Quality Assurance Program Manual

Arkansas Nuclear One
Units 1 & 2
Docket Nos. 50-313 & 50-368
License Nos. DPR-51 & NPF-6

Grand Gulf Nuclear Station
Docket No. 50-416
License No. NPF-29

River Bend Station
Docket No. 50-458
License No. NPF-47

Waterford 3 Steam Electric Station
Docket No. 50-382
License No. NPF-38

Entergy

QUALITY ASSURANCE PROGRAM MANUAL

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A. MANAGEMENT

1. Methodology

a. The Quality Assurance Program Manual (QAPM) provides a consolidated overview of the quality program controls which govern the operation and maintenance of Entergy Operations, Inc.'s (Entergy's) quality related items and activities. The QAPM describes the quality assurance organizational structure, functional responsibilities, levels of authority, and interfaces.

b. The requirements and commitments contained in the QAPM 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 QAPM as well as its implementation. Changes should be promptly communicated when identified.

c. The QAPM applies to all activities associated with structures, systems, and components which are safety related or controlled by 10 CFR 72. The QAPM also applies to transportation packages controlled by 10 CFR 71. The methods of implementation of the requirements of the QAPM are commensurate with the item's or activity's importance to safety. The applicability of the requirements of the QAPM to other items and activities is determined on a case-by-case basis. The QAPM implements 10 CFR 50 Appendix B, 10 CFR 71 Subpart H, and 10 CFR 72 Subpart G. Q-1

d. The QAPM is implemented through the use of approved procedures (i.e., policies, directives, procedures, instructions, or other documents) which 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 QAPM is described below. The specific organization titles for the quality assurance functions described are identified in procedures. The authority to accomplish the quality assurance functions described is delegated to the incumbent's staff as necessary to fulfill the identified responsibility.

A.2 (continued)

a. The chief executive officer is responsible for providing top level direction of all activities associated with the safe and reliable operation of Entergy's nuclear sites. The chief executive officer provides guidance with regards to company quality assurance policy.

b. The chief operating officer reports to the chief executive officer and is responsible for the implementation of all activities associated with the safe and reliable operation of Entergy's nuclear sites. The chief operating officer provides guidance with regards to company quality assurance policy.

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

1. The executive responsible for overall plant nuclear safety at each site is responsible for establishing the policies, goals, and objectives and the implementation of the quality assurance program at the respective site and overseeing activities of the associated off-site safety review committee. Q-57

2. The executive responsible for operations support is responsible for establishing the policies, goals, and objectives and the implementation of the quality assurance program of Entergy's corporate activities and maintaining this QAPM in accordance with regulatory requirements. Q-57

3. The executive responsible for engineering is responsible for providing engineering services.

d. The individuals fulfilling the following management functions report to the executives identified above. 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 be responsible for a single unit/location or for multiple units/locations and may fulfill more than one function described below:

1. The manager responsible for quality assurance has overall authority and responsibility for establishing, controlling, and verifying the implementation and adequacy of the quality assurance program as described in this QAPM. The manager responsible for quality assurance has the authority and responsibility to escalate matters directly to the chief executive officer when needed.

A.2.d (continued)

2. The manager 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. The functional responsibility includes:

   a. chemistry,
   b. operations,
   c. maintenance,
   d. radiological protection,
   e. plant engineering,
   f. implementation of design activities,
   g. work control,
   h. tests,
   i. on-site safety review committee, and
   j. maintenance of the plant in conformance with approved design.

3. The manager responsible for plant modification provides direction, control, and overall supervision of the implementation of plant modifications and assigned maintenance. Separate managers may be responsible for different modification activities.

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

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

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

7. The manager responsible for the corrective action program provides direction, control, and overall supervision of the corrective action program and associated activities.

8. The manager 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 managers.

A.2.d (continued)

9. The manager responsible for materials, purchasing, and contracts is responsible for supplier evaluations, source verifications, 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 managers.

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.

3. Responsibility

a. Entergy has the responsibility for the scope and implementation of an effective quality assurance program.

b. Entergy may delegate all or part of the activities of planning, establishing, and implementing the quality assurance program to others, but retains the responsibility for the program's effectiveness.

c. The adequacy of the QAPM's implementation is assessed annually by the manager(s) responsible for quality assurance and reported to the chief executive officer and the associated executive for overall plant nuclear safety.

d. Entergy is responsible for ensuring that the applicable portion(s) of the quality assurance program is properly documented, approved, and implemented (people are trained and resources are available) before an activity within the scope of the QAPM is undertaken by Entergy or by others.

e. Individual managers 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 QAPM.

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

A. (continued)

4. Authority

a. When Entergy 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 manager responsible for quality assurance has the responsibility and the authority to stop unsatisfactory work 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 quality assurance 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).

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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. The corrective action program for significant conditions adverse to quality shall require cause determination (when possible) and a corrective action plan that should lessen the likelihood of the recurrence.

A.6 (continued)

c. Specific responsibilities within the corrective action program may be delegated, but Entergy 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 significant trends are reported to the appropriate level of management.

f. Additional details concerning corrective action 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 1.33).

7. Regulatory Commitments

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

1. For modifications and nonroutine maintenance, guidance applicable to construction-like activities is applicable to comparable plant activities. Except 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 1 apply wherever the defined term is used in the QAPM and associated guidance documents.

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

A.7.a (continued)

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 quality assurance program requirements if explicitly committed to in the QAPM. If not explicitly committed to, these documents are not considered as quality assurance 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.

b. The NRC is to be notified of QAPM changes in accordance with 10 CFR 50.54(a)(3).

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 who performed the work. I-Q2

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.

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.2 (continued)

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 that 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, and revisions thereto and documentation which identifies the important steps, including sources of design inputs that 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.3 (continued)

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:

1. the supervisor is the only technically qualified individual capable of performing the verification,

2. the need is individually documented and approved in advance by the supervisor's management, and

3. 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.

B.3 (continued)

g. 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 Part 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.

B.4. (continued)

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, and 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). Q-94

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.

B.7 (continued)

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).

B. (continued)

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. 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. Additionally, calibration and control measures are not required for rulers, tape measures, levels and other such devices if normal commercial manufacturing practices provide adequate 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 of items measured, inspected, or tested with an out-of-calibration device.

B.9 (continued)

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., Regulatory Guides 1.30, 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. The criteria that establish which processes are special are described in procedures. The following are special processes:

1. welding,
2. heat treating,
3. NDE (Non-Destructive Examination),
4. chemical cleaning, and
5. unique fabricating or testing processes which require in-process controls.

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.

B.11 (continued)

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. Q-2

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, the acceptance criteria, and the organization responsible for performing the inspection.

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 are to be documented by the inspector and reviewed by qualified personnel.

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 manager responsible for quality assurance or a manager responsible for materials, purchasing, and contracts as appropriate. Q-2

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). Q-2 Q-16

B. (continued)

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 Guide 1.33).

14. Document Control

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

b. The scope of the document control program includes:

1. safety analysis report,
2. design documents,
3. procurement documents,
4. Technical Specifications,
5. procedures, manuals, and plans,
6. corrective action documents, and
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. Copies of controlled documents are distributed to and used by the person performing the activity.

B.14 (continued)

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

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 Guide 1.33).

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, 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 record 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

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1. Methodology

a. Personnel responsible for carrying out audits are maintained cognizant of day-to-day activities by the ongoing involvement in the quality assurance 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.

C. (continued)

2. Performance

10-84

a. A program of planned and periodic audits is established and implemented to confirm that activities affecting quality comply with the QAPM and that the QAPM has been implemented effectively. Audit frequencies will be implemented as required by the applicable Code of Federal Regulations, safety analysis report, and commitments by various correspondence to the NRC. Audits will be conducted at a frequency in accordance with either Section C.2.a.1 or Section C.2.a.2 below.

1. Audit frequencies will be determined in accordance with a performance based audit scheduling program. The scheduling program, through an expert panel, uses assessment indicators to identify and schedule audits based on performance results and importance of the activity relative to safety. Potential audit subject areas are periodically assessed against appropriate performance criteria. From these reviews a determination is made in regard to the depth, scope, and scheduling of specific audits. Functional areas important to safety are assessed annually (± 25%) to identify strengths and weaknesses (if applicable) to determine the level and focus of independent oversight activities for the upcoming year. The basis for the assessment shall include the results of audits and surveillance, NRC inspections, LERs, self-assessments, and applicable conditions reports (e.g., non-conformance and corrective action reports). Personnel changes, change/increase in functional area responsibilities, industry operating experience, and INPO evaluations will also be considered. Each area will be assigned a rating with a comparison to previous years. This assessment will be documented, reviewed, and approved by quality assurance management.

This document is considered a quality assurance record and will be available for NRC review. Audit subject areas of Section C.2.a.2 shall continue to be audited on the frequencies designated unless expert panel judgment, based on performance results, determines such an audit to be unnecessary. In such cases the expert panel basis shall be documented.

C.2.a. (continued)

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

   a. The conformance of each unit's operation to provisions contained within the Technical Specifications and applicable license conditions is audited at least once every 24 months.

   b. The performance, training, and qualifications of the entire staff is audited at least once every 24 months.

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

   d. The performance of activities required by the QAPM to meet the criteria of 10 CFR 50, Appendix B is audited at least once every 24 months. Q-105

   e. The Offsite Dose Calculations Manual and Process Control Program and implementing procedures is audited at least once every 24 months.

   f. The radiological environmental monitoring program and the results thereof is audited at least once every 24 months.

   g. A fire protection and loss prevention program inspection and audit shall be performed using either off-site licensee personnel or an outside fire protection firm at least once 12 months.

   h. The fire protection program and implementing procedures at least once 24 months.

   i. A fire protection and loss prevention program inspection and audit shall be performed using an outside fire consultant at least once 36 months.

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

C.2 (continued)

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

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

e. Scheduling is dynamic and resources are supplemented when the effectiveness of the quality assurance program is in doubt.

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

g. Implementation of delegated portions of the quality assurance program is assessed.

h. Audits are conducted using predetermined acceptance criteria.

i. 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).

D. INDEPENDENT SAFETY REVIEW

1. Description

Q-84

a. Independent safety review is performed to meet the individual unit's commitment to NUREG-0737, Section I.B.1.2, "Independent Safety Engineering Group," as described in the unit's safety analysis report.

Table 1
Regulatory Commitments

A. Regulatory Guide 1.8 Revision 1, dated September 1975

		Clarification/Exception
1.	General	Qualification requirements for personnel will meet ANSI/ANS 3.1 1978 except where exception to ANSI N18.1 or to this Standard is identified in the applicable unit's Technical Specifications. Individuals filling positions who met the previous commitment at the time of implementation of this commitment can be considered to meet any more restrictive aspects of the requirements of this commitment for that position without further review and documentation. Q-5
2.	General	The following qualifications may be considered equivalent to a bachelor's degree: a. 4 years of post secondary schooling in science or engineering, Q-6 b. 4 years of applied experience at a nuclear facility in the area for which qualification is sought, c. 4 years of operational or technical experience/training in nuclear power, or d. any combination of the above totaling 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. Q-6

Table 1
Regulatory Commitments

B. Regulatory Guide 1.30, dated August 1972

		Clarification/Exception
1.	ANSI N45.2.4 General	ANSI N45.2.4 identifies various tests to be performed. The applicability of these tests will be determined as discussed in QAPM Section B.8 and based upon the significance of change or modification. Q-24
2.	ANSI N45.2.4 Section 3	Documented routine inspections and audits of the storage area may be performed instead of the requirements of this Section. Q-8
3.	ANSI N45.2.4 Section 5.2	In some cases, testing requirements may be met by post-installation surveillance testing in lieu of a special post-installation test.
4.	ANSI N45.2.4 Section 6.2.1	The last sentence of this section states: "Items requiring calibration shall be tagged or labeled on completion indicating date of calibration and identity of the person that performed the calibration." Instead of requiring the tagging or labeling of all equipment this statement is changed to require the equipment to be suitably marked to indicate the date of the next required calibration and the identity of the person that performed the calibration. Q-24

Table 1
Regulatory Commitments

C. Regulatory Guide 1.33 Revision 2, dated February 1978

		Clarification/Exception
1.	Section C.1	Entergy will provide procedures for the guide's Appendix A activities as discussed. However, Entergy does not consider all activities listed to be "safety-related" (e.g., activities in 7.e).
2.	Section C.4	This section establishes minimum 2 year audit frequency for all safety related functions and recommends audit frequencies specific to Corrective Action, Facility Operation, and Staff Performance, Training, and Qualifications. Entergy will perform audits at frequencies as discussed in QAPM Section C.2.a instead of this section.
3.	ANSI N18.7 Section 1	Sentences 4 and 5 state, "However, applicable sections of this standard should be used as they apply to related activities. Activities included are: Design Changes, Purchasing, Fabricating..." With regard to radioactive material transportation activities, Entergy will only implement the requirements associated with those activities conducted in accordance with the applicable NRC Quality Assurance Program Approval for Radioactive Material Packages.
4.	ANSI N18.7 Section 4.3.1	The specific areas of experience described in this section is not applicable to the on-site safety review committee but the committee must be comprised of site operating or engineering supervisory personnel. Additionally, the off-site safety review committee need contain experience in only a majority of the areas.
5.	ANSI N18.7 Section 4.3.2.3	The statement that "no more than a minority of the quorum shall have line responsibility for the operation of the plant" is not applicable to the on-site safety review committee.
6.	ANSI N18.7 Section 4.3.4(2)	Reviews associated with changes to the technical specifications will be performed in accordance with Section 4.3.4(3) instead of this section.

Table 1
Regulatory Commitments

C. Regulatory Guide 1.33 (continued)

		Clarification/Exception	
7.	ANSI N18.7 Section 4.3.4(3)	Revision to proposed Technical Specification changes only require review in accordance with this section when the revision involves a significant change to the technical basis for the proposed change.	Q-13
8.	ANSI N18.7 Section 4.3.4(4)	In place of the requirements of this section, the on-site and off-site safety review committees shall review facility operations to detect potential nuclear safety hazards and all reports made in accordance with 10 CFR 50.73.	
9.	ANSI N18.7 Section 4.3.4(5)	Examples of the matters reviewed by the on-site safety review committee in accordance with this section are the following: a. new and revised station administrative procedures and b. changes to the Emergency Plan (except editorial changes).	Q-15
10.	ANSI N18.7 Section 4.5	This section establishes minimum 2 year audit frequency for all safety related functions. Entergy will perform audits at frequencies as discussed in QAPM Section C.2.a instead of this section.	
11.	ANSI N18.7 Section 4.5	The independent review body discussed in this section is the off-site safety review committee.	
12.	ANSI N18.7 Section 5.1	Instead of the requirements of this section to have a summary document, a method of cross referencing these requirements to the implementing procedures will be maintained.	
13.	ANSI N18.7 Section 5.2.2	The person who holds a senior reactor operators license for the affected unit and approves a temporary change to a procedure is not required to be in charge of the shift.	

