DONALD C. COOK NUCLEAR PLANT

QUALITY ASSURANCE PROGRAM DESCRIPTION

UNITS 1&2
DOCKET NOS.50-315 & 50-316
LICENSE NOS. DPR-58 AND DPR-74

Revision 27

Concurred by: D. A. Cantrell / _____ Date: 5/7/2020
Nuclear Oversight Director

Approved by: J. P. Gebbie / _____ Date: 5/7/20
Chief Nuclear Officer

Quality Assurance Program Description

List of Effective Pages

Page Number	Revision/ Addendum
Statement of Policy	11/10/17
1	27
2	27
3	27
4	27
5	27
6	27
7	27
8	27
9	27
10	27
11	27
12	27
13	27
14	27
15	27
16	27
17	27
18	27
19	27
20	27
21	27
22	27
23	27
24	27
25	27
26	27
27	27
28	27
29	27
30	27
31	27
32	27
33	27
34	27
35	27
36	27
37	27
38	27
39	27
40	27
41	27
42	27
43	27
44	27
45	27
46	27
47	27
48	27
49	27
50	27
51	27
52	27
53	27
54	27
55	27
56	27
57	27
58	27
59	27

INDIANA MICHIGAN POWER
An AEP Company

Date November 10, 2017

Subject **American Electric Power Statement of Policy for the Donald C. Cook Nuclear Plant Quality Assurance Program**

From N. K. Akins, President and Chief Executive Officer

To L. W. Baun, Nuclear Oversight Director

American Electric Power Company, Inc. (AEP) 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 the Donald C. Cook Nuclear Plant. The quality assurance program supports the goal of maintaining the safety and reliability of the Donald C. Cook Nuclear Plant at the highest level. This goal is achieved 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, President and Chief Executive Officer of AEP, I maintain the ultimate responsibility for the quality assurance program associated with Donald C. Cook Nuclear Plant. I have delegated responsibilities for the establishment, maintenance, implementation and compliance with the Quality Assurance Program Description, as stated therein, to the Chief Nuclear Officer of the Donald C. Cook Nuclear Plant.

It is the responsibility of all company and contractor employees to implement the contents of the Quality Assurance Program Description rigorously in the execution of their duties. Any employee who believes that the quality assurance program is not being followed has the right, and indeed the obligation, to inform their supervisor or management. 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.

Quality Assurance Program Description

TABLE OF CONTENTS

Quality Assurance Program Description

TABLE OF CONTENTS

Quality Assurance Program Description

Introduction

Corporate Organization

American Electric Power Company Inc. (AEP), the parent holding company, wholly owns the common stock of all AEP System subsidiary (operating) companies. The president and chief executive officer of AEP is the chief executive officer of 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 president and chief executive officer.

The operating facilities of the AEP System are owned and operated by the respective operating companies. The Donald C. Cook Nuclear Plant (CNP) is owned, operated and licensed to Indiana Michigan Power Company (I&M) which is part of the AEP System.

The AEP Company with responsibility for executing the engineering, design, construction, specialized technical training, and certain operations' supervision for the various company power plants is vested with American Electric Power Service Corporation (AEPSC). All, or part, of the administrative functional responsibility for these plants is assigned to the individual operating companies. In the case of CNP, AEPSC provides various administrative support activities.

Certain organizations within the AEP system provide occasional technical assistance for the CNP. The administrative and QA controls for this assistance are controlled through documented interface agreements.

CNP responsibilities include, but are not limited to, providing planning, engineering, and design of the electrical facilities inside CNP up to the high voltage (HV) bushings of the main generator transformers and mechanical facilities inside the plant.

The president and chief executive officer of AEP, through its wholly owned subsidiary I&M, has ultimate responsibility for the QA program associated with CNP. The executive delegated the authority and responsibility for establishing, maintaining, and effectively implementing the QA program for plant modification, operations, and maintenance is the I&M vice president - nuclear generation, who is also the I&M chief nuclear officer. The I&M vice president-nuclear generation also serves as the American Electric Power Service Corporation (AEPSC) senior vice president nuclear operations. The I&M vice president - nuclear generation reports to the chief executive officer of AEP on all matters concerning the safe and reliable operation of CNP, including the Quality Assurance Program Description (QAPD). The I&M vice president - nuclear generation may report through additional layers of management but shall maintain sufficient authority and organizational freedom to implement assigned responsibilities.

Quality Assurance Program Description

A. MANAGEMENT

1. Methodology

a. The QAPD provides a consolidated overview of the quality program controls that govern the operation and maintenance of I&M's quality-related items and activities. The QAPD describes the QA organizational structure, functional responsibilities, levels of authority, and interfaces.

b. The requirements and commitments contained in the QAPD are mandatory and must be implemented, enforced, and adhered to by all individuals and organizations. Employees are encouraged to actively participate in the continued development of the QAPD, as well as its implementation. Changes are promptly communicated when identified.

c. The QAPD applies to all activities associated with structures, systems, and components that are safety-related or controlled by 10 CFR 72. The QAPD also applies to transportation packages controlled by 10 CFR 71. Safety-related items are defined as items:

> That 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 Final Safety Analysis Report; or lead to a release of radioactivity in excess of the total effective dose equivalent (TEDE) guidelines and criteria of 10 CFR 50.67, or fractions thereof, as defined in Regulatory Guide 1.183.

The applicability of the requirements of the QAPD to other items and activities is determined on a case-by-case basis. The QAPD implements 10 CFR 50, Appendix B, 10 CFR 72, Subpart G, and 10 CFR 71, Subpart H.

The ISFSI Structures, Systems, and Components (SSCs) that are important to safety are categorized as Category A, B, or C in accordance with NUREG/CR-6407, Classification of Transportation Packaging and Dry Spent Fuel Storage System Components According to Importance to Safety. Per 10 CFR 72, Subpart G, the QAPD applies to the ISFSI SSCs and activities consistent with their importance to safety.

The classification table found in Appendix D of the QAPD identifies the graded approach and applicability of the CNP QA Program based on the safety categories that are defined in NUREG/CR-6407.

d. The QAPD is implemented through the use of approved procedures (i.e., policies, directives, procedures, or instructions) that provide written guidance for the control of quality-related activities and provide for the development of documentation to provide objective evidence of compliance.

2. Organization

The organizational structure responsible for implementation of the QAPD is described below. The specific organization titles for the QA functions described are identified in procedures. The authority to accomplish the QA functions described is delegated to the incumbent's staff as necessary to fulfill the identified responsibility.

a. The chief executive officer is responsible for providing top level direction of all activities associated with the safe and reliable operation of I&M's nuclear site. The chief executive officer provides guidance with regards to company QA.

b. The chief nuclear officer reports to the chief executive officer and is responsible for the implementation of all activities associated with the safe and reliable operation of I&M's nuclear site. The chief nuclear officer may report through additional layers of management but shall maintain sufficient authority and organizational freedom to implement assigned responsibilities. The chief nuclear officer provides guidance with regards to company QA policy.

