 months.

i. The PROCESS CONTROL PROGRAM and implementing procedures for solidification of radioactive wastes at least once per 24 months.

j. The performance of activities required by the Quality Assurance Program to meet the criteria of Regulatory Guide 1.21, Rev. 1, June 1974 and Regulatory Guide 4.1, Rev. 1, April 1975 at least once per 12 months.

k. Any other area of facility operation considered appropriate by the NSDRC.

AUTHORITY

6.5.2.9 The NSDRC shall report to and advise the CNO on those areas of responsibility specified in Sections 6.5.2.7 and 6.5.2.8.

RECORDS

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

a. Minutes of each NSDRC meeting shall be prepared, approved and issued within 14 days following each meeting.

b. Reports of reviews encompassed by Section 6.5.2.7 above, shall be prepared, approved and issued within 14 days following completion of the review.

c. Audit reports encompassed by Section 6.5.2.8 above, shall be forwarded to the CNO and to the management positions responsible for the areas audited within 30 days after completion of the audit.

6.5.3 TECHNICAL REVIEW AND CONTROL

6.5.3.1 Activities which affect nuclear safety shall be conducted as follows:

a. Procedures required by Technical Specification 6.8 and other procedures which affect plant nuclear safety, and changes thereto, shall be prepared, reviewed and approved. Each such procedure or procedure change shall be reviewed by a qualified individual/group other than the individual/group which prepared the procedure or procedure change, but who may be from the same organization as the individual/group which prepared the procedure or procedure change. Procedures other than Plant Manager Procedures shall be approved by the appropriate department head as previously designated in writing by the site vice president, or designee. The site vice president, or designee, shall approve Plant Manager Procedures. Temporary changes to procedures which do not change the intent of the approved procedures shall be approved for implementation by two members of the plant staff, at least one of whom holds a Senior Operator license, and documented. The temporary changes shall be approved by the original approval authority within 14 days of implementation. For changes to procedures which may involve a change in intent of the approved procedures, the person authorized above to approve the procedure shall approve the change prior to implementation.

b. Proposed changes or modifications to plant nuclear safety-related structures, systems and components shall be reviewed as designated by the site vice president, or designee. Each such modification shall be reviewed (reference Section 6.5.3.1.e) by a qualified (reference Section 6.5.3.1.d) individual/group other than the individual/group which designed the modification, but who may be from the same organization as the individual/group which designed the modifications. Proposed modifications to plant nuclear safety-related structures, systems and components shall be approved prior to implementation by the site vice president, or designee.

c. Proposed tests and experiments which affect plant nuclear safety and are not addressed in the Final Safety Analysis Report or Technical Specifications shall be prepared, reviewed, and approved. Each such test or experiment shall be reviewed by qualified individuals/groups other than the individual/group which prepared the proposed test or experiment to assure cross disciplinary review as appropriate for the proposed test or experiment. Proposed tests and experiments shall be approved before implementation by the site vice president, or designee.

d. Individuals who conducted the reviews performed in the accordance with Section 6.5.3.1a, 6.5.3.1b, and 6.5.3.1c, shall be members of the plant management staff previously designated by the site vice president and shall meet or exceed the minimum qualifications of ANSI N18.1-1971 Section 4.4 for comparable positions. Each such review shall include a determination of whether or not additional, cross-disciplinary review is necessary.

If deemed necessary, such review shall be performed by qualified personnel of the appropriate discipline.

e. Each review shall include a determination of whether or not an unreviewed safety question is involved. Pursuant to 10CFR50.59, NRC approval of items involving unreviewed safety questions shall be obtained prior to the approval of the site vice president, or designee, for implementation.

6.5.3.2 Records of the above activities shall be provided to the site vice president or designee, PORC and/or the NSDRC as necessary for required reviews.

6.10 RECORD RETENTION

6.10.1 The following records shall be retained for at least five years:

a. Records and logs of unit operation covering time interval at each power level.

b. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.

c. All REPORTABLE EVENTS submitted to the Commission.

d. Records of surveillance activities, inspections and calibrations required by the Technical Specifications.

e. Records of changes made to the procedures required by Technical Specification 6.8.1.

f. Records of sealed source and fission detection leak tests and results.

g. Records of annual physical inventory of all sealed source material on record.

6.10.2 The following records shall be retained for the duration of the Facility Operating License:

a. Records and drawing changes reflecting unit design modifications made to systems and equipment described in the Final Safety Analysis Report.

b. Records of new and irradiated fuel inventory, fuel transfers and assembly burnup histories.

c. Records of radiation exposure for all individuals entering radiation control areas.

d. Records of gaseous and liquid radioactive material released to the environment.

e. Records of transient or operational cycles for those facility components identified in the Updated Final Safety Analysis Report.

f. Records of reactor tests and experiments.

g. Records of training and qualification for current members of the Plant Staff.

h. Records of in-service inspections performed pursuant to the Technical Specifications.

i. Records of Quality Assurance activities required by the QA Manual.

j. Records of reviews performed for changes made to procedures or equipment or review of tests and experiments pursuant to 10CFR50.59.

k. Records of meetings of the PORC and NSDRC.

l. Records of radioactive shipments.

m. Records of the service lives of hydraulic snubbers including the date at which service life commences and associated installation and maintenance records.

n. Records of reviews performed for changes made to the OFFSITE DOSE CALCULATION MANUAL and the PROCESS CONTROL PROGRAM.