Table 1
Regulatory Commitments

C. Regulatory Guide 1.33 (continued)

		Clarification/Exception
14.	ANSI N18.7 Section 5.2.2	In addition to the temporary procedure change process described for changes which clearly do not change the intent of a procedure, temporary procedure changes which may change the intent of a procedure may be made following the process described in this section. Except that the person normally responsible for approving revisions to the procedure is the approval authority for the change.
15.	ANSI N18.7 Section 5.2.6	Instead of the requirements of this section concerning non-conforming conditions, non-conforming conditions will be evaluated and controlled in accordance with the corrective action program. Q-20
16.	ANSI N18.7 Section 5.2.6	The requirement of the fifth paragraph of this section to have a log of the status of temporary modifications is not applicable to temporary modifications for routine tasks installed in accordance with procedures. These procedures shall provide assurance that approvals are obtained, temporary modification activities are independently verified by an individual cognizant of the purpose and the effect of the temporary modification, and that activities are adequately documented to indicate the status of the temporary modification. Q-21
17.	ANSI N18.7 Section 5.2.7.1	This section will be implemented by adding the words "Where practical" in front of the first and fourth sentences of the fifth paragraph. For modifications where the requirements of the fourth sentence are not considered practical, a review in accordance with the provisions of 10 CFR 50.59 will be conducted.
18.	ANSI N18.7 Section 5.2.8	In lieu of a "master surveillance schedule," the following requirement shall be complied with: "A surveillance testing schedule(s) shall be established reflecting the status of all in-plant surveillance tests and inspections."
19.	ANSI N18.7 Section 5.2.9	The requirements of the Physical Security Plan shall be implemented in place of these general requirements.

Table 1
Regulatory Commitments

C. Regulatory Guide 1.33 (continued)

		Clarification/Exception
20.	ANSI N18.7 Section 5.2.13.1	Consistent with ANSI N45.2.11 Section 7.2, minor changes to documents, such as inconsequential editorial corrections, or changes to commercial terms and conditions may not require that the revised document receive the same review and approval as the original documents.
21.	ANSI N18.7 Section 5.2.14	Where marking, tagging, or physical separation of the non-conforming item is not feasible, the non-conforming item may be controlled by the use of appropriate documentation.
22.	ANSI N18.7 Section 5.2.15	Required procedure reviews following the occurrences discussed in Section 5.2.15, paragraph 3, sentence 3, are determined and controlled in accordance with the QAPM Section A.6 instead of this section.
23.	ANSI N18.7 Section 5.2.15	This section requires plant procedure review by an individual knowledgeable in the area affected by the procedure no less frequently than every two years to determine if changes are necessary or desirable. Instead of this review, controls are in effect to ensure that procedures are reviewed for possible revision upon identification of new or revised source material potentially affecting the intent of procedures.
24.	ANSI N18.7 Section 5.3.9	Instead of the requirements of this section, the format and content of the emergency operating procedures follow the applicable NRC approved format for the specific unit.
25.	ANSI N18.7 Section 5.3.9.3	Entergy's NRC accepted Emergency Plan will be implemented in lieu of the requirements in this section.

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Table 1
Regulatory Commitments

D. Regulatory Guide 1.37, dated March 1973

		Clarification/Exception
1.	General	Instead of using the cleanliness level classification system of ANSI N45.2.1, the required cleanliness for specific items and activities is addressed on a case-by-case basis. Cleanliness is maintained, consistent with the work being performed to prevent introduction of foreign material. As a minimum, cleanliness inspections are performed prior to system closure and such inspections are documented.
2.	Section C.3	The water quality for final flushes of fluid systems and associated components is at least equivalent to the quality of the operating system water, except for the oxygen and nitrogen content.
3.	Section C.4	As an alternate to the requirements of this section, contamination levels in expendable products may be based upon safe practices and industrial availability with documented engineering evaluations. Contaminant levels are controlled such that subsequent removal by standard cleaning methods results in the achievement of final acceptable levels which are not detrimental to the materials. Q-26
4.	ANSI N45.2.1 Section 5	Any nonhalogenated material may be used which is compatible with the parent material not just plastic film.

Table 1
Regulatory Commitments

E. Regulatory Guide 1.38 Revision 2, dated May 1977

		Clarification/Exception
1.	ANSI N45.2.2 Section 3.2	Storage of an item in a higher level storage area meets the lower level storage requirements.
2.	ANSI N45.2.2 Section 3.2	As an alternate 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 concentration 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.
3.	ANSI N45.2.2 Section 3.7.1	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.
4.	ANSI N45.2.2 Section 3.7.2	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.
5.	ANSI N45.2.2 Section 4.3.4	Inspections of packages and/or preservative coatings are made immediately prior to loading rather than after loading.
6.	ANSI N45.2.2 Section 5.2.1	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 non-conformances 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.

editorial

Table 1
Regulatory Commitments

E. Regulatory Guide 1.38 (continued)

		Clarification/Exception
7.	ANSI N45.2.2 Section 5.2.2	The second division of this subsection requires six additional inspection activities if an item was not inspected or examined at the source. Entergy 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). Instead of the requirement that receiving inspections be performed in an area equivalent to the level of storage required for the item, receiving inspections will be performed in a manner and in an environment which does not endanger the requisite quality of an item. The receiving inspection's location environmental controls may be less stringent than storage environmental requirements for that item; however, the short time spent in the less stringent receiving inspection area shall be of such duration that it will not adversely affect the item being received.
8.	ANSI N45.2.2 Section 5.2.3	The "Special Inspection" procedure is not required to be attached to the item or container but shall be readily available to inspection personnel.
9.	ANSI N45.2.2 Section 6.2.1	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.
10.	ANSI N45.2.2 Section 6.2.4	The sentence is replaced with the following: "The use or storage of food, drinks, and salt tablet dispensers in any storage area shall be controlled and shall be limited to designated areas where such use or storage is not deleterious to stored items."

Table 1
Regulatory Commitments

E. Regulatory Guide 1.38 (continued)

		Clarification/Exception
11.	ANSI N45.2.2 Section 6.2.5	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." Editorial
12.	ANSI N45.2.2 Section 6.3.3	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."
13.	ANSI N45.2.2 Section 6.4.2	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."
14.	ANSI N45.2.2 Section 6.5	The last sentence of this section is not applicable to the operations phase.
15.	ANSI N45.2.2 Section 6.6	Entergy will comply with this section's requirements with the clarification that, for record purposes, only the access of personnel without key cards into indoor storage areas shall be recorded. Unloading or pickup of material shall not be considered "access," nor shall inspection by NRC or other regulatory agents, nor shall tours by nonlicensee employees who are accompanied by licensee employees.

Table 1
Regulatory Commitments

E. Regulatory Guide 1.38 (continued)

		Clarification/Exception
16.	ANSI N45.2.2 Section 7.3	Re-rating hoisting equipment will be considered only when necessary. Prior to performing any lift above the load rating, the equipment manufacturer must be contacted for his approval and direction. The manufacturer must be requested to supply a document granting approval for a limited number of lifts at the new rating and any restrictions involved, such as modifications to be made to the equipment and the test lift load. At all times, the codes governing re-rating of hoisting equipment must be observed.
17.	ANSI N45.2.2 Appendix (A-3) Section A.3.4.1	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."
18.	ANSI N45.2.2 Appendix (A-3) Section A.3.4.2	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 leakproof barrier.
19.	ANSI N45.2.2 Appendix (A-3) Section A.3.5.1	Instead of the requirement for non-metallic plugs and caps to be brightly colored, non-metallic plugs and caps shall be an appropriately visible color.
20.	ANSI N45.2.2 Appendix (A-3) Section A.3.5.2	This paragraph limits halogen and sulfur content of tape. The use of tapes containing greater amounts of halogens than those identified will be allowed after appropriate evaluation; however, the quantities shall not be such that harmful concentrations could be leached or released by breakdown of the compounds under expected environmental conditions.

editorial

Table 1
Regulatory Commitments

E. Regulatory Guide 1.38(continued)

		Clarification/Exception
21.	ANSI N45.2.2 Appendix (A-3) Section A.3.7.1	In lieu of A3.7.1(3) and (4), Entergy will comply with the following: Fiberboard boxes shall be securely closed either with a water resistant adhesive applied to the entire area of contact between the flaps, or all seams and joints shall be sealed with not less than 2-inch wide, water resistant tape. Q-28
22.	ANSI N45.2.2 Appendix (A-3) Section A.3.9	Instead of the requirement that container markings appear on a minimum of two sides of the container, preferably on one side and one end, Entergy will comply with the following: Containers are adequately marked for storage, identification, and retrieval. Multiple marking requirements are imposed, where necessary.
23.	ANSI N45.2.2, Appendix (A-3) Section A.3.9	Instead of the requirement that container markings be no less than 3/4" high, Entergy will comply with the following: Container markings are of a size which permits easy recognition.
24.	ANSI N45.2.2, Appendix (A-3) Section A.3.9	Instead of the specific container marking requirements, Entergy will comply with the following: The information required in container marking is evaluated on a case-by-case basis.
25.	ANSI N45.2.2 Appendix (A-3) Section A.3.9	The last paragraph of A.3.9 could be interpreted as prohibiting any direct marking on bare austenitic stainless steel and nickel alloy metal surfaces. As a alternate, paragraphs A.3.9.(1) 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. Q-30

Table 1
Regulatory Commitments

F. Regulatory Guide 1.39 Revision 2, dated September 1977

		Clarification/Exception
1.	ANSI N45.2.3 General	The ANSI five level zone designation system may not be utilized, but the intent of the standard will be met for the areas of housekeeping, plant and personnel safety, and fire protection.
2.	ANSI N45.2.3 Section 3.1	This section is not applicable.
3.	ANSI N45.2.3 Section 3.2.3	The Fire Protection Program shall be used in lieu of the general requirements in this section.
4.	ANSI N45.2.3 Section 3.3	The first paragraph is not applicable to the operations phase.
5.	ANSI N45.2.3 Section 3.4	This section is not applicable.
6.	ANSI N45.2.3 Section 3.5	Subparagraph (1) is not applicable to the operations phase; (2), (3), and (4) will be implemented.

Table 1
Regulatory Commitments

G. Regulatory Guide 1.58 Revision 1, dated September 1980

		Clarification/Exception
1.	General	Entergy may choose not to apply the requirements of this guide to those personnel who are involved in day-to-day operations, surveillance, maintenance, and certain technical and support services whose qualifications are controlled by the Technical Specifications or other QAPM commitment requirements.
2.	General	Certification of inspectors in accordance with this guide is approved by a manager responsible for quality assurance except for inspectors performing inspections as part of the procurement process. These inspectors may be approved by a manager responsible for materials, purchasing, and contracts. Q-88
3.	ANSI N45.2.6 Section 1.2	Paragraph 4 requires that the standard be imposed on personnel other than licensee employees; the applicability of this standard to suppliers will be documented and applied, as appropriate, in procurement documents for such suppliers.
4.	ANSI N45.2.6 Section 1.2	The requirements of this standard do not apply to personnel using later editions of ASNT contained within 10CFR50.55a approved ASME editions or addenda. Q-35
5.	ANSI N45.2.6 Section 2.5	This section's requirements are clarified with the stipulation that, where no special physical characteristics are required, none will be specified. The converse is also true: if no special physical requirements are stipulated, none are considered necessary.
6.	ANSI N45.2.6 Section 3.5	Entergy reserves the right to use personnel who do not meet these experience requirements but have shown capability through training and testing or capability demonstration.

Table 1
Regulatory Commitments

H. Regulatory Guide 1.64 Revision 2, dated June 1976

	Clarification/Exception
1. ANSI N45.2.11 Section 5.2.4	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.

Table 1
Regulatory Commitments

I. Regulatory Guide 1.74, dated February 1974

		Clarification/Exception
1.	ANSI N45.2.10, Section 2	Definitions for "Certificate of Conformance" and "Certificate of Compliance" will be exchanged based upon the guidance in ANSI N45.2.13 Section 10.2.

Table 1
Regulatory Commitments

J. Regulatory Guide 1.88 Revision 2, dated October 1976

		Clarification/Exception
1.	RG 1.88 Section C	Entergy will meet the requirements of ANSI/ ASME NQA-1-1983, Supplement 17S-1 Section 4.4 in lieu of N45.2.9 Section 5.6 or the discussions in this section for Records Storage Facilities with the clarification that penetrations providing fire protection, lighting, temperature/humidity control, or communications are acceptable as long as the penetration maintains the required fire resistance. Q-37 Except that as an alternate to these requirements non-permanent records (e.g., 3 years retention records) may be stored and maintained by the originating organization in one-hour minimum fire rated file cabinets located in environmentally controlled facilities that have suitable fire protection. Suitable fire protection is provided by either an automatic sprinkler system or a combination of two or more of the following: 1) automatic fire alarms, 2) hose stations, or 3) portable extinguishers.
2.	ANSI N45.2.9 Section 1.4	Documents are considered completed when they are "completely filled out" (i.e., when sufficient information is recorded to fulfill the record's intended purpose) and the adequacy of the document (e.g., legibility) has been accepted by the document control or records management organizations or designees.
3.	ANSI N45.2.9 Section 3.2.2	The requirements for an index discussed in this section are considered to only require that a method of retrieving the record and controlling the identified information be established.
4.	ANSI N45.2.9 Section 5.4.2	Instead of the requirements of this section, Entergy will comply with the following: Records shall not be stored loosely. They shall be secured for storage in file cabinets or on shelving in containers. Methods other than binders, folders, or envelopes (e.g., dividers or boxes) may be used to organize records for storage. This section is not applicable to special processed records controlled in accordance with Section 5.4.3 when the requirements of this section are not appropriate for the record type.

Table 1
Regulatory Commitments

J. Regulatory Guide 1.88 Revision 2, dated October 1976

		Clarification/Exception
5.	ANSI N45.2.9 Section 5.4.3	Instead of the requirements of this section, Entergy will comply with the following: Provisions shall be made for special processed records such as radiographs, photographs, negatives, microfilm, and magnetic media to prevent damage from excessive light, stacking, electromagnetic fields, temperature, and humidity as appropriate to the record type with appropriate consideration of packaging and storing recommendations as provided by the manufacturer of these materials. Q-38
6.	ANSI N45.2.9 Section 5.5	Routine general office and nuclear site security systems and access controls are provided; no special security systems are required to be established for record storage areas.
7.	ANSI N45.2.9 Section 5.6	Entergy will meet the requirements of ANSI/ ASME NQA-1-1983, Supplement 17S-1 Section 4.4 in lieu of this section for Records Storage Facilities with the clarification that penetrations providing fire protection, lighting, temperature/humidity control, or communications are acceptable as long as the penetration maintains the required fire resistance. Q-39 Except that as an alternate to these requirements non-permanent records (e.g., 3 years retention records) may be stored and maintained by the originating organization in one-hour minimum fire rated file cabinets located in environmentally controlled facilities that have suitable fire protection. Suitable fire protection is provided by either an automatic sprinkler system or a combination of two or more of the following: 1) automatic fire alarms, 2) hose stations, or 3) portable extinguishers.

Table 1
Regulatory Commitments

K. Regulatory Guide 1.94 Revision 1, dated April 1976

		Clarification/Exception
1.	ANSI N45.2.5 Section 2.5.2	The last sentence requires that all items inspected with maintenance and test equipment which is found to be out of calibration shall be considered unacceptable. Entergy will comply with QAPM Section B.9.g as an alternate. QAPM Section B.9.g requires an evaluation to determine the validity of previous measurements.
2.	ANSI N45.2.5 Section 4.5	When using ACI-305-72 and ACI-306-66, Entergy may apply the following requirements: PLACING TEMPERATURES OF CONCRETE A. During hot weather concreting, placing temperatures of concrete will be limited to the following: 1) Concrete members less than 3 feet in least dimension will not exceed 90°F; 2) Concrete members from 3 feet to 6 feet in least dimension will not exceed 70°F; and 3) Concrete members more than 6 feet in least dimension will have placing temperature as near 50°F as can be obtained by use of ice as necessary up to 100 percent of adding mixing water; and by shading aggregate and sprinkling the coarse aggregate the day it is to be used. Care will be taken so that no unmelted ice remains in the concrete at the end of the mixing period. B. During cold weather concreting: In heating the water and aggregate, live steam to heat the fine and coarse aggregate shall not be used. The permissible range for concrete temperature shall be as follows: 1) Sections less than 3 feet in least dimensions 55°F to 75°F; and 2) Mass concrete 3 feet or more in least dimension 45°F to 65°F. The mixing water and aggregate will be purchased as required. The materials will be free of ice, snow and frozen lumps before they enter the mixer.
3.	ANSI N45.2.5 Table B	As an alternate to daily testing grout for compressive strength, for prepackaged shelf item, non-shrink grout, the grout's compressive strength tests may be performed once on each batch of non-shrink grout received, rather than each day grout is placed.