    1. The individual responsible for QA reports to the chief nuclear officer and has overall authority and responsibility for establishing, controlling, maintaining and verifying the implementation and adequacy of the QA program as described in this QAPD. The individual responsible for QA is also responsible for supplier evaluations and source verifications. The individual responsible for QA has the authority and responsibility to escalate matters directly to the chief executive officer when needed.

c. The following executives report to the chief nuclear officer:

    1. The executives responsible for overall plant nuclear safety, engineering and support services at I&M's nuclear site report to the CNO. These executives are responsible for establishing and maintaining policies, goals and objectives of the QA program, implementation of the QA program, support activities and overseeing the activities of the on-site review committee.

d. The individuals fulfilling the following management functions report to the executives identified in Paragraph A.2.c above, unless otherwise noted. These individuals may report through an additional layer of management but shall maintain sufficient authority and organizational freedom to implement the assigned responsibilities. These individuals may fulfill more than one function described below:

1. The individual responsible for plant operations assures the safe, reliable, and efficient operation of the plant within the constraints of applicable regulatory requirements and the operating license.

2. The individual responsible for plant modification provides direction, control and overall supervision of the implementation of plant modifications and assigned maintenance. Separate individuals may be responsible for different modifications.

3. The individual responsible for training provides direction, control, and overall supervision of all training of personnel required by regulations.

4. The individual responsible for records management provides direction, control, and overall supervision of the records management program and associated activities.

5. The individual responsible for document control provides direction, control, and overall supervision of the document control program and associated activities.

6. The individual responsible for the corrective action program provides direction, control and overall supervision of the corrective action program and associated activities. This individual may report to the individual responsible for QA.

7. The individual responsible for engineering is responsible for the development and maintenance of engineering programs, policies, and procedures and for providing engineering services. Different aspects of these responsibilities (e.g., fuel design) may be fulfilled by separate individuals.

8. The individual responsible for materials, purchasing, and contracts is responsible for procurement, services, receipt, storage, and issue of materials, parts, and components. Different aspects of these responsibilities (e.g., source verification) may be fulfilled by separate individuals.

e. The on-site and off-site safety review committees independently review activities to provide additional assurance that the units are operated and maintained in accordance with the Operating License and applicable regulations, which address nuclear safety. Appendix C to this QAPD provides additional information that supplements or complements the on-site and off-site safety review committees activities described herein.

f. The NSRB receives its authority from and independently reports to the Nuclear Oversight Committee of the AEP Board of Directors. The Chief Nuclear Officer oversees and administers the function on their behalf and under their direction.

3. Responsibility

a. I&M has the responsibility for the scope and implementation of an effective QA program.

b. I&M may delegate all or part of the activities of planning, establishing, and implementing the QA program to others, but retains the responsibility for the program's effectiveness.

c. The adequacy of the QAPD's implementation is periodically assessed by the individual responsible for QA and the associated executive for overall plant nuclear safety, and is reported to the chief nuclear officer.

d. I&M is responsible for ensuring that the applicable portion(s) of the QA program is properly documented, approved, and implemented (people are trained and resources are available) before an activity within the scope of the QAPD is undertaken by I&M or by others.

e. Responsible individuals are to ensure that personnel working under their management cognizance are provided the necessary training and resources to accomplish their assigned tasks within the scope of the QAPD.

f. Procedures that implement the QAPD are approved by the management responsible for the applicable quality function. The procedures are to reflect the QAPD and work is to be accomplished in accordance with them.

4. Authority

a. When I&M delegates responsibility for planning, establishing, or implementing any part of the overall QA program, sufficient authority to accomplish the assigned responsibilities is delegated.

b. The individual responsible for QA has the responsibility and the authority to stop unsatisfactory work (except reactor operation) and control further processing,

delivery, installation, or use of non-conforming items or services. Cost and schedule considerations will not override safety considerations.

5. Personnel Training and Qualification

a. Personnel assigned to implement elements of the QA program are capable of performing their assigned tasks.

b. Training programs are established and implemented to ensure that personnel achieve and maintain suitable proficiency.

c. Personnel training and qualification records are maintained in accordance with procedures.

d. Additional details concerning personnel training and qualification may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.8, 1.58, and 1.146).

6. Corrective Action

a. It is the responsibility of each individual to promptly identify and report conditions adverse to quality. Management at all levels encourages the identification of conditions that are adverse to quality.

b. A corrective action program is established and implemented that includes prompt identification, documentation, and correction of conditions adverse to quality. For significant conditions adverse to quality, the cause is determined (when possible) and corrective action(s) that should prevent recurrence is (are) identified and tracked until completed.

c. Specific responsibilities within the corrective action program may be delegated, but I&M maintains responsibility for the program's effectiveness.

d. Non-conforming items are properly controlled to prevent their inadvertent test, installation, or use. They are reviewed and either accepted, rejected, repaired, or reworked.

e. Reports of conditions that are adverse to quality are analyzed to identify trends in quality performance. Significant conditions adverse to quality and adverse trends are reported to the appropriate level of management.

f. Additional details concerning corrective action activities may be found in Section B.13 and the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33).

7. Regulatory Commitments

a. Except where alternatives are identified, I&M complies with the QA guidance documents listed on Table 1. If the guidance in any of these documents is in conflict with the QAPD, the guidance provided in the QAPD is the controlling guidance. Additionally, the following clarifications apply to all guidance documents listed in Table 1:

1. For modifications and non-routine maintenance, guidance applicable to construction-like activities is applicable to comparable plant activities. An exception is that the inspection of modifications, repairs, rework, and replacements shall be in accordance with the original design and inspection requirements or a documented approved alternative.

2. The definitions provided by Regulatory Guide 1.74 and associated clarifications as described in Table 2 apply wherever the defined term is used in the QAPD and associated guidance documents.

3. Clarification to a guidance document applies wherever the guidance document is invoked.

4. In each of the ANSI Standards, other documents (e.g., other standards, codes, regulations, tables, or appendices) are referenced or described. These other documents are only QA program requirements if explicitly committed to in the QAPD. If not explicitly committed to, these documents are not considered as QA program requirements, although they may be used as guidance.

5. Guidance applicable to safety-related items and activities is applicable to comparable items and activities controlled by 10 CFR 72 and transportation packages controlled by 10 CFR 71.

6. Guidance applicable to safety-related items and activities is applicable to comparable fire protection items and activities prescribed by 10 CFR 50.48(c), National Fire Protection Association Standard NFPA 805. Specifically, the fire protection quality requirements are defined in Section C, Quality Assurance Program, of Appendix A to NRC Branch Technical Position (APCSB) 9.5-1 (1976).

b. The NRC is to be notified of QAPD changes in accordance with 10 CFR 50.54(a).

B. PERFORMANCE /VERIFICATION

1. Methodology

a. Personnel performing work activities such as design, engineering, procurement, manufacturing, construction, installation, startup, maintenance, modification, operation, and decommissioning are responsible for achieving acceptable quality.

b. Personnel performing verification activities are responsible for verifying the achievement of acceptable quality and are different personnel than those performing the work.

c. Work is accomplished and verified using instructions, procedures, or other appropriate means that are of a detail commensurate with the activity's complexity and importance to safety.

d. Criteria that define acceptable quality are specified, and quality is verified against these criteria.

e. Computer programs used in safety-related design analyses or operational activities are controlled through administrative procedures.