Table 1
Regulatory Commitments

K. Regulatory Guide 1.94 (continued)

		Clarification/Exception
4.	ANSI N45.2.5 Section 4.8	For the performance of correlation tests, the requirements of this standard may be modified as discussed below: Table B, REINFORCING STEEL: In-process testing of reinforcing steel will include the mechanical properties of yield strength, tensile strength and percent elongation on full size specimens for each bar size for each 50 tons or fraction thereof from each mill heat. Bend tests are performed during material qualification testing only, except as noted below for bar sizes #14 through #18. Table A, "Required Qualification Tests" as applied to reinforcing steel will include bend tests as required by ASTM A615 and summarized in the following: a) For bar sizes #3 through #11, one full size specimen from largest bar size rolled from each mill heat, unless material from one heat differs by three or more designation numbers. When this occurs, one bend test shall be made from both the highest and lowest designation number of the deformed bars rolled; b) For bar sizes #14 through #18, Supplementary Requirements S1 of ASTM A615 will be applied, i.e., one fullsize specimen for each bar size for each mill heat. If supplementary requirements are not followed for mill tests, they will be applied as in-process tests. In-process test specimens may be selected at the rebar fabrication shop, prior to start of fabrication of the rebar from the heat or fraction thereof represented by the test specimen. Acceptance criteria for any failed test (qualifications as well as in-process) may be the same as that for tensile tests specified in Subarticle CC-2331.2 of ASME Section III, Div. 2 Code (1975). This states that if a test specimen fails to meet the specified strength requirements, two (2) additional specimens from the same heat and of the same bar size would be tested, and if either of the two additional specimens fails to meet the specified strength requirements, the material represented by the tests would be rejected for the specified use. Alternative use of rejected material under strict control may be subject to evaluation by engineering.

Table 1
Regulatory Commitments

K. Regulatory Guide 1.94 (continued)

		Clarification/Exception
5.	ANSI N45.2.5 Section 4.9	Entergy may interpret the terms "horizontal, vertical and diagonal bars" to apply respectively to the following types of splice positions: a. Horizontal, including 10° to horizontal; b. Vertical, including 10° to vertical; and c. 45° angle, including 10° to 80° angle. The words "splicing crew" are interpreted to refer to all project members that are actively engaged in preparing and assembling cadweld mechanical splices at the final splice location. Separate test cycles will be established for each bar size and each splice position.
6.	ANSI N45.2.5 Section 5.5	Entergy will comply with inspection requirements of the applicable welding codes and any exceptions instead of this section.

Table 1
Regulatory Commitments

L. Regulatory Guide 1.116 Revision 0-R, dated June 1976

		Clarification/Exception
1.	ANSI N45.2.8 Section 3	Documented routine inspections and audits of the storage area may be performed instead of the requirements of this section.

Table 1
Regulatory Commitments

M. Regulatory Guide 1.123 Revision 1, dated July 1977

		Clarification/Exception
1.	RG 1.123 Paragraph C.6.e	This paragraph shall be implemented as originally written in N45.2.13 (i.e., with the verb "should" instead of the verb "shall"). Entergy retains the ultimate responsibility for performance of purchased equipment. The appropriate engineering discipline will exercise this management/engineering prerogative with respect to the final decision on post installation test requirements.
2.	ANSI N45.2.13 Section 1.2.2	Item c is an option which may be used to assure quality; however, any option given in 10 CFR 50 Appendix B, Criterion VII as implemented by the QAPM may also be used.
3.	ANSI N45.2.13 Section 1.3	Instead of the definition provided for QA Program Requirements, Entergy will comply with the following: "Those individual requirements of the QAPM which, when invoked in total or in part, establish quality assurance program requirements for the activity being controlled. Although not specifically used in the QAPM, ANSI N45.2 may be imposed upon suppliers."
4.	ANSI N45.2.13 Section 3.1	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.
5.	ANSI N45.2.13 Section 3.1	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.
6.	ANSI N45.2.13 Section 3.4	The requirements of the QAPM will be implemented instead of this section.

Table 1
Regulatory Commitments

M. Regulatory Guide 1.123 (continued)

		Clarification/Exception
7.	ANSI N45.2.13 Section 4.2	Supplier evaluations may be performed any time prior to placing the purchased item in service.
8.	ANSI N45.2.13 Section 8.2 Item b	Non-conformance notices for conditions described in this section are only required to be submitted to Entergy when the non-conformance could adversely affect the end use of an item relative to safety, interchangeability, operability, reliability, integrity or maintainability. Q-44
9.	ANSI N45.2.13 Section 10.2 Item d	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, Entergy 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."

Table 1
Regulatory Commitments

N. Regulatory Guide 1.144 Revision 1, dated September 1980

		Clarification/Exception
1.	RG 1.144 Section C.3.a.(2)	This section is not applicable.
2.	RG 1.144 Section C.3.b.(2)	In addition to the requirements of this section, previously evaluated and approved active suppliers for which auditing is not the selected method of source verification should be evaluated concurrent with the award of a contract. Regardless of the evaluation results, active suppliers (except those excluded under C.3.b(1)) are source verified (audit, surveillance or inspection) within two years prior to award of a contract or have source verification performed. Inactive suppliers are evaluated prior to supplying items or services. An audit shall be conducted if required to determine the acceptability of procured items or services (i.e. acceptability cannot be determined by receipt inspection or another method allowable under 10 CFR 50 Appendix B, Criterion VII).
3.	RG 1.144 Section C.3.b.(2)	Instead of the annual documented evaluation of suppliers discussed in this section, an ongoing evaluation of supplier performance is conducted which takes into account, where applicable, the other considerations of this section and paragraph of the Regulatory Guide. Q-46
4.	ANSI N45.2.12 Section 4.3.1	Pre-audit and post-audit conferences may be fulfilled by a variety of communications, such as telephone conversation.
5.	ANSI N45.2.12 Section 4.3.1	Pre-audit and post-audit conferences are only held when deemed necessary by quality assurance or when requested by the audited organization.

Table 1
Regulatory Commitments

N. Regulatory Guide 1.144 (Continued)

		Clarification/Exception
6.	ANSI N45.2.12 Section 4.3.2.2	This subsection could be interpreted to limit auditors to the review of only objective evidence; sometimes and for some program elements, no objective evidence may be available. Entergy will comply with an alternate sentence which reads: "When available, objective evidence shall be examined for compliance with QAPM requirements. If subjective evidence is used (e.g., personnel interviews) then the audit report must indicate how the evidence was obtained."
7.	ANSI N45.2.12 Section 4.3.3	Pre-audit and post-audit conferences are only held when deemed necessary by quality assurance or when requested by the audited organization.
8.	ANSI N45.2.12 Section 4.3.3	Pre-audit and post-audit conferences may be fulfilled by a variety of communications, such as telephone conversation.
9.	ANSI N45.2.12 Section 4.4	Instead of the last sentence of the last paragraph of the section, Entergy will comply with the following: The audit report shall be issued within thirty working days after the last day of the audit. The last day of an audit shall be considered to be the day of the post-audit conference. If a post-audit conference is not held because it was deemed unnecessary, the last day of the audit shall be considered to be the date the post-audit conference was deemed unnecessary as documented in the audit report.
10.	ANSI N45.2.12 Section 4.5.1	The QAPM Section A.6 corrective action program may be used instead of these requirements as long as the appropriate time limits are applied to significant conditions adverse to quality. Also, no additional documentation is necessary if needed corrective actions are taken and verified prior to audit report issuance. Q-51

Table 1
Regulatory Commitments

O. Regulatory Guide 1.146 Revision 0, dated August 1980

Clarification/Exception

1.	ANSI N45.2.23 Section 2.3.1.3	Holders of NRC-issued Reactor Operator/Senior Reactor Operator Licenses comply with the requirements of this section and may be awarded two credits.
2.	ANSI N45.2.23 Section 2.3.4	Prospective lead auditors shall demonstrate their ability to effectively implement the audit process and lead an audit team. They shall have participated in at least one audit within the year preceding the individual's effective date of qualification. Upon successful demonstration of the ability to effectively lead audits, licensee management may designate a prospective lead auditor as a "lead auditor". Q-52

Attachment 2

Discussions of Change

ADMINISTRATIVE CHANGES

A.1 Information which contained no requirements related to the implementation of the quality assurance program or only provided a cross reference to other available information has been removed. Removal of this information results in no changes to the applicable requirements.

A.2 With the development and implementation of a single quality assurance program which covers all of the Entergy sites, discussions concerning how quality assurance programs at the different sites interact are no longer required. These discussions are removed.

A.3 This requirement is contained in another document which requires NRC review and approval to change or deviate from (e.g., Technical Specification or 10 CFR). Therefore, removing this item has no net affect upon the requirement.

A.4 The manager responsible for quality assurance will no longer be responsible for controlling the QAPM but will remain responsible for approving changes and assuring the QAPM is adequate for assuring quality. The responsibility for control of the QAPM itself is transferred to the executive responsible for operations support to allow for a single QAPM to be maintained for all four sites. Since the manager responsible for quality assurance remains responsible for approving changes and assuring the QAPM is adequate for assuring quality, this change does not have any significant affect on the quality assurance function.

A.5 This clarification to Entergy's commitment to the associated document is removed since it is unnecessary. The associated document provides adequate allowance for implementation in the manner described in the deleted clarification.

A.6 QAPM Section A.2 describes the organizational structure for the various quality assurance functions. Inherent in the organizational structure is that disputes within the organization which cannot be resolved by the management of the involved organization will be referred to the appropriate higher level of management. Therefore, this discussion regarding disputes can be removed without changing any requirements since QAPM Section A.2 adequately addresses the issue.

A.7 Specific subcategories of the document types required to be controlled by the document control program are removed but the requirement remains for the documents to be controlled by the broad document types identified in QAPM Section B.14.b and ANSI N18.7.

ADMINISTRATIVE CHANGES

A.8 The specific statement that the functional position has the authority to stop work on activities within the respective scope of functional responsibilities is removed but the requirement remains in the QAPM. QAPM Section A.2 identifies that the authority to accomplish the quality assurance functions described in the QAPM is delegated as necessary to fulfill the identified responsibility. Inherent in having sufficient authority to accomplish quality assurance functions is the authority to stop work if needed. Therefore, this discussion can be removed without changing any requirements since QAPM Section A.2 adequately addresses the issue.

A.9 Currently the QA program states that the necessary measuring and test equipment including accuracy requirements be specified for inspections. The QAPM Section B.12.b encompasses this requirement by requiring that the acceptance criteria be specified. Identification of necessary measuring and test equipment including accuracy requirements is an inherent part of specifying the acceptance criteria. Therefore, this discussion can be removed without changing any requirements since QAPM Section B.12.b adequately addresses the issue.

A.10 Requirements and clarifications addressing initial start-up testing are removed since initial construction activities are completed at the Entergy sites.

A.11 The proposed QAPM Section A.6.b states that the corrective actions for significant conditions adverse to quality should "lessen the likelihood of the recurrence" of the condition. This revised wording replaces the original wording which stated that the corrective action should be designed to prevent recurrence of the condition. The revised words have the same intent as the original words; that the recurrence of significant conditions adverse to quality are to be reduced by the corrective action program. The revised words remove the potential implication that the recurrence of a condition constitutes a breakdown of the quality assurance program. Since the intent of the requirement remains unchanged this change is discussed as an administrative change.

Additionally, the proposed QAPM Section A.6.b states that the cause of significant conditions adverse to quality shall be determined "when possible". The revised words have the same intent as the original words. The revised words remove the potential implication that the inability to determine the cause of a condition constitutes a breakdown of the quality assurance program. Since the intent of the requirement remains unchanged this change is discussed as an administrative change.

A.12 The current QA programs contain several clarifications identifying that tests and inspections identified in the standard for construction activities will be considered in the development of required tests and inspections for modifications but may not be applicable to all modification activities. These clarifications are consolidated into a single generic statement to that effect and the new clarification is made applicable to all of the sites. This generic statement is consistent with that approved by the NRC in the ANO quality assurance program.

ADMINISTRATIVE CHANGES

A.13 The commitment to ANSI N18.7 Section 4.3.4(3) is clarified to reflect that revision to proposed Technical Specification changes only require review in accordance with this section when the revision involves a significant change to the technical basis for the proposed change. Letters which transmit a proposed technical specification or license change to the Commission have many parts. This change is made to clarify that revisions to a previously submitted proposed change only require review by the safety committees when the safety justification for the requested change has been significantly modified by the revision. This change is discussed as an administrative change since it only reflects the intent of the ANSI N18.7 requirement.

Q-13

A.14 A clarification to ANSI N18.7 Sections 5.2.2 and 5.2.13.1 is added. This clarification identifies that consistent with ANSI N45.2.11, Section 7.2, minor changes to documents, such as inconsequential editorial corrections or changes to commercial terms and conditions may not require that the revised document receive the same review and approval as the original documents. This change is discussed as an administrative change since it only reflects the intent of the ANSI N18.7 requirement.

The proposed clarification is consistent with the clarification previously approved by the NRC in the ANO quality assurance program.

A.15 The GGNS clarification concerning procedure reviews is modified to identify that the corrective action program must be followed and this clarification is added to the ANO, RBS, and W3 programs. The corrective action program already identifies when corrective actions to reduce the likelihood of recurrence must be performed including procedure reviews. This change is discussed as an administrative change since it only reflects the intent of the ANSI N18.7 requirement.

A.16 Consistent with the discussion in ANSI N45.2.9 Section 1.1, an additional clarification is added to the commitment to ANSI N45.2.9 Section 1.4 to identify that document control or records management review and acceptance of a document is a necessary part of the document becoming a quality assurance record. As a result, interim record requirements are removed.

A.17 Definitions that are repeated from other industry standards and regulatory guides are removed from the quality assurance program manual. Instead of repeating the definitions, QAPM Section A.7.a.2 identifies that the definitions of Regulatory Guide 1.74 apply wherever the defined term is used and for definitions not in regulatory Guide 1.74 Entergy relies on the definition in the applicable standard as described in QAPM Table 1. This change is discussed as an administrative change since it only removes definitions that the quality assurance program manual identify as based on the definition contained in other industry standards or regulatory guides.

A.18 Changes to the QA program made in accordance with the change controls of 10 CFR 50.54 or submitted to the NRC are identified. These changes have no net affect on the proposed QAPM.

ADMINISTRATIVE CHANGES

A.19 In some cases the requirements of Section 5.4.2 (e.g., to store the records in file cabinets) may not be appropriate or possible for records which require special processing. The requirements of Section 5.4.3 provide the appropriate controls to protect records which require special processing. Therefore, the commitment to ANSI N45.2.9 Section 5.4.2 is clarified to identify that this section is not applicable to special processed records controlled in accordance with Section 5.4.3 when the requirements of this section are not appropriate for the record type. This change is discussed as an administrative change since it only reflects the intent of the ANSI requirement.

A.20 The applicability of construction guidance to activities during the operations phase is clarified. This clarification is consistent with ANSI N18.7 Section 5.2.17 which identifies that for modifications and nonroutine maintenance the guidance applicable to construction-like activities is applicable to comparable plant activities. This clarification is also consistent with RBS QAD-10 Section 6.8 which identifies 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. This change is discussed as an administrative change since it only reflects the intent of the requirements.

LESS RESTRICTIVE CHANGES

L.1 The requirement for the manager(s) function described to report directly to a specific executive has been changed to allow there to be a single layer of management between the two positions and no longer identify the specific executive. In the case of the manager responsible for quality assurance the position will maintain authority to escalate matters directly to the chief executive officer when needed and will continue to advise the off-site safety review committee. In all cases, the positions will maintain sufficient authority and organizational freedom to implement the assigned responsibilities.

L.2 The specific discussion of this management position has been removed. The primary management functions responsible for the QAPM functions continue to be described without the description of this position. The responsibilities discussed for this management position are not directly associated with the implementation of the QAPM and any responsibilities which this position affects are sufficiently covered in the QAPM by the remaining requirements (e.g., QAPM Section A.1.b).

L.3 The specific discussion of this management position has been removed. The primary management functions responsible for the QAPM functions continue to be described without the description of this position. The responsibilities discussed for this management position are sufficiently covered in the QAPM function description of the management function above this position (e.g., QAPM Section A.2.d.2, QAPM Section A.2.d.7, or QAPM Section A.2.d.8).

L.4 Details associated with the implementation of this requirement are removed from the QAPM. Removal of this information results in no change to the requirement but this level of detail in the implementation method does not require the change controls of 10 CFR 50.54 to be applied since the acceptance criteria for the requirement remains in the QAPM.

L.5 Specific identification of the responsibility for procurement activities and quality assurance activities of the executive responsible for operations support is removed but the functional management positions remain described. The QAPM describes the functional position of the manager responsible for procurement and the manager responsible for quality assurance and identifies these managers' reporting relationship to the executive level of management. The revised QAPM provides sufficient description of the organizational responsibilities while allowing the flexibility of the function to report either through the site or the corporate executive position. The specific reporting chain will be identified in procedures as required by QAPM Section A.2 and in accordance with commitments to ANS N18.7 Section 3.2.

LESS RESTRICTIVE CHANGES

L.6 Plant specific management positions titles and descriptions in the current quality assurance program have been replaced with functional titles and descriptions. The QAPM provides the functional descriptions to implement the quality assurance requirements; therefore, the existence of these functions will continue to be controlled by the change controls of 10 CFR 50.54. This approach of removing the specific titles is consistent with the intent of Generic Letter 88-06 which recommended, as a line item improvement to the Technical Specifications, relocation of the corporate and unit organization charts to licensee controlled documents. The intent of the Generic Letter, and of this proposed change, is to reduce the unnecessary burden on NRC and licensee resources being used to process changes due solely to personnel titles and position description changes during reorganizations and to allow one set of requirements to apply to all of the Entergy sites including the corporate offices. The relationship of the QAPM functional position descriptions and the plant specific position titles will be contained in procedures as required by QAPM Section A.2 and detailed position descriptions and organization structure will be controlled in accordance with commitments to ANS N18.7 Section 3.2.

L.7 The procedure periodic review requirements at the sites are made consistent. Each of the sites has a different description of the procedure periodic review requirements in the current quality assurance programs. The proposed QAPM has procedure periodic review requirements which are based on those previously approved for ANO. The proposed change removes details associated with the implementation of this requirement from the GGNS, RBS, and W3 quality assurance programs. Removal of this information results in no change to the requirement but this level of detail in the implementation method does not require the change controls of 10 CFR 50.54 to be applied since the acceptance criteria for the requirement remains in the QAPM.

The level of detail of the proposed clarification is consistent with the clarification previously approved by the NRC in the ANO quality assurance program.

L.8 The commitments to ANSI N45.2.4 Section 6.2 is clarified by indicating that the specific methods identified are not the only acceptable ways to insure that measuring and test equipment is calibrated when required and traceable to the person who performed the calibration. This section is clarified to identify that equipment shall be suitably marked to indicate date of next required calibration. GGNS and RBS already have a clarification allowing the use of identifying numbers and cross referencing system to maintain and retrieve the necessary information. These methods will continue to be acceptable methods of implementing the requirements with the proposed clarification to ANSI N45.2.4. The specific methods of marking are not detailed in the QAPM but are contained in licensee procedures. Removal of the specific methods of control results in no change to the requirement but this level of detail in the implementation method does not require the change controls of 10 CFR 50.54 to be applied since the acceptance criteria for the requirement remains in the QAPM.

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LESS RESTRICTIVE CHANGES

L.9 The required minimum audit frequency is changed to once every 2 years (except for fire protection audits which are maintain at the current frequencies consistent with Generic Letter 82-21), unless the performance based audit program described in QAPM Section C.2.a.1 is implemented. The revised audit frequency provides adequate assurance that degradation in performance is detected in a timely manner considering the mature state of the quality assurance program and the associated implementing procedures. In addition to the minimum required two year audit frequency, QAPM Section C.2.e requires that additional audits be performed when the effectiveness of the quality assurance program is in doubt. The corrective action program required by QAPM Section A.6 provides a mechanism for performance issues to be identified and subsequently addressed as required by QAPM Section C.2.e.

Q-105

The proposed minimum audit frequencies are consistent with the requirements of ANSI N18.7-1976 section 4.5 and the frequencies approved by the NRC in the ANO quality assurance program. The previous ANO audit frequencies contained a requirement for an audit of any other area deemed appropriate, this requirement is contained in QAPM Section C.2.e which requires that additional audits be performed when the effectiveness of the quality assurance program is in doubt.

L.10 Specifics associated with cleanliness levels are removed and a generic position that requires cleanliness for specific items be determined on a case-by-case basis is provided. The clarification will continue to insure that adequate cleanliness is maintained and sets minimum requirements.

The clarification is consistent with the current quality assurance program clarification approved by the NRC for RBS.

L.11 The GGNS requirement that the Director, Quality (manager responsible for quality assurance) have responsibility for performing quality reviews of the procedures for which another department is responsible is removed. The manager responsible for quality assurance will remain responsible for reviews of procedures which implement QAPM functions for which the quality assurance function has responsibility in accordance with QAPM Section A.3.f. Additionally, the manager responsible for quality assurance will maintain responsibility for performing audits which provide an objective evaluation of quality related practices, procedures, instructions, activities, and items in accordance with QAPM Section C.2.b. The remaining requirements discussed above provide adequate assurance that the requirements of the quality assurance program remain reflected in the applicable procedures. Removing this requirement is consistent with the quality assurance programs approved for ANO and RBS.

LESS RESTRICTIVE CHANGES

L.12 Details associated with the time frames for implementation of revised regulatory requirements or commitments are removed from the QAPM. Removal of this information results in no changes to the requirement but this level of detail in the QAPM implementation methods does not require the change controls of 10 CFR 50.54. This level of detail is not required in the current ANO, W3 or RBS quality assurance programs.

L.13 Commitment to Regulatory Guide 1.26 and Regulatory Guide 1.29 and associated quality groups or seismic classification discussions are removed from the quality assurance program. The quality group and seismic classifications of equipment are described in the individual plant safety analyses reports and as a result controlled by the change controls of 10 CFR 50.59. The requirements remaining in the quality assurance program (e.g., QAPM Section B.2 and the commitment to Regulatory Guide 1.64) along with the commitments in the safety analyses reports provide sufficient controls on the quality group and seismic classification considering that the plants are in the operating phase. Removing these commitments is consistent with the quality assurance program approved by the NRC for ANO.

L.14 Other nonhalogenated material may be used which is compatible with the parent material, since plastic film is subject to damage and does not always provide adequate protection.

The clarification is consistent with the current quality assurance program clarification approved by the NRC for RBS.

L.15 Specifics associated with the care of items are removed and a generic statement that types of components that could require maintenance while in storage shall be identified and evaluated for specific maintenance requirements is added. Additionally the clarification identifies that 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. The revised clarification does not negate the previous details provided in the standard and associated clarifications but allows these details to be controlled outside of the QAPM. Removal of this information results in no change to the requirement but this level of detail in the implementation methods does not require the change controls of 10 CFR 50.54 to be applied since the acceptance criteria for the requirement remains in the QAPM.

The clarification is consistent with the current quality assurance program clarification approved by the NRC for ANO.

L.16 The new requirement or clarification provides adequate quality assurance requirements to implement 10 CFR 50 Appendix B and is consistent with the current quality assurance program approved by the NRC for ANO.

L.17 The new clarification meets the intent of the original Regulatory Guide or ANSI requirement and is consistent with a discussion in the GGNS UFSAR.

LESS RESTRICTIVE CHANGES

L.18 The new requirement or clarification provides adequate quality assurance requirements to implement 10 CFR 50 Appendix B and is consistent with the current program at RBS.

L.19 The new requirement or clarification provides adequate quality assurance requirements to implement 10 CFR 50 Appendix B and is consistent with the current quality assurance program approved by the NRC for W3.

L.20 The new requirement or clarification provides adequate quality assurance requirements to implement 10 CFR 50 Appendix B and is consistent with the current quality assurance program approved by the NRC for GGNS.

L.21 Consistent with the proposed removal of plant specific management titles, the specific procedure types which implement QAPM requirements and the plant specific management positions responsible for reviewing and approving changes to the procedures are removed. The specific discussions of the polices that the functional position is responsible for approving is removed but the requirement that the appropriate position approve changes remains in the QAPM. QAPM Section A.2 identifies the position functional responsibilities while QAPM Section A.3.f states that "Procedures that implement the QA program are approved by the management responsible for the applicable quality function." Therefore, the appropriate review and approval requirements will continue to be required by the QAPM and the specific management position responsible for approval will be maintained in approved documents as required by QAPM Section A.1. The specific procedures that implement QAPM requirements and the plant specific management positions responsible for reviewing and approving changes to these procedures will be documented in procedures. The proposed change is consistent with the quality assurance program approved by the NRC for RBS.

L.22 The W3 requirement that the Director, Quality (manager responsible for quality assurance) have responsibility for performing reviews of quality related indoctrination and training programs for which another department is responsible is removed. The manager responsible for quality assurance will remain responsible for insuring personnel under his direction have adequate training in accordance with QAPM Section A.3.e. Additionally, the manager responsible for quality assurance will maintain responsibility for performing audits which provide an objective evaluation of quality related practices, procedures, instructions, activities, and items in accordance with QAPM Section C.2.b. The remaining requirements discussed above provide adequate assurance that the requirements of the quality assurance program remain reflected in the applicable procedures. Removing this requirement is consistent with the quality assurance programs approved by the NRC for ANO, RBS, and GGNS.

LESS RESTRICTIVE CHANGES

L.23 The required minimum audit frequencies are modified with the added allowance to implement the performance based audit program described in QAPM Section C.2.a.1. Audit frequencies will be determined in accordance with a performance based audit scheduling program. The scheduling program, through an expert panel, uses assessment indicators to identify and schedule audits based on performance results and importance of the activity relative to safety. Potential audit subject areas are periodically assessed against appropriate performance criteria. From these reviews a determination is made in regard to the depth, scope, and scheduling of specific audits. Functional areas important to safety are assessed annually (±25%) to identify strengths and weaknesses to determine the level and focus of independent oversight activities for the upcoming year. The basis for the assessment shall include the results of QA audits and surveillance, NRC inspections, LERs, self-assessments, and applicable conditions reports (e.g., non-conformance and corrective action reports). Personnel changes, change/increase in functional area responsibilities, industry operating experience, and INPO evaluations will also be considered. Each area will be assigned a rating with a comparison to previous years. Audit subject areas contained below shall continue to be audited on the frequencies designated unless expert panel judgment, based on performance results, determines such as an audit to be unnecessary. The performance based audit frequency provides adequate assurance that degradation in performance is detected in a timely manner considering the mature state of the quality assurance program and the associated implementing procedures and allows for increased audit frequencies when performance dictates.

The proposed minimum audit frequencies are consistent with the requirements of the program approved by the NRC in the GGNS quality assurance program.

L.24 Commitments to Regulatory Guide 1.70 are removed from the quality assurance program. The safety analysis report has already been issued and as a result, the format and content are controlled by the change controls of 10 CFR 50.59. Removing these commitments is consistent with the quality assurance program approved by the NRC for ANO, GGNS, and RBS.

LESS RESTRICTIVE CHANGES

L.25 The minimum qualification and training requirements for the four sites are made consistent. Each of the sites' Technical Specifications identify minimum requirements for the qualifications of personnel in terms of the applicable ANSI/ANS Standard and identify exceptions to that ANSI/ANS Standard. In addition to the ANSI/ANS Standard identified in the Technical Specifications, each plant identifies additional requirements for various positions in their respective quality assurance program. Instead of these varying requirements, the revised commitment establishes a consistent base of requirements by requiring that the experience and training requirements for personnel meet ANSI/ANS 3.1 1978 except where exception to this Standard is identified in the applicable unit's Technical Specifications.

The revised requirements establish a consistent and stable set of base requirements between the four sites. In some cases this base requirement (ANSI/ANS 3.1 1978) may be less restrictive than the current commitment but in many cases it also adds additional requirements (e.g., GGNS is currently only committed to ANSI N18.7 1971 for all positions except for key quality programs personnel). The requirements of ANSI/ANS 3.1 1978 are sufficient to meet the requirements of 10 CFR 50 Appendix B and have been accepted by the NRC for each of the covered positions at one of the sites. Other requirements and clarifications currently identified in the quality assurance programs are removed and will be controlled as procedural details. Removal of this information results in no change to the requirement but this level of detail in the implementation of training and qualification requirements does not require the change controls of 10 CFR 50.54 to be applied since adequate training and qualification requirements remain in the QAPM.

To mitigate the burden associated with the documenting initial compliance with the increased requirements a statement is added to the QAPM identifying that "individuals filling positions at the time of implementation of this commitment can be considered to meet the requirements of ANSI/ANS 3.1 1978 for that position without further review and documentation." Additionally, the clarification in the GGNS quality assurance program concerning equivalency to the term bachelor's degree is retained.

L.26 Discussion of an intermediate management position between the primary quality assurance position function and the associated executive position is removed. The QAPM allows this position to exist by allowing there to be a single layer of management between the executive position and the quality assurance function position. In all cases the primary quality assurance position will maintain sufficient authority and organizational freedom to implement the assigned responsibilities. The revised presentation provides adequate description of the quality assurance function while providing organizational flexibility for the respective sites in implementing the requirements.

LESS RESTRICTIVE CHANGES

L.27 The explicit commitment to include certain non-safety related structures, systems, components or activities within the scope of the QA program is removed. The information previously contained in the QA manual will be controlled by the associated plant as an item to which the QA program is applied as discussed in QAPM Section A.1.c. Not including this information directly in the QAPM is consistent with the QA programs previously approved by the NRC for GGNS and W3. Consistent with the method of control previously approved for these items at W3, these requirements will be explicitly included into procedures as Special Scope QA Requirements as part of their removal from the QAPM. Removal of this information results in no change to the requirement but this level of detail in the applicability to non safety related items or services does not require the change controls of 10 CFR 50.54 to be applied since adequate requirements to meet 10 CFR 50 Appendix B remain in the QAPM.

L.28 Detail is removed from the ANO quality assurance program that is more appropriate for discussion in the Safety Analysis Report. This level of detail is not contained in the GGNS, RBS, or W3 quality assurance programs and the remaining requirements are adequate to implement 10 CFR 50 Appendix B. These items will be included in the Safety Analysis Report during the next update.