2. Design Control

a. The design control program is established and implemented to assure that the activities associated with the design of systems, components, structures, and equipment and modifications thereto, are executed in a planned, controlled, and orderly manner.

b. The program includes provisions to control design inputs, processes, outputs, changes, interfaces, records, and organizational interfaces.

c. Design inputs (e.g., performance, regulatory, quality, and quality verification requirements) are to be correctly translated into design outputs (e.g., specifications, drawings, procedures, and instructions).

d. The final design output is to relate to the design input in sufficient detail to permit verification.

e. The design process is to ensure that items and activities are selected and independently verified consistent with their importance to safety to ensure they are suitable for their intended application.

f. Changes to final designs (including field changes and modifications) and dispositions of non-conforming items to either use-as-is or repair are to be subjected to design control measures commensurate with those applied to the

original design and approved by the organization that performed the original design or a qualified designee.

g. Interface controls (internal and external between participating design organizations and across technical disciplines) for the purpose of developing, reviewing, approving, releasing, distributing, and revising design inputs and outputs are defined in procedures.

h. Design documentation and records, which provide evidence the design and design verification process was performed in accordance with this program, shall be collected, stored, and maintained in accordance with documented procedures. This documentation includes final design documents, such as drawings and specifications, revisions thereto, and documentation that identifies the important steps, including sources of design inputs which support the final design.

i. Additional details concerning design control activities may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guide 1.64).

3. Design Verification

a. A program is established and implemented to verify the acceptability of design activities and documents for the design of items. The selection and incorporation of design inputs and design processes, outputs, and changes are verified.

b. Verification methods include, but are not limited to, design reviews, alternative calculations, and qualification testing. The extent of this verification will be a function of the importance to safety of the item, the complexity of the design, the degree of standardization, the state of the art, and the similarity with previously proven designs. Standardized or previously proven designs will be reviewed for applicability prior to use.

c. When a test program is used to verify the acceptability of a specific design feature, the test program is to demonstrate acceptable performance under conditions that simulate the most adverse design conditions that are expected to be encountered.

d. Independent design verification is to be completed before design outputs are used by other organizations for design work and before they are used to support other activities such as procurement, manufacture, or construction. When this timing cannot be achieved, the unverified portion of the design is to be identified and controlled. In all cases, the design verification is to be completed before relying on the item to perform its function.

e. Individuals or groups responsible for design reviews or other verification activities shall be identified in procedures and their authority and responsibility

shall be defined and controlled. Design verification shall be performed by any competent individuals or groups other than those who performed the original design but who may be from the same organization. The designer's immediate supervisor may perform the design verification provided: the supervisor is the only technically qualified individual capable of performing the verification, the need is individually documented and approved in advance by the supervisor's management, and the frequency and effectiveness of the supervisor's use as a design verifier are independently verified to guard against abuse.

f. Design verification procedures are to be established and implemented to ensure that an appropriate verification method is used, the appropriate design parameters to be verified are chosen, the acceptance criteria are identified, the verification is satisfactorily accomplished, and the results are properly recorded.

g. The following quality requirements are applicable to analyses, calculations, and evaluations performed to support compliance with 10 CFR 50.48(c), NFPA 805 (2001 Edition)

1. Review: Each analysis, calculation, or evaluation performed shall be independently reviewed.
2. Verification and Validation: Each calculational model or numerical method used shall be verified and validated through comparison to test results or comparison to other acceptable models.
3. Limitation of Use: Acceptable engineering methods and numerical models shall only be used for applications to the extent these methods have been subject to verification and validation. These engineering methods shall only be applied within the scope, limitations, and assumptions prescribed for that method.
4. Qualification of Users: Cognizant personnel who use and apply engineering analysis and numerical models (e.g., fire modeling techniques) shall be competent in that field and experienced in the application of these methods as they relate to nuclear power plants, nuclear power plant fire protections, and power plant operations.
5. Uncertainty Analysis: An uncertainty analysis shall be performed to provide reasonable assurance that the performance criteria have been met.

h. Additional details concerning design verification activities may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guide 1.64).

4. Procurement Control

a. A program is established and implemented to ensure that purchased items and services are of acceptable quality.

b. The program includes provisions for evaluating prospective suppliers and selecting only qualified suppliers.

c. The program includes provisions for ensuring that qualified suppliers continue to provide acceptable products and services.

d. The program includes provisions (e.g., source verification, receipt inspection, pre-installation and post-installation tests, and certificates of conformance) for accepting purchased items and services.

e. Applicable technical, regulatory, administrative, and reporting requirements (e.g., specifications, codes, standards, tests, inspections, special processes and 10 CFR 21) are invoked for procurement of items and services.

f. The program includes provisions for ensuring that documented evidence of an item's conformance to procurement requirements is available at the site before the item is placed in service or used unless otherwise specified in procedures.

g. The program includes provisions for ensuring that procurement, inspection, and test requirements have been satisfied before an item is placed in service or used unless otherwise specified in procedures.

h. The procurement of components, including spare and replacement parts, is subject to quality and technical requirements suitable for their intended service.

i. Appropriate controls for the selection, determination of suitability for intended use (critical characteristics), evaluation, receipt, and quality evaluation of commercial grade items are to be imposed to ensure that the items will perform satisfactorily in service.

j. Additional details concerning procurement control may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33 and 1.123)

5. Procurement Verification

a. A program is established and implemented to verify the quality of purchased items and services at intervals and to a depth consistent with the item's or service's importance to safety, complexity, quantity, and the frequency of procurement.

b. The program is executed in all phases of procurement. As necessary, this may require verification of activities of suppliers below the first tier.

c. Additional details concerning procurement verification may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.123 and 1.144)

6. Identification and Control of Items

a. A program is established and implemented to identify and control items to prevent the use of incorrect or defective items.

b. Identification of each item is maintained throughout fabrication, erection, installation, and use so that the item can be traced to its documentation. Traceability is maintained to an extent consistent with the item's importance to safety.

c. Additional details concerning identification and control of items may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guide 1.33).

7. Handling, Storage, and Shipping

a. A program is established and implemented to control the handling, storage, shipping, cleaning, and preserving of items to ensure the items maintain acceptable quality.

b. Special protective measures (e.g., containers, shock absorbers, accelerometers, inert gas atmospheres, specific moisture content levels, and temperature levels) are specified and provided when required to maintain acceptable quality.

c. Specific procedures are developed and used for cleaning, handling, storage, packaging, shipping, and preserving items when required to maintain acceptable quality.

d. Items are marked and labeled during packaging, shipping, handling, and storage to identify, maintain, and preserve the items' integrity and indicate the need for special controls.

e. Additional details concerning handling, storage, and shipping activities may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guide 1.38)

8. Test Control

a. A test control program is established and implemented to demonstrate that items will perform satisfactorily in service.

b. Criteria are defined that specify when testing is required.

c. The test control program includes, as appropriate, proof tests before installation, pre-operational tests, post-maintenance tests, post-modification tests, and operational tests.

d. Test procedures are developed that include:

1. instructions and prerequisites to perform the test,

2. use of proper test equipment,

3. acceptance criteria, and

4. mandatory inspections as required.

e. Test results are evaluated to assure that test objectives and inspection requirements have been satisfied.

f. Unacceptable test results shall be evaluated.

g. Additional details concerning test control may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guide 1.33).