L.29 The requirement is removed. The remaining requirements are adequate to implement 10 CFR 50 Appendix B. Removing this requirement is consistent with the quality assurance programs approved by the NRC for W3, RBS, and GGNS.

L.30 The commitment to Regulatory Guide 1.28 is removed. As discussed in the current GGNS quality assurance program, this Regulatory Guide is not applicable to operational activities. Regulatory Guide 1.33, which is committed to in the proposed QAPM, provides the appropriate requirements. Removing this requirement is consistent with the quality assurance programs approved for W3, RBS, and GGNS.

L.31 In all cases the previous requirement for participation in five audits does not adequately ensure the necessary skill level of prospective lead auditors while in other cases, participation in five audits is not necessary; therefore, an option is provided for the licensee management to invoke alternate requirements. Requiring prospective lead auditors to demonstrate proficiency in audits skills, rather than a pre-defined number of audits, ensures the needed skill level of the prospective lead auditor. The new requirement allows management to forego the unnecessary time and expense of sending skilled personnel on unnecessary audits to fulfill a numeric requirement and provides the flexibility to require additional training when it is needed. The proposed requirement is adequate to implement 10 CFR 50 Appendix B.

L.32 Specific identification that the signature or initials of the reviewer must be documented is removed. Instead, the proposed QAPM states that indication of the positive concurrence must be documented. This change is made to allow alternatives to signatures and initials be used such as electronic signatures. The proposed requirement is adequate to implement 10 CFR 50 Appendix B.

LESS RESTRICTIVE CHANGES

L.33 A clarification is added that identifies that storage of an item in a higher level storage area meets the lower level storage requirements. Since the requirements for the each higher level of storage is designed to provide an increased level of protection for the stored items, storing an item in a higher level of storage provides an acceptable level of protection for the item.

L.34 The specific requirements concerning Independent Technical Reviews (a.k.a., ISEG) is removed from the W3 quality assurance program. This review program was a result of the TMI action plan. It is not part of compliance with 10 CFR 50 Appendix B. This lack of relationship to the 10 CFR 50 Appendix B program is demonstrated by the fact that older plants, including ANO, are not required to have this function. Additionally, GGNS and RBS, who have committed to having an ISEG function, are allowed to control changes under the change controls of 10 CFR 50.59 instead of 10 CFR 50.54. Removing this information from the W3 quality assurance program is consistent with the quality assurance programs approved by the NRC for ANO, GGNS, and RBS and does not affect compliance with the requirements of 10 CFR 50 Appendix B. The current W3 Independent Technical Review requirements will be relocated to the safety analysis report and changes will be controlled under the change controls of 10 CFR 50.59. A general statement of the fact that an individual unit's independent safety review is performed to meet the individual unit's commitment to NUREG-0737 Section I.B.1.2, "Independent Safety Engineering Group," as described in the unit's safety analysis report is added to the QAPM. Changes to the details of the individual unit's program will be controlled under the change controls of 10 CFR 50.59.

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L.35 The explicit commitment to include certain non-safety related ANO fire protection structures, systems, components or activities within the scope of the QA program is removed. The information previously contained in the QA manual will be relocated to another part of the ANO safety analysis report. As part of this relocation the information may be reformatted and reworded consistent with the safety analysis report and QAPM wording and format. Not including this information directly in the QAPM is consistent with the QA programs previously approved by the NRC for GGNS and W3. Removal of this information results in no change to the requirement but this level of detail in the applicability to non safety related items or services does not require the change controls of 10 CFR 50.54 to be applied since adequate requirements to meet 10 CFR 50 Appendix B remain in the QAPM. Following removal from the QA program changes to these commitments will be controlled in accordance with 10 CFR 50.59.

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MORE RESTRICTIVE CHANGES

M.1 The discussion of this management functional position has been added. Additional discussion of the primary management functions responsible for the QAPM functions is added for clarity and consistency.

M.2 A clarification/exception to a document that Entergy has committed to follow is removed or a more restrictive requirement is added. The change results in a more restrictive set of requirements.

Attachment 3

Arkansas Nuclear One
QA Manual Operations Markup

1.4.2 Executive Vice President & Chief Operating Officer

The Executive Vice President & Chief Operating Officer has the responsibility to oversee all operations and engineering functions of Entergy Operations. He delegates authority and responsibility for the operation and support of ANO through the Vice President, Operations ANO; the Vice President, Engineering; and the Vice President, Operations Support. It is the responsibility of the Executive Vice President & Chief Operating Officer to assure that all safety-related activities under his direction are performed following the guidelines of the Headquarters Quality Assurance Manual and the ANO QAMO.

~~The organization is shown on Figure 1.~~

1.4.2.1 Vice President, Operations Support

The Vice President, Operations Support reports directly to the executive Vice President and Chief Operating Officer and is responsible for administering corporate support functions in the areas of radiological protection, radioactive waste management, chemistry, environmental services, operations, maintenance, outage management, security, emergency planning, technology transfer, licensing; plant assessments, information technology, material requirements and materials, purchasing and contracts. It is the responsibility of the Vice President, Operations, Support to assure that these functions performed for ANO are performed in accordance with the requirements of the ANO Quality Assurance program.

1.4.2.1.1 Director, Materials, Purchasing & Contracts

The Director, Materials, Purchasing and Contracts reports to the Vice President, Operations Support and is responsible for the oversight and development of purchasing policies and procedures consistent across Entergy Operations nuclear sites and Headquarters and providing the direction and administration necessary relative to quality responsibilities as they relate to the ANO Quality Assurance Program.

10.2.3

A.3.d
A.3.e

Personnel performing inspection activities to verify quality are to be qualified as stated in Section 2.0 of this manual. When inspection techniques require specialized qualifications or skills, personnel performing the inspection are to meet applicable licensing requirements, codes and standards appropriate to the discipline involved.

10.3 CONTROL OF INSPECTIONS

10.3.1

A.1.d
B.12.b

Inspections are to be performed in accordance with approved written instructions or procedures, which set forth the requirements and acceptance limits and specify the inspection responsibilities. If inspections require detailed written procedures to perform the task, the procedures are to contain, as a minimum, the following:

(1) Qualitative and/or quantitative acceptance criteria

(2) Prerequisites for performing the inspection and any limiting conditions

N18.7
5.2.17

(3) Identification of any special equipment and tools required to perform the inspection (when accuracy requirements for inspections exceed the accuracy of normally available process or measuring and test equipment, such additional accuracy requirements are to be specified within those inspection procedures)

(4) A step-by-step description of the method of inspection, examination, measurement or test to be performed

(5) Identification of those inspection results to be documented. Inspection forms or checklists are to be used as an aid in documenting the inspection activity to assure quality requirements have been met

L.4

10.3.2

B.12.f

N18.7
5.2.17
(Para 2)

Operational inspections are to be performed by qualified individuals other than those who performed or directly supervised the activity being inspected. Construction inspections are to be performed by qualified individuals other than those who performed or directly supervised the activity being inspected and do not report directly to the immediate supervisors who are responsible for the activity being inspected.

1.-Q-2

10.3.2.1

B.12.f
N18.7
5.2.17
(Para. 2)

Operational inspections may be performed ~~by second line supervisory personnel~~ or by other qualified personnel not assigned first-line supervisory responsibility for conduct of the work.

Q-2
L.4

10.3.2.2

B.12.a
N18.7
5.2.17
(Para 3)

Construction inspections are to be conducted in a manner similar to that associated with construction phase activities in accordance with applicable approved procedures.

10.3.2.3

A.3.d
A.3e

If individuals performing inspections are not part of the ANO Organization, the inspection procedures, personnel qualification criteria, and independence from undue pressure such as cost and schedule are to be reviewed and found acceptable by the Director, Quality or designee prior to initiation of the activity.

L.6
L.4

A.2.d.1

10.3.3

B.12.a
N18.7
5.2.17
(Para 5)

If an inspection determined to be required is impossible or disadvantageous, indirect control by monitoring processing methods, equipment and personnel is to be provided to verify conformance with applicable documented instructions, procedures and drawings. Both inspection and process monitoring are to be provided when control is inadequate without both.

L.4

N18.7 5.2.6 (para 6)

(2) Perform independent verification of temporary modifications, by an individual cognizant of the purpose and effect of the temporary modification

(3) Document temporary modifications to assure the required actions are taken to return the equipment or system to its original operating configuration and status

L.4

N18.7 5.2.6 Clarification

Q-21

Additionally, temporary modifications which constitute temporary changes to plant configuration due to routine tasks such as additions of temporary jumpers or gauges as part of maintenance, calibration, or troubleshooting, may be installed and removed by use of approved procedures or work plans, providing (2) and (3) above are satisfied. These changes are not maintained on a status log since removal of the temporary change is controlled by the same procedure or work plan which installed it.

14.2.6

N18.7 5.2.6 (para 7)

When equipment or a system is properly identified as being ready to be returned to service, the appropriate Operations Supervision is notified and initiates the proper operation procedures. Testing of the equipment or system for functional acceptability is to be in accordance with Section 11.0 of this manual and documented to verify current status of the item.

L.4

14.2.7

B.13.9 B.13.6 N18.7 5.2.11

Equipment, structures and systems found to be nonconforming as a result of an activity are to be handled in accordance with approved procedures and Section 15.0 of this manual.

INSERT T1-2(A)

Clarification	Applicable discussion of change
Section C.4	L.20 and L.19
ANSI N18.7 Section 1	L.20
ANSI N18.7 Section 4.3.1	1st sentence L.19 2nd sentence L.20
ANSI N18.7 Section 4.3.2.3	L.19
ANSI N18.7 Section 4.3.4(2)	L.20
ANSI N18.7 Section 4.3.4(3)	A.13
ANSI N18.7 Section 4.3.4(4)	L.19
ANSI N18.7 Section 4.3.4(5)	L.19
ANSI N18.7 Section 4.5 (1st item)	L.23
ANSI N18.7 Section 4.5 (2nd item)	L.19
ANSI N18.7 Section 5.1	L.21
ANSI N18.7 Section 5.2.2 (2 items)	L.20
ANSI N18.7 Section 5.2.6 (1st item)	L.4
ANSI N18.7 Section 5.2.6 (second item)	See ANO section 14.2.5
ANSI N18.7 Section 5.2.8	L.20
ANSI N18.7 Section 5.2.9	L.20
ANSI N18.7 Section 5.2.14	L.20
ANSI N18.7 Section 5.2.15	L.20 and L.4
ANSI N18.7 Section 5.3.9	L.20
ANSI N18.7 Section 5.3.9.3	L.20

T-10-24

6.7 SAFETY LIMIT VIOLATION

6.7.1 The following actions shall be taken in the event a Safety Limit is violated:

a. The unit shall be placed in at least HOT STANDBY within one hour.

b. The Vice President, Operations ANO and the SRC shall be notified within 24 hours.

c. The Nuclear Regulatory Commission shall be notified pursuant to 10CFR50.72 and a report submitted pursuant to the requirements of 10CFR50.36 and Specification 6.6.

6.8 PROCEDURES

6.8.1 Written procedures shall be established, implemented and maintained covering the activities referenced below:

a. The applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Revision 2, February 1978.
b. Refueling operations.
c. Surveillance and test activities of safety related equipment.
d. (Deleted)
e. (Deleted)
f. Fire Protection Program implementation.
g. Modification of Core Protection Calculator (CPC) Addressable Constants. These procedures should include provisions to assure that sufficient margin is maintained in CPC Type I addressable constants to avoid excessive operator interaction with the CPCs during reactor operation.

NOTE: Modifications to the CPC software (including changes of algorithms and fuel cycle specific data) shall be performed in accordance with the most recent version of "CPC Protection Algorithm Software Change Procedure," CEN-39(A)-P that has been determined to be applicable to the facility. Additions or deletions to CPC addressable constants or changes to addressable constant software limit values shall not be implemented without prior NRC approval.

h. New and spent fuel storage.
i. ODCM and PCP implementation.
j. Postaccident sampling (includes sampling of reactor coolant, radioactive iodines and particulates in plant gaseous effluent, and the containment atmosphere).

6.8.2 Each procedure of 6.8.1 above, and changes in intent thereto, shall be reviewed and approved as required by the QAMO prior to implementation and reviewed periodically as set forth in administrative procedures.

INSERT T1-5A

Clarification	Applicable discussion of change
ANSI N45.2.2 Section 3.2 (1st item)	L.20
ANSI N45.2.2 Section 3.2 (2nd item)	L.33
ANSI N45.2.2 Section 3.7.1	L.20
ANSI N45.2.2 Section 3.7.2	L.20
ANSI N45.2.2 Section 4.3.4	L.17
ANSI N45.2.2 Section 6.2.1	L.20
ANSI N45.2.2 Section 6.2.5	L.20
ANSI N45.2.2 Section 6.3.3	L.20
ANSI N45.2.2 Section 6.5	L.20
ANSI N45.2.2 Section 6.6	L.20
ANSI N45.2.2 Section 7.3	L.20
ANSI N45.2.2 App (A-3) Section A3.4.1	L.17
ANSI N45.2.2 App (A-3) Section A.3.7.1	L.17

I-Q-28

INSERT T1-9A

Clarification	Applicable discussion of change
ANSI N45.2.3 Section 3.1	L.20
ANSI N45.2.3 Section 3.2.3	L.20
ANSI N45.2.3 Section 3.3	L.20
ANSI N45.2.3 Section 3.4	L.20
ANSI N45.2.3 Section 3.5	L.20

INSERT T1-9B

Clarification	Applicable discussion of change
ANSI N45.2.4 Section 5.2	L.20
ANSI N45.2.4Section 6.2.1	L.8 and L.19

1- Q-24
1- Q-8

INSERT T1-10A

Clarification	Applicable discussion of change
RG 1.58 General	Section 10
ANSI N45.2.6 Section 1.2	L.20
ANSI N45.2.6 Section 2.5	L.20
ANSI N45.2.6 Section 3.5	L.20

Q-98

APPENDIX B

QUALITY PROGRAM FOR FIRE PROTECTION

1.0 INTRODUCTION

1.1 The fire protection program was developed to define the organizational responsibilities, procedural controls, fire brigade staffing and training and the quality assurance provisions that have been established for the nuclear plant. The overall objective of the fire protection program is to minimize both the probability and consequences of postulated fires and to maintain the capability to safely shut down the plant if a fire should occur.

L.35

1.2 The scope of the fire protection program includes those fire protection and detection systems, and those structures and components (such as fire doors, fire dampers, and penetration seals) which, as identified in the plant's Fire Hazards Analysis Program Manual, are required to restrict the damage caused by a single exposure fire to safety-related equipment and equipment required to achieve and maintain safe plant shutdown to within those limits set forth in Section 1 of Appendix R to 10CFR50.

Q-105

1.3 The quality program for fire protection is designed to comply with the requirements of this manual and with the quality assurance guidelines identified in BTP-APCSB 9.5-1, Rev. 2, July 1981, Guidelines for Fire Protection for Nuclear Power Plants, subject to exceptions noted in this Appendix.

1.4 With respect to regulatory commitments, ANO is committed to implementing the requirements of the following, subject to exceptions noted in this Appendix:

1. 10CFR50, Appendix A, General Design Criterion 3 - Fire Protection.

2. Specific sections of 10CFR50.48, Fire Protection and 10CFR50, Appendix R, Fire Protection for Nuclear Power Facilities Operating Prior to January 1, 1979. These sections are as follows:

III.G. Fire Protection Safe Shutdown Capability

III.J. Emergency Lighting

III.L. Alternative and Dedicated Shutdown Capability

III.O. Oil Collection System for Reactor Coolant Pumps

L.35

Q-105

1.5 Other fire protection commitments are contained in the following references and documents:

1. Facility Operating License(s)

2. Safety Analysis Reports (SAR)

3. Fire Protection Safety Evaluation Reports (SER)

4. Regulatory correspondence to and from the NRC (includes applicable NRC generic letters and exemption letters for ANO).