9. Measuring and Test Equipment Control

a. A program is established and implemented to control the calibration, maintenance, and use of measuring and test equipment.

1. Measuring and test equipment does not include permanently installed operating equipment or test equipment used for preliminary checks where data obtained will not be used to determine acceptability or be the basis for design or engineering evaluation.

2. Installed operating equipment does not include the plant process computer (PPC), security computer, meteorological information data acquisition system (MIDAS), radiological access control and dose tracking software, or other computers that are permanently installed in the plant.

3. Calibration and control measures are not required for rulers, tape measures, levels, and other such devices if normal commercial manufacturing practices provide an adequate level of accuracy.

b. The types of equipment covered by the program (e.g., instruments, tools, gages, and reference and transfer standards) are defined in procedures.

c. Measuring and test equipment is calibrated at specified intervals or immediately before use on the basis of the item's required accuracy, intended use, frequency of use, and stability characteristics and other conditions affecting its performance.

d. Measuring and test equipment is labeled, tagged, or otherwise controlled to indicate its calibration status and to ensure its traceability to calibration test data.

e. Measuring and test equipment is calibrated against standards that have an accuracy of at least four times the required accuracy of the equipment being calibrated or, when this is not possible, have an accuracy that ensures the equipment being calibrated will be within the required tolerance.

f. If nationally recognized standards exist, calibration standards are to be traceable to them. Except where calibration standards with the same accuracy as the instruments being calibrated are shown to be adequate for the requirements, calibration standards are to have a greater accuracy than the standards being calibrated.

g. Measuring and test equipment found out of calibration is tagged or segregated. The acceptability shall be determined for items measured, inspected, or tested with an out-of-calibration device.

h. Additional details concerning measuring and test equipment control may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Safety Guide 30, Regulatory Guides 1.33, 1.94, 1.116 and 1.123).

10. Inspection, Test, and Operating Status

a. The status of required inspections and tests and the operating status of items is verified before release, fabrication, receipt, installation, test, and use, as applicable. This verification is to preclude inadvertent bypassing of inspections and tests and to prevent inadvertent operation of controlled equipment.

b. The application and removal of inspection, test, and operating status indicators are controlled in accordance with procedures.

c. Additional details concerning inspection, test, and operating status control may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guide 1.33).

11. Special Process Control

a. A program is established and implemented to ensure that special processes are properly controlled.

b. Processes subject to special process controls are those for which full verification or characterization by direct inspection is impossible or impractical. The criteria that establish which processes are special are described in procedures. The following are special processes:

1. welding and brazing,
2. heat treating,
3. protective coatings,
4. NDE (Non-Destructive Examination),
5. chemical cleaning, and
6. concrete placement

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

d. Additional details concerning special process control may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guide 1.33).

12. Inspection

a. A program is established and implemented for inspections of activities in order to verify conformance to the documented instructions, procedures and drawings for accomplishing the activity. The inspection program may be implemented by or for the organization performing the activity to be inspected.

b. Provisions to ensure inspection planning is properly accomplished are to be established. Planning activities are to identify the characteristics and activities to be inspected, the inspection techniques, and the acceptance criteria.

c. Provisions to identify inspection hold points, beyond which work is not to proceed without the consent of the inspection organization, are to be defined.

d. Inspection results shall be kept in sufficient detail to permit adequate confirmation of the inspection program.

e. Unacceptable inspection results shall be evaluated and resolved in accordance with procedures.

f. Inspections are performed by qualified personnel other than those who performed or directly supervised the work being inspected. While performing the inspection activity the inspectors functionally report to the associated individual responsible for QA or an individual responsible for materials, purchasing, and contracts, as appropriate.

g. Additional details concerning inspections may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33 and 1.58).

13. Corrective Action

a. Procedures shall provide for identification, evaluation, and resolution of conditions adverse to quality.

b. Reworked, repaired, and replacement items are to be inspected and tested in accordance with the original inspection and test requirements or specified alternatives.

c. Additional details concerning corrective action activities may be found in Section A.6 and the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33 and 1.144).

14. Document Control

a. A program is established and implemented to control the development, review, approval, issue, use, and revision of documents.

b. At a minimum, the following documents are included in the document control program:

1. Safety Analysis Report,
2. design documents,
3. procurement documents,
4. Technical Specifications,
5. procedures, manuals, and plans,
6. corrective action documents,
7. other documents as defined in procedures.

c. Revisions of controlled documents are reviewed for adequacy and approved for release by the same organization that originally reviewed and approved the documents or by a designated organization that is qualified and knowledgeable.

d. Controlled documents are available to and used by the person performing the activity.

e. The distribution of new and revised controlled documents is in accordance with procedures. Superseded documents are controlled to prevent inadvertent use.

f. Additional details concerning document control may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33 and 1.64).

15. Records

a. A program is established and implemented to ensure that sufficient records of items and activities (e.g., design, engineering, procurement, manufacturing, construction, inspection and test, radiography, installation, pre-operation, startup, operations, maintenance, modification, decommissioning, and audits) are generated and maintained to reflect completed work.

b. The program provides provisions for the administration, receipt, storage, preservation, safekeeping, retrieval, and disposition of records.

c. Additional details concerning records requirements may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guide 1.88).

C. AUDIT

1. Methodology

a. Personnel responsible for carrying out audits are maintained cognizant of day-to-day activities by ongoing involvement in the QA program requirements so that they can act in a management advisory function.

b. Organizations performing audits are to be technically and performance oriented commensurate with the activity being reviewed.

c. Personnel performing audits have no direct responsibilities in the area they are assessing.

d. Audits are accomplished using instructions, procedures, or other appropriate means that are of a detail commensurate with the activity's complexity and importance to safety.

2. Performance

a. A program of planned and periodic audits is established and implemented to confirm that activities affecting quality comply with the QAPD and that the QAPD has been implemented effectively. Audits will be conducted as required by the applicable Code of Federal Regulations, safety analysis reports, and commitments by various correspondence to the Nuclear Regulatory Commission. Audits will be conducted at a frequency in accordance with Section C.2.a.1.

1. Audit schedules assure that the following areas are audited at the indicated frequencies, or more frequently as performance dictates.

a. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 24 months.

b. The performance, training, and qualification of the entire station staff at least once per 24 months.

c. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems, or method of operation that affect nuclear safety at least once per 24 months.

d. The performance of activities required by the QAPD to meet the requirements of 10 CFR 50, Appendix B, at least once per 24 months.

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

f. The fire protection equipment and program implementation at least once per 24 months using either a qualified licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least once every 36 months.

g. The Radiological Environmental Monitoring Program and radiological effluents monitoring activities and implementing procedures at least once per 24 months.

h. The Off-site Dose Calculation Manual and implementing procedures at least once per 24 months.

i. The Process Control Program and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.

j. The performance of activities implementing NRC Order EA-12-051, Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation, requirements to provide reliable Spent Fuel Pool water level instrumentation on a periodic basis.

k. Audits of the following programs are performed at the frequencies specified in the governing regulation:

Program	Governing Regulation
Safeguards Contingency Plan	10 CFR 50.54(p)(3)(i-ii) Appendix C to 10 CFR 73
Security Program	10 CFR 73.55(m)(1-4)
Cyber Security Program	10 CFR 73.55(m)
Site Access Authorization Program	10 CFR 73.56(n)
Site Fitness for Duty Program	10 CFR 26.41(b)
FFD Laboratory	10 CFR 26.41(c)
Emergency Preparedness Program	10 CFR 50.54(t)
Packaging and Transportation of Radioactive Waste	10 CFR 71.137
Independent Spent Fuel Storage Installation	10 CFR 72.176

l. Any other area of facility operation considered appropriate by the off-site review committee or the executives responsible for overall plant nuclear safety and engineering.

2. A grace period of 90 days may be applied to the 24-month frequency for internal audits. For activities deferred in accordance with the 90-day grace period, the next performance due date will be based on their originally scheduled date.

3. Audits shall provide an objective evaluation of quality-related practices, procedures, instructions, activities, and items, and a review of documents and records, as applicable.

4. Audits shall be performed in accordance with approved written procedures or checklists. Items from previous audits shall be reviewed and re-audited, as appropriate. The checklists are used as guides to the auditor.

5. Scheduling and resource allocations are based on the status and safety importance of the activity or process being assessed.

6. Scheduling is dynamic and resources are supplemented when the effectiveness of the QA program is in doubt.

7. Audit reports are written and distributed to the appropriate levels of management for review. Follow-up action, including re-audit of deficient areas, is initiated as deemed appropriate.

8. Implementation of delegated portions of the QA program is assessed.

9. Audits are conducted using predetermined acceptance criteria.

10. Additional details concerning audits may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33 and 1.144).

Table 1 - 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.	Reg. Guide 1.21 (6/74)	- Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants
5.	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
6.	Reg. Guide 1.33 (02/78)	- Quality Assurance Program Requirements (Operation)
	ANSI N18.7 (1976)/ (ANS 3.2 1976)	- Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants
	ANSI N45.2 (1977)	- Quality Assurance Program Requirements for Nuclear Facilities
7.	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
8.	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)

Table 1 - REGULATORY AND SAFETY GUIDES/ANSI STANDARDS

9.	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
10.	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
11.	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
12.	Reg. Guide 1.63 (7/78)	- Electric Penetration Assemblies in Containment Structures for Light-Water- Cooled Nuclear Power Plants
13.	Reg. Guide 1.64 (6/76)	- 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
14.	Reg. Guide 1.74 (2/74)	- Quality Assurance Terms and Definitions
	ANSI N45.2.10 (1973)	- Quality Assurance Terms and Definitions
15.	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
16.	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

Table 1 - REGULATORY AND SAFETY GUIDES/ANSI STANDARDS

	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
17.	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
18.	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
19.	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
20	Reg. Guide 4.1 (4/75)	Programs for Monitoring Radioactivity in the Environs of Nuclear Power Plants
21.	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
22.	ANSI N45.4 (1972)	- Leakage-Rate Testing of Containment Structures for Nuclear Reactors
23.	Appendix A to NRC Branch Technical Position (APCSB) 9.5-1 (1976)	- Guidelines for Fire Protection for Nuclear Power Plants
24.	NUREG/CR-6407	- Classification of Transportation Packaging and Dry Spent Fuel Storage System Components According the Importance to Safety. (2/96)

Table 1 - REGULATORY AND SAFETY GUIDES/ANSI STANDARDS

25.	Reg. Guide 7.10	- Establishing Quality Assurance Programs for Packaging Used in Transportation of Radioactive Material. (3/05)

Table 2

CLARIFICATION/EXCEPTIONS TO REGULATORY GUIDES

1. Reg. Guide 1.8 (9/75)/ANSI N18.1 (1971)

1a. General

Exception/Interpretation
The following qualifications may be considered equivalent to a bachelor's degree:

1. Four (4) years of post-secondary schooling in science or engineering;
2. Four (4) years of applied experience at a nuclear facility in the area for which qualification is sought;
3. Four (4) years of operational or technical experience/training in nuclear power; or
4. any combination of the above totaling four (4) years.

Years of experience used to meet the education requirements as allowed by this exception shall not be used to also meet the experience requirements.

1b. Sec. 4.2.4

Requirement
Technical Manager – "A maximum of four years of the remaining seven years of experience should be fulfilled by satisfactory completion of academic training."

Exception/Interpretation
The nuclear oversight director may have equivalent educational qualifications in accordance with ANSI/ANS 3.1-1993, paragraph 4.1 to 4.1.2.4.

2. Reg. Guide 1.33 (02/78)/ANSI N18.7 (1976)

2a. 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 Appendix C to this QAPD.

2b. 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 specific areas of experience described in this section are not applicable to the Plant Operations Review Committee (PORC) but the committee must be comprised of site operations or engineering supervisory personnel. Additionally, the Nuclear Safety Review Board (NSRB) need contain experience in only a majority of the areas.

2c. 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
No more than two alternates shall participate as voting members in PORC activities at any one time

2d. Sec. 4.3.2.1

This exception pertaining to NSRB composition has been withdrawn.

2e. Sec. 4.3.2.2

Requirement
"Formal meetings of personnel assigned to a standing committee functioning as an independent review group shall be scheduled as needed."

Exception/Interpretation
The PORC shall meet at least once per calendar month and as convened by the Chair or the Vice-Chair.

2f. Sec. 4.3.2.3

Requirement
"A quorum for formal meetings of the committee held under the provisions of 4.3.2.2 shall consist of not less than a majority of the principals, or duly appointed alternates,..."

Exception/Interpretation
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

2g. Sec. 4.3.2.3

Requirement
"...no more than a minority of the quorum shall have line responsibility for the operation of the plant."

Exception/Interpretation
This requirement is not applicable to the on-site safety review committee.

2h. Sec. 4.3.2.3

This exception pertaining to NSRB quorum has been withdrawn.

2i. 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.

2j. 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 this QAPD and shall include:

1. All Plant Manager Instructions (PMIs), and changes thereto, with the exception of minor changes (as described in Requirement 6, Document Control, of ANSI/ASME NQA-1-2008, Quality Assurance Requirements for Nuclear Facility Applications).

2. Review of facility operations to detect potential nuclear safety hazards.
3. 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 NSRB.
4. Review of changes to the Process Control Program, Offsite Dose Calculation Manual, and radwaste treatment system.
5. Reportable Events and submittal of the result of review to the NSRB and the site Vice President.
6. Safety Limit Violation Report and the submitting of these reports to the Chairman of the NSRB and the Chief Nuclear Officer within 14 days of the violation.

2k. Sec. 4.3.4(2)

Requirement
"Proposed changes in procedures, proposed changes in facility, or proposed test or experiments, any of which involves a change in the technical specifications or an unreviewed safety question as defined in 10 CFR 50.59(c). [1]"

Exception/Interpretation
As a result of the 1999 10 CFR 50.59 rule change, the phrase "an unreviewed safety question" will be replaced with the phrase "requires a license amendment pursuant to 10 CFR 50.90."

2l. 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
NSRB review and approval are required for proposed license amendments prior to implementation. NSRB review and approval are normally performed prior to submittal to the NRC. However, in rare cases, with the permission of the NSRB Chair, exceptions may be authorized. PORC review and approval are also required for proposed license amendments prior to implementation. This requirement is normally satisfied before a request is submitted to the NRC.