1.6 The above requirements are implemented by controlling activities as described in this manual and Appendix and by procedures referenced in this manual and Appendix.

2.0 ORGANIZATION

2.1 The organizational structure and responsibilities of key personnel associated with the administration, implementation and evaluation of the fire protection program are described in Section 1.0 of this manual and as follows:

1. The Vice President, Operations ANO is the management position which has the overall responsibility for the development, implementation and assessment of the effectiveness of the fire protection program. He reports directly to the Entergy Operations Executive Vice President and Chief Operating Officer.

2. The General Manager, Plant Operations is responsible for the overall administration and implementation of plant operations and training in accordance with the fire protection program. He reports directly to the Vice President, Operations ANO.

3. The Manager, Standards is responsible for the establishment and monitoring of fire prevention aspects of the program at the plant including control of combustibles, ignition sources and postings. The Manager, Standards reports directly to the General Manager, Plant Operations. The Manager, Standards is responsible for:

   (1) Implementing, maintaining and assessing the fire prevention aspects of the program as defined in plant procedures (combustible controls, fire watches and fire drills)

   (2) Developing inspection and surveillance criteria

   (3) Maintenance and revision of the Pre-Fire Plans

4. The Manager, Engineering Programs is responsible for monitoring and overviewing fire protecuon programs and design fire protection modifications. The Manager, Engineering Programs reports directly to the Director, Design Engineering. Under his direction are Fire Protection Engineers/Specialist/Technicians who are responsible for:

(1) Implementing, maintaining and assessing the fire protection aspects of the program as defined in plant procedures

(2) Performing fire protection evaluations

(3) Providing guidance and technical support to the nuclear plant in the area of fire protection

(4) Assuring that applicable regulatory requirements are included in the fire protection program L.35

(5) Assuring design reviews for fire protection modifications are performed Q-105

(6) Assuring that evaluations/assessments of the fire protection program are performed and results reported to management

(7) Maintenance and revision of the Fire Hazards Analysis (FHA)

(8) Classification of F-list components for the Component Level F-list

(9) Coordinating insurer, NRC and other fire protection inspections.

(10) Assuring fire protection systems engineering functions are performed (suppression, detection, barriers, fire pumps and water supplies).

5. The Director, Quality is responsible for assuring that the fire protection program is implemented in accordance with the QA Manual Operations, SAR and applicable procedures. This is accomplished by the performance of audits and other provisions of the QA Manual Operations. He shall assure that corrective action, when necessary, is taken. He reports directly to the Vice President, Operations ANO.

6. The Director, Nuclear Safety is responsible for providing other responsible organizations with regulatory information and interpretations on regulatory issues related to fire protection. He is also responsible for providing interface with the NRC on fire protection matters, engineering evaluations and analysis of fire protection systems, as related to regulatory commitments and control of license-based documents relating to fire protection. He reports directly to the Vice President, Operations ANO.

L.35

Q-16

7. The Director, Design Engineering is responsible for assuring that the technical requirements specified in the Operating License, Safety Analysis Report, and other design basis documents, with respect to fire protection, have been satisfied in design modifications and design documents affecting ANO.

3.0 QUALITY ASSURANCE PROGRAM

3.1 This quality program is to ensure that the fire protection systems for safety-related areas (as defined in paragraph 1.2 of this Appendix) are controlled in accordance with applicable NRC regulations, industrial standards and codes, policies, rules, procedures and licensing documents. The quality program is implemented through approved procedures. The effectiveness of the fire protection program is verified through surveillances and scheduled audits conducted by the Quality Organization, under the cognizance of the SRC. General requirements for this program are also described in subsections 2.4 through 2.7 of this manual, except that personnel performing inspections need not be certified to ANSI N45.2.6, when inspections are performed on equipment not listed on the Q-list.

L,35

3.2 Employees whose duties and responsibilities are related to this fire protection program at or in support of the nuclear plant are to participate in appropriate training programs to assure that suitable proficiency is achieved and maintained in the work they are performing.

Q-105

3.3 Fire protection training for plant personnel is included as part of industrial safety in the General Employee Training Program. Personnel are periodically retrained in industrial safety in accordance with approved procedures. Personnel assigned to the plant Fire Brigade are to receive additional indoctrination and training to assure their capability to fight fires is established and maintained. The Director, Training and Emergency Planning has the overall responsibility for these training programs.

4.0 DESIGN CONTROL

4.1 Section 3.0 of this manual is applicable for design control activities pertaining to the fire protection system.

5.0 PROCUREMENT DOCUMENT CONTROL

5.1 The control of procurement documents for fire protection-related materials, parts and components is described in Section 4.0 of this manual with the exception of paragraph 4.2.3. When these items are not associated with the Q-list, the procurement document is to include the requirement that items be U.L. listed or F.M. approved for fire protection use, where applicable, in accordance with approved procedures.

L.35

6.0 INSTRUCTIONS, PROCEDURES AND DRAWINGS

6.1 Inspections, tests, administrative controls, fire drills and training that govern the fire protection program are prescribed by documented instructions, procedures and drawings and are accomplished in accordance with these documents. Instructions, procedures and drawings are prepared, reviewed, approved and revised in accordance with approved procedures.

Q-105

7.0 DOCUMENT CONTROL

7.1 Section 6.0 of this manual is applicable for the control of quality program documents related to fire protection.

8.0 CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

8.1 The control of purchased fire protection-related materials, equipment and services is described in Section 7.0 of this manual, with the following exception related to subsections 7.2, 7.3 and 7.5. For the procurement of fire protection-related items or services not associated with the Q-list, the vendor/contractor qualification criteria (including periodic reassessment of their program) is not required. Nonconformances dispositioned repair or use-as-is by the vendor are to be submitted to and accepted by ANO only when so designated on the procurement document.

9.0 IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS

9.1 Section 8.0 of this manual is not applicable for the identification and control of materials, parts and components related to the fire protection system. No particular requirements for this section have been identified in BTP-APCSB 9.5-1, Rev. 2. The identification and control of materials, parts and components are conducted in accordance with existing procurement and materials management procedures and practices.

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10.0 CONTROL OF SPECIAL PROCESSES

10.1 Section 9.0 of this manual is not applicable for the control of special processes, as applicable to fire protection systems. No particular special process controls have been identified by BTP-APCSB 9.5-1, Rev. 2. The control of special processes for the maintenance of the fire protection system is performed in accordance with applicable approved procedures and practices.

11.0 INSPECTION

11.1 Inspection activities applicable to the fire protection system are described in Section 10.0 of this manual with the exception of paragraphs 10.2.2 and 10.3.2.3, when inspections are performed on equipment not associated with the Q-list. The Regulatory Guides referenced in paragraph 10.2.2 are not applicable to the fire protection system. Individuals outside the Quality Organization who perform inspections only need to meet paragraphs 10.3.2 and 10.3.2.1.

In addition to the provisions of this manual, inspections and surveillances are addressed in applicable portions of the SAR for each nuclear unit.

12.0 TEST CONTROL

12.1 A test program is to be established and implemented to ensure that testing is performed and verified on applicable systems and components to demonstrate conformance with design and system readiness requirements. The tests are to be performed in accordance with written test procedures and test results evaluated for conformance to the test objectives.

12.2 The control of testing activities is described in Section 11.0 of this manual. Surveillance testing requirements are identified in the Safety Analysis Report for each nuclear unit.

L.35

13.0 CONTROL OF MEASURING AND TEST EQUIPMENT

Q-105

13.1 Section 12.0 of this manual is not applicable for the control of measuring and test equipment. No particular measuring and test equipment controls have been identified in BTP-APCSB 9.5-1, Rev. 2. Measuring and test equipment is controlled in accordance with applicable approved procedures and practices.

14.0 HANDLING STORAGE AND SHIPPING

14.1 Section 13.0 of this manual is not applicable for the handling, storage and shipping of fire protection-related materials and equipment. No particular requirements for this section have been identified in BTP-APCSB 9.5-1, Rev. 2. Handling, storage and shipping activities are controlled in accordance with applicable approved procedures and practices.

15.0 INSPECTION, TEST AND OPERATING STATUS

15.1 Measures are established to provide for the identification of items that have satisfactorily passed required inspections and tests and are documented per approved instructions or procedures.

15.2 Section 14.0 of this manual is applicable for identifying the inspection, test and operating status of the fire protection system.

16.0 NONCONFORMING MATERIAL, PARTS AND COMPONENTS

16.1 The control of nonconforming materials, parts and components related to the fire protection system is described in Section 15.0 of this manual, with the exception of subsection 15.3, when the item is not associated with the Q-list. Vendor nonconformances are to be submitted to ANO only when so designated on the procurement document.

17.0 CORRECTIVE ACTIONS

17.1 A corrective action system is established to ensure that conditions adverse to fire protection, such as failures, malfunctions, deficiencies, deviations, defective components, uncontrolled combustible materials and nonconformances, are promptly identified, reported and corrected.

17.2 Corrective action activities are controlled as described in Section 16.0 of this manual, with the following exception related to subsection 16.3. Vendors furnishing fire protection items not associated with the Q-list are not required to be listed on the QSL.

4.35

Q-165

18.0 QUALITY ASSURANCE RECORDS

18.1 Records which furnish evidence that the criteria enumerated in this program are being met for activities affecting the fire protection program are to be prepared and maintained as described in Section 17.0 of this manual.

19.0 AUDITS

19.1 Audits are to be conducted and documented to verify compliance with the fire protection program, including design and procurement documents, instructions, procedures and drawings and inspection and test activities. Section 18.0 of this manual is applicable for the control of audits related to the fire protection program.

19.2 As a minimum, the following audits of the fire protection program are to be scheduled at the indicated frequencies:

C.2.a.2.h a. The Facility Fire Protection Program and implementing procedures at least once per 24 months.

Q-105

C.2.a.2.g b. An independent fire protection and loss prevention program inspection and audit shall be performed at least once per 12 months utilizing either qualified off-site licensee personnel or an outside fire protection firm.

C.2.a.2.i c. An inspection and audit of the fire protection and loss prevention program shall be performed by a qualified outside fire consultant at least once per 36 months.

Attachment 4

Grand Gulf Nuclear Station
OQAM Markup

OPERATIONAL QUALITY ASSURANCE MANUAL
TITLE: INSPECTION

10.4.2 (Continued):

RG 1.58 General Clarification B.12.a B.12.b A.2.d.1

the performance of all quality inspections. The coordination of activities concerning the training and certification of all quality inspectors shall be accomplished by the Director, Quality. ~~Level III quality inspectors are appointed.~~ The Director, Quality assures all safety-related work authorizations will be reviewed, as defined by the appropriate implementing administrative procedures, for determination of any quality inspection requirements. Procedures or work authorizing documents which control repetitive tasks are reviewed initially and when revised for inclusion of inspection requirements.

Q-88 | L.4 L.6 L.4

10.4.3 A.3.b

The licensee may delegate the responsibility for implementing certain portions of the inspection program to other organizations. However, the licensee retains the ultimate responsibility for assuring that all aspects of the inspection program are carried out. At GGNS, the Director, Quality is responsible for assuring that inspection activities assigned to onsite contractors are accomplished in accordance with the requirements of this policy.

10.4.4 A.1.b

Organizations supplying safety-related material, equipment and services are responsible for complying with the applicable requirements of this policy, as stipulated in the procurement documents, and for imposing them upon their contractors and suppliers as applicable. They are also responsible for verifying, through surveillance or audits, that the requirements are being adequately implemented.

10.4.5 This section deleted in Revision 12.

10.4.6 A.2.d.9

The Vice President, Operations Support, is responsible for assuring that headquarters source, receipt, warehouse, and shipout inspections are accomplished in accordance with the requirements of approved policies. He is responsible for developing and implementing procedures and for the qualification, training, and certification of personnel for the performance of these inspections. ~~Level III receipt inspectors are appointed.~~

L.5 | RG 1.58 General Clarification | Q-88 | L.4

10.5 REQUIREMENTS

10.5.1 B.12.b

Inspection requirements shall be included in applicable specifications, drawings, procedures, instructions or other documents which prescribe and control safety-related activities.

10.5.2 B.12.b A.1.d

These inspection requirements shall be translated into a documented inspection program, to be implemented by the responsible organizations in accordance with written procedures, which verifies that the activities are accomplished in accordance with the specifications, drawings, procedures or instructions.

OPERATIONAL QUALITY ASSURANCE MANUAL
TITLE: INSPECTION

10.5 (Continued):

10.5.3 Inspection procedures, instructions or checklists shall include provisions, as required, for the following:

10.5.3.1 Identification of characteristics and activities to be inspected;

10.5.3.2 Identification of the individuals or organizations responsible for performing the inspection activities;

10.5.3.3 Identification of acceptance and rejection criteria;

10.5.3.4 A description of the method of inspection;

10.5.3.5 Recording evidence of the completion and verification of a manufacturing, inspection or test operation;

10.5.3.6 Recording the identity of the inspector or data recorder and the results of the inspection operation; and,

10.5.3.7 Specifying the necessary measuring and test equipment, including the accuracy requirements. Accuracy may be specified by requiring a specific model or type of instrument.

10.5.4 The applicable drawings and specifications shall be available for use with the inspection procedures, instructions or checklists when an inspection operation is being carried out.

10.5.5 Inspections shall be performed by qualified personnel who are independent of those individuals who performed the activity being inspected. Inspection of operating activities (work functions associated with normal operation of the Plant, routine maintenance, and certain technical services routinely assigned to the onsite operating organization) may be conducted by second-line supervisory personnel or by other qualified personnel not assigned first-line supervisory responsibility for conduct of the work.

When inspections of operating activities are performed by individuals other than those who performed or directly supervised the work, but are within the same group, the following controls shall be met:

10.5.5.1 The quality of the work can be demonstrated through a functional test when the activity involves breaching of pressure retaining items;

OPERATIONAL QUALITY ASSURANCE MANUAL
TITLE: AUDITS

18.5.6 (Continued):

N.12 S 3.5.1 18.5.6.1 Auditing shall be initiated as early in the life of an activity as practical to assure timely implementation of QA program requirements.

N.12 S 3.5.2 18.5.6.2 Audits shall be scheduled on the basis of the status and importance of the activities to be audited.

18.5.6.3 This section deleted in Revision 14.

18.5.7 Individual audits shall be performed in accordance with documented procedures, plans, or checklists which describe the audit and provide for an objective evaluation of the status and adequacy of the areas being audited.

N.12 S 4.2.1
C.2.b
C.2.c

The "objective evaluation" referenced is not to be confused with the evaluation statement in ANSI N45.2.12 to which the licensee has provided a clarification. See Appendix A. (A.1)

18.5.8 Audit results, including conditions adverse to quality detected during the audit, shall be documented and reviewed with the supervisor or manager having responsibility in the areas audited. Distribution of audit reports shall include management of the audited organization and appropriate licensee management.

N.12 S 4.3.2.5
C.2.f

18.5.9 Management of the audited organizations shall be responsible for correcting conditions adverse to quality identified during an audit. They shall assure that corrective action is scheduled, accomplished as scheduled, and documented. The corrective action shall be designed to prevent the recurrence of significant conditions adverse to quality. (See also Appendix A, Regulatory Guide 1.144, Item 11.)