2m. Sec. 4.5

Requirement
"Audits of selected aspects of operational phase activities shall be performed with a frequency commensurate with their safety significance and in a manner as to assure that an audit of all safety-related functions is completed within a period of two years."

Exception/Interpretation
Audits will be performed at frequencies as discussed in QAPD section C.2.a.1 instead of this section of ANSI N18.7.

2n. Sec. 5.2.2

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

Exception/Interpretation
The person who holds a senior reactor operator license for the affected unit and approves a temporary change to a procedure is not required to be in charge of the shift.

2o. Sec. 5.2.2

Requirement
"Temporary changes which clearly do not change the intent of the approved procedure, shall ..."

Exception/Interpretation
The temporary changes shall be approved by the original approval authority within 14 days of implementation.

2p. Sec. 5.2.8

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.

2q. Sec. 5.2.11

Requirement
"The program shall provide measures to ensure that conditions adverse to plant safety... and non-conformances are promptly identified and corrected."

Exception/Interpretation
The job order system and/or the corrective action program are used at CNP to identify nonconforming items and initiate corrective action for items which are installed or have been released to the CNP. Completed job order activities are reviewed by the supervisor

responsible for accomplishing the work. Nuclear oversight periodically audits the job order system, and on a sample basis, job orders.

2r. Sec. 5.2.11

Requirement
"In the case of significant conditions adverse to safety, the measures shall assure that the cause of the condition is determined and corrective action taken shall be documented and reported to appropriate levels of management..."

Exception/Interpretation
The Chairperson of the NSRB shall be notified of all Safety Limit violations within 24 hours of discovery.

2s. 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 10 CFR 50, Appendix B; ANSI N45.2; or other nationally recognized codes and standards.

2t. 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.

2u. Sec. 5.2.15

Requirement
"Review, Approval, and Control of Procedures. The administrative controls and quality assurance program shall provide measures to control and coordinate the approval and issuance of documents, including changes thereto, which prescribe all activities affecting quality... "

Exception/Interpretation
Requirements for review, approval, and control of procedures will be accomplished in accordance with ANSI/ANS-3.2 (2012), Managerial, Administrative and Quality Assurance Controls for the Operational Phase of Nuclear Power Plants, Section 3.6 – Document Control; and Requirement 6 (Document Control) of ANSI/ASME NQA-1-2008, Quality Assurance Requirements for Nuclear Facility Applications, and NQA-1a-2009, Addenda to ASME NQA-1–2008, instead of ANSI N18.7-1976/ANS-3.2, Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants, Section 5.2.15 - Review, Approval, and Control of Procedures, with the following clarification: the Qualified Technical Review (QTR) is performed after the initial round of validation, cross-discipline, and/or special reviews. The QTR is responsible to ensure all appropriate reviews have been obtained prior to their approval.

2v. Sec. 5.2.16

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

Exception/Interpretation
See Item 6b.

2w. Sec. 5.2.17

Requirement
"Such inspections shall be performed by qualified individuals other than those who performed or directly supervised the activity being inspected."

Exception/Interpretation
1. The I&M Peer Inspection Program is based on the premise that I&M personnel are qualified to ANSI N18.1 (1971) 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 that 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.

2. Major modification and non-routine maintenance work on safety-related equipment is inspected per ANSI N45.2.6, 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.

3. 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.

2x. Sec. 5.3.2(3)

Requirement
"References, including reference to technical specifications, should be included in procedures as applicable."

Exception/Interpretation
Instructions and procedures identify the regulatory requirements and commitments which pertain to the subject that it will control and establish responsibilities for implementation.

2y. 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
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 in their letter N90040 dated 02/14/90.

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. ANSI N45.2.2

4a 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.

4b. Sec. 3.2

Requirement
"The packaging requirements are based on the protection the item should receive during shipping, handling and storage."

Exception/Interpretation
As an alternative to the requirements in Section 3.2.1, items (4), (5) and (7), Section 3.2.2, Section 3.2.3, item (1), and Section 3.2.4, item (2), the storage atmosphere may be controlled such that it is free of harmful contaminants in concentrations that could produce damage to the stored item, and protecting weld end preparations and threads by controlling the manner in which the item is stored.

4c. Sec. 3.7.1

Requirement
Containers are used when maximum protection for the item or its barrier is required. Domestic types used shall be limited to:

(1) Cleated, sheathed boxes (500 lb. Maximum net weight).

Exception/Interpretation
Cleated, sheathed boxes may be used up to 1000 lb., rather than 500 lb. as specified in 3.7.1(1). Special qualification testing may be required for loads over 1000 lb.

4d. Sec. 3.7.2

Requirement
Skids and runners shall be used on boxes with a gross weight of 100 lb. or more, allowing a minimum floor clearance for forklift tines as provided by 4-inch lumber.

Exception/Interpretation
Skids and runners will normally be fabricated from a minimum 2 X 4 inch nominal lumber size and laid flat except where this is impractical because of the small dimensions of the container. If forklift handling is required, minimum floor clearance for forklift tines will be provided.

4e. Sec. 5.2.1

Requirement
Preliminary visual inspection or examination shall be performed prior to unloading to determine if any damage occurred during shipping.

Exception/Interpretation
Warehouse personnel will normally visually scrutinize incoming shipments for damage of the types listed in this section. This activity is not necessarily performed prior to unloading. Separate documentation of the shipping damage inspection is not necessary. Release of the transport agent after unloading and the signing for receipt of the shipment provides adequate documentation of completion of the shipping damage inspection. Any nonconformance noted will be documented and dispositioned. Persons performing the visual scrutiny during unloading are not considered to be performing an inspection function as defined under Reg. Guide.1.74; therefore, while they will be trained to perform this function, they may not be certified (N45.2.6) as an inspector.

4f. Sec. 5.2.2

Requirement
"Unless the completed item was inspected or examined at the source, it shall be inspected or examined at the point of receiving to verify that the following characteristics conform to the specified requirements."

Exception/Interpretation
This subsection requires six additional inspection activities if an item was not inspected or examined at the source. I&M will consider that a source inspection has been conducted if the supplier of the item is required to comply with ANSI N45.2.2 for the purchased item and if the supplier's program has been audited and found acceptable in the area (i.e.. the supplier performs a source inspection of his supplier or conducts a receipt inspection that includes, as applicable, the six additional items listed).

4g. 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.

4h. Sec. 5.2.3

Requirement
"...the "Special Inspection" procedure, complete with documentation instructions, shall be attached to the item or container..."

Exception/Interpretation
The "Special Inspection" procedure is not required to be attached to the item or container but shall be readily available to inspection personnel.

4i. Sec. 6.2.1

Requirement
"Access to storage areas shall be controlled and limited only to personnel designated by the responsible organization."

Exception/Interpretation
Items which fall within the Level D classification of the standard will be stored in an area which may be posted to limit access, but other positive controls such as fencing or guards may not be provided.

4j. 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.

4k. Sec. 6.2.5

Requirement
"Measures shall be taken to prevent the entrance of rodents and other small animals into indoor storage areas or equipment to minimize possible contamination and mechanical damage to stored material."

Exception/Interpretation
The sentence is replaced with the following: "Exterminators or other appropriate measures shall be used to control animals to minimize possible contamination and mechanical damage to stored material. If evidence of animal activity is detected, a survey or inspection will be utilized to determine the extent of the damage."

4l. Sec. 6.3.3

Requirement
"Hazardous chemicals, paints, solvents, and other materials of a like nature shall be stored in well ventilated areas which are not in close proximity to important nuclear plant items."

Exception/Interpretation
An alternate to the stated requirement is the following: "Hazardous chemicals, paints, solvents, and other materials of a like nature shall be stored in approved cabinets or containers which are not in close proximity to installed systems required for safe shutdown."

4m. 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.

4n. Sec. 6.4.2

Requirement
Care of items in storage shall be exercised in accordance with the following.

Exception/Interpretation
Care of items in storage shall be exercised in accordance with the following: "Types of components that could require maintenance while in storage shall be identified and evaluated for specific maintenance requirements. Maintenance activities 6.4.2 (6) through 6.4.2 (8) listed in this requirement shall be considered during this evaluation and any deviations shall be justified and documented."

4o. Sec. 6.5

Requirement
"Items released from storage and placed in their final location within the power plant, shall be inspected and cared for in accordance with the requirements of Section 6 of this standard, and other applicable standards."

Exception/Interpretation
The last sentence of this section is not applicable to the operations phase.

4p. Appendix (A-3) Sec. A3.4.1

Requirement
"The following criteria shall be used when considering the type of contact preservatives to be used."

Exception/Interpretation
During printing of the standard, a transposition occurred between the last sentence of A3.4.1 (4) and A3.4.1(5). The correct requirements are: (4) "However, preservatives for inaccessible inside surfaces of pumps, valves and pipe systems containing reactor coolant water shall be the water flushable type." (5) "The name of the preservative used shall be indicated to facilitate touch up."

4q. Appendix (A-3) Sec. A3.4.2

Requirement
"When inert gas blankets are used, the following criteria shall apply."

Exception/Interpretation
There may be cases involving large or complex shaped items for which an inert or dry air purge is provided, rather than a static gas blanket, in order to provide adequate protection due to difficulty of providing a leak proof barrier. In these cases, a positive pressure purge flow may be utilized as an alternate to a leak-proof barrier.

4r. Appendix (A-3) Sec. A3.9, Par. 2.(1)

Requirement
"Container markings shall be on a minimum of two sides of the container, preferably on one side and one end."

Exception/Interpretation
Instead of the requirement that container markings appear on a minimum of two sides of the container, preferably on one side and one end, I&M will comply with the following: Containers are adequately marked for storage, identification, and retrieval. Multiple marking requirements are imposed, where necessary.

4s. Appendix (A-3) Sec. A3.9, Par. 2.(4)

Requirement
"Container markings shall be applied with waterproof ink or paint in characters no less than ¾ inch high, container size permitting."

Exception/Interpretation
Instead of the requirement that container markings be no less than ¾ inch high, I&M will comply with the following: Container markings are of a size that permits easy recognition.

4t. Appendix (A-3) Sec. A3.9, Par. 2.(6)

Requirement
"Container markings shall include the following information:"

Exception/Interpretation
Instead of the specific container marking requirements, I&M will comply with the following: The information required in container marking is evaluated on a case-by-case basis.

4u. Appendix (A-3) Sec. A3.9, last Par.

Requirement
"Marking of items not within a container, such as pipe, tanks and heat exchangers, shall exhibit specified information in a location which is in plain unobstructed view, but not directly applied to bare austenitic stainless steel and nickel alloy metal surfaces of the item."

Exception/Interpretation
The last paragraph of A3.9 could be interpreted as prohibiting any direct marking on bare austenitic stainless steel and nickel alloy metal surfaces. As a alternate, paragraphs A3.9.(l) and (2) may be used to control marking on the surface of austenitic stainless steels and nickel base alloys based on documented engineering evaluations. Contamination levels are controlled such that the material used for marking is not detrimental to the materials marked.

5. ANSI 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. ANSI N45.2.4

6a. Sec. 2.2

Requirement
Section 2.2 establishes prerequisites that 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. ANSI 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 Sections CC-4333.4, 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. ANSI N45.2.6,

8a. 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.

8b. Sec. 2.3

Requirement
"Any person who has not performed inspection, examination, or testing activities in his qualified area for a period of one year shall be reevaluated..."

Exception/Interpretation
A 90-day grace period may be applied to this activity. For activities deferred in accordance with the 90-day grace period. The next performance due date will be based on their originally scheduled date.

9. Reg. Guide 1.58 - General

9a. Sec. 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 CNP 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. Sections C.5, C.6, C.7, C.8, C.10

Requirement
"The requirements for qualification of nuclear power plant inspection, examination, and testing personnel that are included in ANSI N45.2.6 are acceptable to the NRC staff..."

Exception/Interpretation
I&M takes the position that the classification of test personnel into "Levels" based on the requirements stated in Section 3.0 of ANSI N45.2.6 does not necessarily assure adequate capability. I&M maintains that departmental and first line supervisors are best able to judge the capability of the personnel under their supervision, and that "Level" classification would require an overly burdensome administrative work load, could inhibit testing activities, and provides no assurance of capabilities. Therefore, I&M does not implement the "Level" classification concept for test personnel.

The methodology under which tests are conducted at the CNP 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 test 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 C.5, C.6, C.7, C.8 and C.10 of Regulatory Guide 1.58 for test personnel.

C.5 Based on the discussion in 9b, this position is not applicable to the CNP.

C.6 Replacement personnel for CNP 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 test 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 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 test personnel meet the minimum requirements of "Level I," and that management, supervisory, and engineering personnel meet the minimum requirements of ANSI 18.1.

10. ANSI 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. ANSI N45.2.9

11a. General

Exception/Interpretation
Quality assurance records required by this QAPD may be maintained electronically. Those records that are maintained electronically shall be maintained in accordance with the requirements of Generic Letter 88-18, Plant Record Storage on optical Disk, Regulatory Issue Summary 2000-18, Guidance on managing Quality Assurance Records in Electronic Media and this QAPD.

11b. 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.

11c. 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.

11d. 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 CNP Master File Room and other off-site record storage facilities comply with the requirements of NUREG-0800 (7/81), Section 17.1.17.4.

11e. Sec. 5.6

Requirement
Section 5.6 requires the record storage facilities to have a four-hour fire rating.

Exception/Interpretation
In lieu of this requirement, the minimum two-hour rating as specified in ANSI N45.2.9-1979 is an acceptable alternative.

12. Reg. Guide 1.64/ANSI N45.2.11

12a. Sec. 5.2.4

Requirement
Procedures shall be established to control the flow of design information between organizational units.

Exception/Interpretation
For the documentation of inter-disciplinary design reviews, there must be documented evidence of the acceptability of design documents, or portions thereof, prior to release (material, stress, physics, mechanical, electrical, concrete, etc.). Indication of the positive concurrence of those who determine the design acceptability relative to their respective disciplinary area of concern should be on the document or on a separate form traceable to the document. A document that indicates the reviewer's comments need not be retained.