N.12 S 4.3.2.4
A.6.b
N.12 S 4.5.1

18.5.10 Deficient areas shall be reviewed or reaudited on a timely basis to verify implementation of corrective action.

C.2.c

18.5.11 Audit results shall be analyzed to detect adverse quality trends and to evaluate the effectiveness of the Operational Quality Assurance Program. Results of such analyses which indicate adverse quality trends shall be reported to appropriate management for review and assessment.

A.3.c
C.2.f
A.6.e

18.5.12 Records shall be generated and retained for all audits, including individual audit plans, audit reports, written replies, and records of corrective action. (See also Appendix A, Regulatory Guide 1.144, Item 13.)

N.12 S 5.2 (Q.1)

18.5.13 The licensee interprets the requirements of the UFSAR, Appendix 16B, Section 7.4.2.8, which requires that audits shall be performed under the cognizance of the SRC, to be met by the following: The SRC shall review the results of audits of nuclear activities conducted in accordance with the GGNS Operational Quality Assurance Program and maintain cognizance of the audit schedule.

N18.7 S 4.5 (Q-84)

Add Section D (L.34)

NRC Regulatory Guide 1.30 (Continued):

The Operational Quality Assurance Program complies with the requirements of this guide with the following clarifications:

1) For operations phase maintenance and modification activities, the licensee shall control these activities under this Operational Quality Assurance Program. The licensee shall comply with the Regulatory Position established in this regulatory guide in that quality assurance programmatic/ administrative requirements included therein (subject to the clarifications in item 2 below) shall apply to these maintenance and modification activities even though such requirements may not have been in effect originally. Technical requirements associated with maintenance and modifications shall be the original requirements or better (e.g., code requirements, material properties, design margins, manufacturing processes, and inspection requirements).

A.7.a.1

2) Additional clarifications for ANSI N45.2.4 - 1972 are indicated for specific sections below.

Section 1.4 - Definitions in this Standard which are not included in ANSI N45.2.10 will be used; all definitions which are included in ANSI N45.2.10 will be used as clarified in the licensee commitment to Regulatory Guide 1.74.

A.7.a.2

Section 2.1 - Planning requirements, when necessary, will be incorporated into maintenance and modification procedures.

A.5

Section 2.3 - Procedures and Instructions will be implemented as set forth in Policies 2, 3, 5, 10, and 11 of the Operational Quality Assurance Manual and by compliance with the Technical Specifications or the UFSAR, Appendix 16B, and ANSI N18.7 as set forth in Appendix A to the OQAM in lieu of the requirements set forth here.

A.7.a.3

A.1

Section 2.4 - Results will be implemented as set forth in Policies 10, 11 and 17 of the Operational Quality Assurance Manual and by compliance with ANSI N18.7 as set forth in Appendix A of the OQAM in lieu of the requirements set forth here.

A.7.a.3

A.1

Section 2.5.2 - Calibration and Control. The third sentence of this section states in part, " ... equipment shall be suitably marked to indicate date of next required calibration." The licensee will utilize a computerized system to indicate the calibration status of installed operations measuring and test equipment in lieu of marking or tagging the individual item.

N.4 §2.5.2

Q-24

L.8

Insert clarification N.453

L.16

NRC Regulatory Guide 1.30 (Continued):

Section 3 - Preconstruction Verification will be implemented as follows: (1) is required only for modifications; (2) will be implemented with the clarification that "approved instruction manuals" shall be interpreted to mean the manuals provided by the supplier as required by the procurement order--these manuals will not be reviewed and approved, per se, by the licensee; (3) no special checks will be made by the person withdrawing a replacement part from the warehouse--equivalent controls are assured by compliance with ANSI N45.2.2 as set forth in Appendix A to the Operational Quality Assurance Manual; and, (4) will be complied with as stated, by individual technicians as part of the maintenance/modification process. A.5

Section 4 - Installation will be implemented by inclusion, as necessary, in the appropriate maintenance or modification procedure, where such procedures are used. Standard licensee maintenance practices require that care be exercised in the six areas listed whether a procedure is required or not. A.5

Section 5.1 - Inspections, including subsections 5.1.1, 5.1.2, and the first sentence in 5.1.3, will be implemented as set forth in Policy 10 of the Operational Quality Assurance Manual. The inspection program will incorporate, as applicable, those items listed in these subsections. The remaining sentence in 5.1.3 is covered in equivalent detail in the licensee's commitment to ANSI N18.7, Section 5.2.6; the requirements as set forth in that commitment will be implemented in lieu of the requirements stated here. A.5 Q-8

Section 5.2 - Tests, including subsections 5.2.1 through 5.2.3, will be implemented as set forth in Policies 3 and 11 of the Operational Quality Assurance Manual. The test program will consider the elements outlined in this Section, where applicable, when developing test requirements for inclusion in maintenance and modification procedures. In some cases, testing requirements may be met by post-installation surveillance testing in lieu of a special post installation test. A.5 A.12

N.4 5.2 clarification

Section 6 - Post-Construction Verification is not generally considered applicable at operating facilities because of the scope of the work and the relatively short interval between installation and operation. Where considered applicable, as in modifications, the elements described in this section will be considered in the development and implementation of inspection and testing programs as described in Policies 3, 10 and 11 of the Operational Quality Assurance Manual. A.12

A.7.a.1 N.4 General clarification

With regard to Section 6.2.1 of ANSI N45.2.4 - 1972 titled Equipment Tests: The last paragraph of this section deals with tagging and labeling. The licensee will comply with an alternate last paragraph which reads: "Each safety-related item of process instrumentation is identified with a unique number. This number is utilized in instrument maintenance records so that current calibration status, including data such as the date of the L.8

N.4 5.6.2.1 clarification

NRC Regulatory Guide 1.33 - Section 19 (Continued):

In options, (1) and (3) above, the material meets the requirement to receive "the same level of review and approval as operating procedures" since the material is reviewed as part of the procedure review process. In option (2), the requirements shall be deemed to have been fulfilled by requiring a copy of the pertinent manual (manual sections) to be available to and considered by persons conducting the review of the procedure. A5

30) With regard to Section 5.2.16 of ANSI N18.7 - 1976 titled Measuring and Test Equipment: The second sentence of the third paragraph states "Records shall be made and equipment suitably marked to indicate calibration status." The licensee will utilize a computerized system to indicate the calibration status of installed operations measuring and test equipment in lieu of marking or tagging the individual item. Q-24 L.8

N18.7 5.2.16

31) With regard to Section 1 of ANSI N18.7 titled Scope: The fourth and fifth sentences state, "However, applicable sections of this standard should be used as they apply to related activities. Activities included are: Design Changes, Purchasing, Fabricating.." The licensee does not intend to fabricate, design, assemble, or modify any NRC licensed container to be used to transport radioactive material.

N18.7 5.1 clarification

Table 1

NRC Regulatory Guide 1.37 - "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants" (3/73) Endorses ANSI N45.2.1 - 1973.

The Operational Quality Assurance Program complies with the requirements of this guide with the following clarifications:

1) With regard to Paragraph C.3 of Regulatory Guide 1.37: The water quality for final flushing of fluid systems and associated components shall be at least equivalent to the quality of the operating system water except for the oxygen and nitrogen content, but this does not infer that chromates or other additives, normally in the system water, will be added to the flush water. A.5

RG 1.37 SC.3 Clarification

2) With regard to Paragraph C.4 of Regulatory Guide 1.37: Expendable materials, such as inks and related products, temperature indicating sticks, tapes, gummed labels, wrapping materials (other than Polyethylene), water soluble dam materials, lubricants, NDT penetrant materials and couplants, which contact stainless steel or nickel alloy surfaces shall not contain lead, zinc, copper, mercury, cadmium and other low melting point metals, their alloys or compounds, as basic and essential chemical constituents. Prescribed maximum levels of water leachable chlorides, total halogens, and sulphur and its compounds shall be imposed on expendable products. L.4

RG 1.37 SC.4 Clarification

3) With regard to Section 5 of ANSI N45.2.1 - 1973 titled Installation Cleaning: The recommendation that local rusting on corrosion resistant alloys be removed by mechanical methods is interpreted to mean that local rusting may be removed mechanically, but the use of other removal means is not precluded. A.5

INSERT 17-A

Clarification	Applicable discussion of change
ANSI N45.2.2 Section 4.3.4	L.17
ANSI N45.2.2 Section 5.2.3	L.16
ANSI N45.2.2 App (A-3) Section A3.4.1	L.17
ANSI N45.2.2 App (A-3) Section A3.4.2	L.16
ANSI N45.2.2 App (A-3) Section A.3.5.1	L.16
ANSI N45.2.2 App (A-3) Section A.3.5.2	L.16
ANSI N45.2.2 App (A-3) Section A.3.7.1	L.17
ANSI N45.2.2 App (A-3) Section A.3.9 (1st item)	L.16
ANSI N45.2.2 App (A-3) Section A.3.9 (2nd item)	L.16
ANSI N45.2.2 App (A-3) Section A.3.9 (3rd item)	L.16
ANSI N45.2.2 App (A-3) Section A.3.9 (4th item)	L.16 and L.4

Q-28

NRC Regulatory Guide 1.39 (Continued):

Cleanliness will be maintained, consistent with the work being performed, so as to prevent the entry of foreign material into safety-related systems. This will include, as a minimum, documented cleanliness inspections which will be performed prior to system closure. As necessary, (e.g., the opening is larger than the tools being used) control of personnel, tools, equipment, and supplies will be established when major portions of the reactor system are opened for inspection, maintenance or repair.

Additional housekeeping requirements will be implemented as required for control of radioactive contamination.

N.3 S 3.3 Clarification — Section 3.3 - Materials and Equipment: The first paragraph in this section is not applicable to the operations phase.

N.3 S 3.4 Clarification — Section 3.4 - Construction Tools, Supplies, and Equipment: Not applicable to the operations phase.

N.3 S 3.5 clarification — Section 3.5 - Surveillance, Inspection, and Examination: Subparagraph (1) is not applicable to the operations phase; (2), (3) and (4) will be implemented.

~~Section 4 - Records: The requirements of Policy 17 and ANSI N45.2.9 as set forth in Appendix A of the Operational Quality Assurance Manual shall be implemented in lieu of the requirements of this section.~~

N.3 S 5.2.3 clarification — Section 3.2.3 - Fire Protection and Prevention: The accepted Fire Protection Plan shall be used in lieu of the general requirements in this section.

Table 1 — NRC Regulatory Guide 1.58 - "Qualifications of Nuclear Power Plant Inspection, Examination, and Testing Personnel". (Rev. 1, 9/80) - Endorses ANSI N45.2.6 1978.

The Operational Quality Assurance Program complies with the requirements of this guide with the following clarifications:

2nd RG 1.58 General clarification — 1) The licensee may choose not to apply the requirements of this guide to those personnel who are involved in day-today operations, surveillance, maintenance and certain technical and support services whose qualifications are controlled by Technical Specifications, ~~Appendix 16B of the UFSAR~~ or other Operational Quality Assurance Program commitment requirements.

1st RG 1.58 General clarification

2) With regard to Section 1.2 of ANSI N45.2.6 - 1978 titled Applicability : The third paragraph requires that the standard be used in conjunction with ANSI N45.2; the licensee no longer specifically commits to ANSI N45.2 in the Operational Quality Assurance Program. The fourth paragraph requires that the standard be imposed on personnel other than licensee employees; the applicability of the standard to suppliers will be documented and applied, as appropriate, in the procurement documents for such suppliers.

N.6 S 1.2 clarification

Attachment 5

River Bend Station
QADs Markup

6.3 The ~~Supervisor~~ - Quality (Quality Control) has the authority to initiate Stop ~~Work~~ Actions through designated channels and control further processing, delivery ~~or installation~~ of nonconforming materials and components identified ~~through~~ the inspection process. This authority is described in department procedures.

6.4 Inspection procedures, instructions, and/or checklists shall be prepared, for inspection activities. When required by applicable codes, standards and design documentation, inspection requirements for maintenance, design modification, and testing activities affecting a safety-related structure, system, or component, shall be prepared either as a separate document or as an integral part of a work instruction. These procedures, instructions and checklists shall be available for use, along with the necessary drawings and specifications, prior to performing the inspection, and shall include the following:

6.4.1 ~~Approval of Inspection Plan or Checklist~~;

6.4.2 Identification of characteristics and activities to be inspected;

6.4.3 A description of the method of inspection;

6.4.4 Identification of hold/~~notification/witness~~ points;

6.4.5 Accept/reject criteria;

6.4.6 Identification of applicable procedures, drawings, specifications, and revisions thereto;

6.4.7 ~~The identity of the inspector, data recorder and person approving inspection results~~ including the results of the inspection operations shall be recorded;

6.4.8 Necessary measuring and test equipment, including range and accuracy requirements; and,

6.4.9 A method of identifying, reporting, segregating, and disposing of a nonconforming item when found.

6.5 Inspections shall be performed by trained and qualified personnel who are independent of those individuals who performed or directly supervised the activity being inspected.

6.5.1 Inspections of operating activities, may be conducted by second-line supervisory personnel or by other qualified personnel not assigned first-line supervisory responsibility for conduct of the work. When the inspector is within the same group as the individual performing the work, the following controls shall be met:

B.12.f

Q-2

1. The activity is routine maintenance, normal plant operation and selected technical services. This does not include modifications and nonroutine maintenance; and

2. The quality of the work can be demonstrated by a functional test when the activity involves breaching a pressure retaining boundary.

L.4

3. Inspection procedures, training, qualification, and certification criteria for inspection personnel are reviewed and found acceptable by the Manager - Quality Assurance.

4. Independence of inspection personnel performing inspection of "in-line" functions is reviewed and found acceptable by the Manager - Quality Assurance prior to initiation of the inspection process.

6.6 Personnel qualifications and certifications shall comply with the applicable codes, standards, or licensing requirements, and they shall be documented, filed, retained, and updated. Personnel performing inspections which require specialized qualifications or skills shall be qualified in accordance with the applicable codes, standards, or licensing requirements. This qualification shall be documented and updated in accordance with procedure requirements. Inspectors shall be qualified through experience, education and RBS approved vendor training programs. ~~(Reference 2.4, Regulatory Guide 1.58 [ANSI N45.2.6-1978])~~.

B.12.a
A.5

A.1

6.7 When direct inspection of processed material or products is ~~impossible, indirect control~~ by monitoring processing methods, equipment, and personnel shall be used. ~~Where necessary,~~ inspection and process monitoring shall be used if control is inadequate ~~without~~ both.

L.4

N.1253.5.2 2. Audits shall be conducted to predetermined schedules.

N.1253.5.2 3. Audits shall be scheduled with a frequency commensurate with the activity's safety significance and status. L.23

C.2.a.1 4. Audits of selected aspects shall be performed in a C.2.a.2 manner to ensure that an audit of all safety-related functions is completed within a period of two years.

C.2.a2.c 5. Results of actions taken to correct deficiencies that affect nuclear safety and occur in facility equipment, structures, systems, or method of operation shall be audited at least once per ~~six~~ 24 months. L.9

C2.a.2.d 6. Those applicable elements of the Quality Assurance in which quality-related activities are more intensive and impact daily operations shall be audited at least ~~annually~~ 2 years.

C.2.a.2.a 7. The conformance of facility operation to the Technical Specifications and applicable license conditions shall be audited at least once per ~~12~~ 24 months. L.9

C.2.a.2.b 8. The performance, training, and qualification of the unit staff shall be audited at least once per ~~12~~ 24 months. L.9

C.2.a.2.j 9. Performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10CFR50, at least once per 24 months.