13. Reg. Guide 1.144/ANSI N45.2.12

13a. Sec. C.3.a(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.

13b. Sec. C.3.b(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.

13c. Sec. C.3.b(2)(b)

Requirement
"Applicable elements of a supplier's quality assurance program should be audited by the purchaser on a triennial basis. ... A documented evaluation of the supplier should be performed annually."

Exception/Interpretation
A grace period not to exceed 25 percent of the audit interval shall be allowed for supplier audits and evaluations. A total combined time interval for any three consecutive inspection or audit intervals should not exceed 3.25 times the specified inspection or audit interval. For activities deferred in accordance with the 25-percent grace period, the next performance date will be based on the originally scheduled date.

13d. 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 C.2.a.1.c of this QAPD. Only selected corrective/preventive actions, determined by the auditing organization, will be verified by the auditing organization.

13e. Sec. 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.

14. ANSI N45.2.13,

14a. Sec. 3.1

Requirement
"Procurement document changes shall be subject to the same degree of control as utilized in the preparation of the original documents."

Exception/Interpretation
The "same degree of control" is stipulated to mean "equivalent level of review and approval." The changed document may not always be reviewed by the originator, however, at least an equivalent level of management/supervision shall review and approve any changes.

14b. Sec. 3.1

Requirement
"Procurement document changes shall be subject to the same degree of control as utilized in the preparation of the original documents."

Exception/Interpretation
Changes to procurement documents which are changes in quantity, estimated price, cost codes, taxes, format or editorial changes that do not affect the quality of the item or service do not require an equivalent level of review and approval as the original document.

14c. 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, I&M follow ANSI N18.7, Section 5.2.13, Sub-item 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."

14d. 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 2s.

14e. 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.

14f. 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, Sub-items 1 through 5). The timing of reviews will be the same as for review of the original procurement documents.

14g Sec. 4.2

Requirement
"Procurement source evaluation and selection measures shall be adopted by the Purchaser..."

Exception/Interpretation
Supplier evaluations may be performed any time prior to placing the purchased item in service.

14h. Sec. 8.2, Item b

Requirement
"b. Submittal of nonconformances notice to Purchaser by Supplier as directed by the Purchaser."

Exception/Interpretation
Non-conformance notices for conditions described in this section are only required to be submitted to I&M when the non-conformance could adversely affect the end use of an item relative to safety, interchangeability, operability, reliability, integrity or maintainability.

14i. 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 2s.

14j. Sec. 10.1

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.

14k. Sec. 10.2, Item d

Requirement
"The certificate should be by a person who is responsible for this quality assurance function and ..."

Exception/Interpretation
The section states that the certificate should be attested to by a person who is responsible for this QA function whose function and position are described in the Purchaser's/ Supplier's QA program. As an alternate to this requirement, I&M will use the following: "The person attesting to a certificate shall be an authorized and responsible employee of the supplier, and shall be identified by the supplier."

15. ANSI N18.1

15a 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 manager must hold or have held a senior operator license at CNP or a similar reactor; or have been certified for equivalent senior operator knowledge. If the operations manager 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.

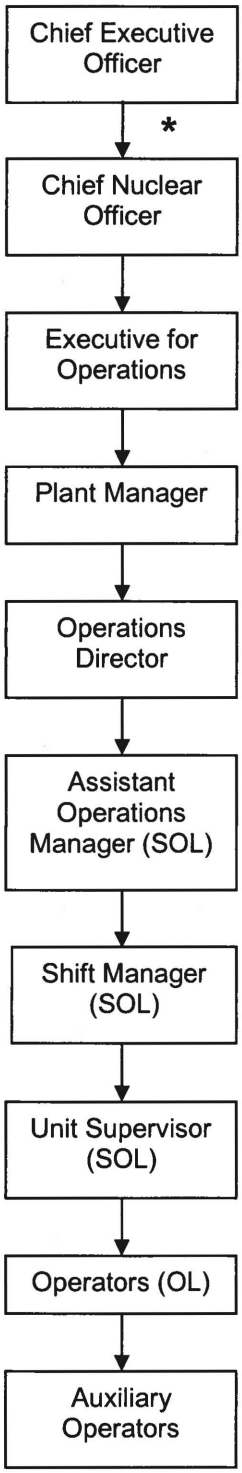
16. ANSI N45.2.23

16a. Sec. 3.2 & 5.3

Requirement
3.2 – "Based on management annual assessment, management may extend…."
5.3 – "Records for Lead Auditors shall be maintained and updated annually."

Exception/Interpretation
A 90-day grace period may be applied to these activities. For activities deferred in accordance with the 90-day grace period. The next performance due date will be based on their originally scheduled date.

Figure 1 – Site Operations Organization Chart



* Reporting may be through additional layers of management.

Note: Only those items for Appendix C in Revision 15C, that were not already addressed in a Reg. Guide, CFR, or a standard, or that were needed as a placeholder, were included in this Appendix.

Appendix C

6.5 REVIEW AND AUDIT

6.5.3 TECHNICAL REVIEW AND CONTROL

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

a. *Deleted (Addressed in ANSI/ANS-3.2-2012, Section 3.6; and Requirement 6 of ASME NQA-1-2008 and NQA-1a-2009, as referenced in Exception 2u of Table 2).*

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 a condition requiring a license amendment pursuant to 10 CFR 50.90, is involved. Pursuant to 10 CFR 50.59, NRC approval of items involving a condition requiring a license amendment pursuant to 10 CFR 50.59, 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 NSRB as necessary for required reviews.

6.10 RECORD RETENTION

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

a. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
b. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
c. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
d. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
e. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
f. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
g. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
h. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
i. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
j. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
k. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
l. *Deleted (Addressed in N45.2.9 – Appendix A, Section A.6.1).*
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

Appendix D

Independent Spent Fuel Storage Installation (ISFSI) Quality Matrix

10 CFR 50 Appendix B	Title	Important to Safety SSCs Category		
		A	B	C
1	Organization	M	M	R
2	Quality Assurance Program	M	M	R
3	Design Control	M	M	R
4	Procurement Document Control	M	R	NR
5	Instructions, Procedures, and Drawings	M	M	R
6	Document Control	M	M	R
7	Control of Purchase Material, Equipment, and Services	M	R	R
8	Identification and Control of Materials, Parts, and Components	M	R	R
9	Control Of Special Processes	M	M	R
10	Inspections	M	M	R
11	Test Control	M	M	R
12	Control of Measuring, and Test Equipment	M	M	R
13	Handling, Storage, and Shipping	M	R	NR
14	Inspection, Test, and Operating Status	M	M	NR
15	Nonconforming Material, Parts, or Components	M	M	R
16	Corrective Action	M	M	R
17	Quality assurance Records	M	M	R
18	Audits	M	M	R

(M) Mandatory = Indicates the Appendix B Quality Assurance (QA) Program shall be used

(R) Recommended = Indicates application of the applicable QA criterion may benefit the user. The Engineering organization shall determine the extent of application required for the SSCs in question.

(NR) Not Required = Indicates that little benefit has been identified or no regulatory basis has been found to require application of applicable QA Criteria. Imprudent use of these criteria may add unnecessary burden.