C.2.a.2.d 10. Emergency Plan and implementing procedures at least once per ~~12~~ 24 months. L.4 L.9

~~11. Security Plan and implementing procedures at least once per 12 months.~~ L.27

C.2.a.2.h 12. The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee Quality Assurance personnel. Q-105

13. The fire protection equipment and program implementation at least once per 12 months utilizing either qualified offsite licensee personnel or an outside independent fire protection consultant. An outside independent fire protection consultant is utilized at least every third year.

14. The Radiological Environmental Monitoring Program and the results thereof at least once per ~~12~~ 24 months.

15. The Offsite Dose Calculation Manual and implementing procedures at least once per 24 months.

16. The Process Control Program and implementing procedures at least once per 24 months.

17. The performance of activities required by the Quality Assurance Program for effluent and environmental monitoring at least once per ~~12~~ 24 months.

18. Any other area of unit operation considered appropriate by the Nuclear Review Board, Vice President - Operations, or General Manager Plant Operations.

6.2.2 Areas that shall be audited include, but are not limited to:

1. Conduct of Operations
2. Training and Qualifications
3. Corrective Action Program
4. Fire Protection Program/Equipment
5. ~~Computer Software QA Program~~
6. ~~Emergency Plan~~
7. Station Security Plan/~~Fitness-For-Duty~~
8. Offsite Dose Calculation Manual
9. ~~Radiological Effluent Monitoring~~

6.6.2 When the corrective action response states a planned action that will not be completed within 30 calendar days of the issuance of the finding, a follow-up report shall be required. This follow-up report shall state the corrective action taken and the date it was completed.

N.12 54.5.1

6.7 Quality Trends of Audits

6.7.1 Audit deficiencies shall be analyzed in accordance with Nuclear Procedure Manual Procedure, River Bend Nuclear Procedure-052, River Bend Station Trending Program, for indications of quality trends in order to determine the effectiveness of the Quality Assurance Program.

A.3.c
A.6.c

6.7.2 Results of these analyses which indicate adverse quality trends shall be reported to appropriate River Bend Station management for review and assessment.

A.6.e

6.8 Audit Records

6.8.1 Records shall be generated and retained for all audits. These records include:

A.1.d 2

- ~~Audit schedules~~

L.4

A.1.d

- Audit checklists
- Audit plans

N.12 55.2

- Audit reports
- Written responses and
- Corrective action reports.

7.0 DOCUMENTATION

7.1 Not applicable to this directive.

Q-84

L.34

Add Section D

Attachment 6

Waterford 3
QAPM Markup

RG 1.8 g. Ability to maintain an effective working relationship with employees, contractors, suppliers, government agencies, and the public. (1.25)

4.7.1.2 The primary quality related responsibilities of the Director, Quality include:

a. Planning, organizing, and administering the Quality Assurance program;

A.2.1.1 b. Developing, reviewing, and concurring with the content of the Waterford 3 Quality Assurance Program Manual and changes thereto;

(1.6)

c. Developing Quality Assurance Procedures (QAPs);

d. Assisting in establishing that portion of the Training program that addresses quality assurance;

e. Advising, reviewing, and concurring on the scope and content of quality assurance training and indoctrination programs for personnel performing quality related activities;

f. Providing requested inspection training to personnel performing quality related activities;

(Q-88)

RG 1.58 General Clarification g. Certifying Lead Auditors and Inspectors;

h. Assuring effective implementation of the Quality Assurance program through a comprehensive system of reviews, assessments, and the performance or monitoring of nondestructive examinations and other special processes;

i. Maintaining surveillance of plant activities to provide independent verification that these activities are performed correctly and that human errors are reduced as much as practical; 18

j. Ensuring that quality reviews are conducted for quality related implementing procedures and design changes, including drawings and specifications, to ensure the inclusion of quality requirements;

k. Reviewing all safety related work authorizations (WAs), WAs containing hold points, or WAs involving special processes, to ensure the inclusion of quality requirements, and ensuring that quality reviews are conducted for all other initiated work authorizations;

ADMINISTRATIVE CONTROLS

SAFETY LIMIT VIOLATION (Continued)

Q-106

a. The NRC Operations Center shall be notified by telephone as soon as possible and in all cases within 1 hour. The Vice President Operations and the SRC shall be notified within 24 hours.

NUREG 1.75 4.3.4 (4) clarification

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

NUREG 1.75 4.3.4 (4) Clarification

c. The Safety Limit Violation Report shall be submitted to the Commission, the SRC and the Vice President Operations within 14 days of the violation.

L.4

d. Critical operation of the unit shall not be resumed until authorized by the Commission.

6.8 PROCEDURES AND PROGRAMS

6.8.1 Written procedures shall be established, implemented and maintained covering the activities referenced below:

N/A

a. The applicable procedures recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978 and Emergency Operating Procedures required to implement the requirements of NUREG-0737 and NUREG-0737, Supplement 1, as stated in Generic Letter 82-33.

b. Refueling operations.

c. Surveillance and test activities of safety-related equipment.

d. Not used.

e. Not used.

f. Fire Protection Program implementation.

g. Modification of Core Protection Calculator (CPC) Addressable Constants, including independent verification of modified constants.

NOTES:

(1) Modification to the CPC addressable constants based on information obtained through the Plant Computer - CPC data link shall not be made without prior approval of the PORC.

(2) Modifications to the CPC software (including algorithm changes and changes in fuel cycle specific data) shall be performed in accordance with the most recent version of CEN-39(A)-P, "CPC Protection Algorithm Software Change Procedure," that has been determined to be applicable to the facility. Additions or deletions to CPC Addressable Constants or changes to Addressable Constant software limits values shall not be implemented without prior NRC approval.

h. Administrative procedures implementing the overtime guidelines of Specification 6.2.2e., including provisions for documentation of deviations.

i. PROCESS CONTROL PROGRAM implementation.

page 13(2) new

Document	Comment
B. ANSI/ANS 3.1-1978, "Standards for Selection and Training of Personnel for Nuclear Power Plants"	2. The qualification of personnel other than those in the Health Physics, Radwaste, and Chemistry Departments are in accordance with ANSI/ANS 3.1-1978. Specific commitments are shown in FSAR Chapter 13. (L.25)
	3. Personnel performing Independent Technical Review functions meet the qualification requirements of NUREG-0737-1980 instead of Section 4.7.2 of ANSI/ANS 3.1-1978.
3. Regulatory Guide 1.30, August 1972, "Quality Assurance Requirements for the Installation, Inspection and Testing of Instrumentation and Electrical Equipment" (Endorses ANSI N45.2.4-1972) Table L	1. Waterford 3 applies the provisions of this Regulatory Guide and its endorsed standard to Class 1E equipment only. A.1.c (A.5)
	2. Each safety related item of process instrumentation is identified with a unique number. This number is used in instrument maintenance records so that current calibration status, including data such as the date of the calibration and identity of the person that performed the calibration, can be readily determined. Such information may also be contained on tags or labels that may be attached to installed instrumentation. (Q-24) (L.8)

N.4 S 2.5.2

N.4 S 6.2.1 Clarification

Insert Clarification N.4 General (A.12)

Insert Clarification N.4 S 5.2 (L.20)

(Q-8)

INSERT 39-A

Clarification	Applicable discussion of change
Section C.4	L.9 and L.23
ANSI N18.7 Section 1	L.20
ANSI N18.7 Section 4.3.1	1st sentence is from QAP 4.10.2 2nd sentence L.20
ANSI N18.7 Section 4.3.2.3	from QAP Chapter 1 Section 4.10.2
ANSI N18.7 Section 4.3.4(2)	L.20
ANSI N18.7 Section 4.3.4(3)	A.13
ANSI N18.7 Section 4.3.4(4)	see QAP Chapter 1 Section 4.10.5
ANSI N18.7 Section 4.3.4(5)	see QAP Chapter 1 Section 4.10.5
ANSI N18.7 Section 4.5 (1st item)	L.23
ANSI N18.7 Section 4.5 (2nd item)	see QAP Chapter 1 Section 4.9.10.3 and QAP Chapter 18 Section 5.2
ANSI N18.7 Section 5.1	L.21
ANSI N18.7 Section 5.2.2 (2 items)	L.20
ANSI N18.7 Section 5.2.6 (1st item)	L.4
ANSI N18.7 Section 5.2.6 (2nd item)	L.4 and L.16
ANSI N18.7 Section 5.2.7.1	L.20
ANSI N18.7 Section 5.2.8	L.20
ANSI N18.7 Section 5.2.9	L.20
ANSI N18.7 Section 5.2.13.1	A.14
ANSI N18.7 Section 5.2.14	L.20
ANSI N18.7 Section 5.2.15	L.20 and L.4
ANSI N18.7 Section 5.3.9	L.20
ANSI N18.7 Section 5.3.9.3	L.20

Q-24

INSERT 41-A

Clarification	Applicable discussion of change
General	L.10
Section C.3	L.20
Section C.4	L.20
ANSI N45.2.1 Section 5	L.14

INSERT 41-B

Clarification	Applicable discussion of change
ANSI N45.2.2 Section 3.2 (1st item)	L.20
ANSI N45.2.2 Section 3.2 (2nd item)	L.33
ANSI N45.2.2 Section 3.7.1	L.20
ANSI N45.2.2 Section 3.7.2	L.20
ANSI N45.2.2 Section 4.3.4	L.17
ANSI N45.2.2 Section 5.2.1	L.20
ANSI N45.2.2 Section 5.2.2	L.20 and L.16
ANSI N45.2.2 Section 5.2.3	L.16
ANSI N45.2.2 Section 6.2.1	L.20
ANSI N45.2.2 Section 6.2.4	L.20
ANSI N45.2.2 Section 6.2.5	L.20
ANSI N45.2.2 Section 6.3.3	L.20
ANSI N45.2.2 Section 6.5	L.20
ANSI N45.2.2 Section 6.6	L.20
ANSI N45.2.2 Section 7.3	L.20
ANSI N45.2.2 App (A-3) Section A3.4.1	L.17
ANSI N45.2.2 App (A-3) Section A3.4.2	L.16
ANSI N45.2.2 App (A-3) Section A.3.5.1	L.16
ANSI N45.2.2 App (A-3) Section A.3.5.2	L.16
ANSI N45.2.2 App (A-3) Section A.3.7.1	L.17
ANSI N45.2.2 App (A-3) Section A.3.9 (1st item)	L.16
ANSI N45.2.2 App (A-3) Section A.3.9 (2nd item)	L.16
ANSI N45.2.2 App (A-3) Section A.3.9 (3rd item)	L.16
ANSI N45.2.2 App (A-3) Section A.3.9 (4th item)	L.16 and L.4

Q-28

1.0 PURPOSE

1.1 Inspections of maintenance, modification, repair, material receipt and storage activities for safety related items and activities are conducted in accordance with the B.12.a requirements contained in this chapter and applicable codes, standards, and specifications.

1.2 In accordance with the Waterford 3 Quality Assurance (QA) Program, inspections are planned and executed as required to assure conformance of an item to specified B.12.a requirements. Characteristics to be inspected and inspection methods to be employed are specified and inspection results documented. Inspections are performed by persons other than those who performed or directly supervised the work being inspected.

2.0 REFERENCES

2.1 ~~USNRC~~ Regulatory Guide 1.33, Revision 2, February 1978 (which endorses ANSI N18.7-1976, ~~"Administrative~~ Controls and Quality Assurance for the Operational Phase of Nuclear ~~Power Plants~~") A.1

2.2 USNRC Regulatory Guide 1.58, Rev. 2, ~~September~~ 1980 (which endorses ANSI N45.2.6 - 1978, "Qualifications of Inspection, ~~Examination~~, and Testing Personnel for Nuclear Power Plants")

2.3 ASME Code, Section XI, Edition and Addenda as specified in the Waterford 3 SES Inservice Inspection Plan 1

3.0 DEFINITIONS A.1

3.1 See Chapter 2 - ~~Attachment 7.4~~.

3.2 PEER/MAINTENANCE INSPECTOR - An ANSI N45.2.6 certified individual normally assigned to the line organization, but who reports to the QA Inspections unit during Q-2 the inspection activity. This individual is not directly responsible for, or supervisor of, B.12f the activity being inspected.

4.0 RESPONSIBILITIES

4.1 General Manager, Plant Operations

A.2.d.2 The General Manager, Plant Operations is responsible for:

4.1.1 The control and maintenance of ANII interfaces involving inspections related to modifications, repairs, and replacements under the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code (Code), Section XI, Section III, Division I Class 1, 2, 3, and MC components and their supports;

4.1.2 Support of the Peer Inspection program by recommending and providing personnel to be certified and to perform peer inspections; and

4.1.3 Preparing maintenance and modification work instructions which contain the required inspection holdpoints and criteria.

4.2 Director, Design Engineering

4.2.1 The Director, Design Engineering is responsible for the control and maintenance of the Waterford 3 ASME Ten Year Inservice Inspection Program. The Director, Design Engineering is also responsible for all ANII interfaces in matters related to the Inservice Inspection Program.

A.2.d.8

4.3 Director, Quality

A.2.d.1 The Director, Quality is responsible for:

4.3.1 The development and administration of the plant inspection program at Waterford 3;

RG1.58 General clarification

4.3.2 Certifying inspection personnel;

4.3.3 Reviewing all safety related work authorizations (WAs), WAs containing hold points, or WAs involving special processes, to ensure the inclusion of quality requirements, and ensuring that quality reviews are conducted for all other initiated work authorizations; and

4.3.4 Conducting or coordinating inspections of modifications and maintenance activities.

4.4 Vice President, Operations Support

A.2.d.9

4.4.1 The Vice President, Operations Support is responsible for the performance of receipt and storage inspections.

5.0 PROCEDURE

5.1 Inspection Program

5.1.1 Entergy Operations, Inc. (EOI) has three sources of inspection personnel for safety related activities at Waterford 3:

A.1

5.1.1.1 Quality Assurance personnel;

5.1.1.2 Line organization personnel (i.e. Peer/Maintenance Inspectors); or

5.1.1.3 Contract personnel.

5.1.2 Inspections shall be controlled as follows:

5.1.2.1 Inspections are performed in accordance with procedures approved by Entergy Operations, Inc.; A.3.f B.12.a L.4

5.1.2.2 Inspection results are documented, evaluated and their acceptability determined by responsible personnel in accordance with approved procedures; B.12.d B.12.e A.1.d Q-88

5.1.2.3 Inspection procedures, inspection personnel qualifications and certifications are concurred with by the Director, Quality; RG1.58 General Criteria L.4

NOTE: Stores inspection procedures, are controlled in accordance with the Materials, Purchasing and Contracts administrative procedures manual. L.4

5.1.2.4 Inspections are performed by certified individuals other than those who performed or directly supervised the activity being inspected; B.12.f Q-2

5.1.2.5 Inspection of operating activities may be conducted by second-line supervisory personnel or by other certified personnel not assigned first-line supervisory responsibility for conduct of the work; and B.12.f Q-2

5.1.2.6 Inspection activities not conducted by Quality Assurance are periodically reviewed by Quality Assurance. C.12.a

5.1.3 Inspections of operating activities or work functions associated with normal operation of the plant, routine maintenance, and certain technical support services routinely performed by the plant staff may be conducted by qualified and certified personnel selected by plant management. B.12.a L.4

5.3.3 ~~The inspector qualification program shall be reviewed and concurred with by the Director, Quality or his designee~~. The Director, Quality shall be responsible for approving the certification of inspectors.

RG1.58 RG1.58. consolidation

L.4

Q-88

5.4 ~~Inspection~~ By Sampling Methods

B.12.a

Sampling inspection ~~methods~~ may be used when tests are destructive or when quality assurance records and ~~inherent~~ characteristics of the item indicate that a reduction in items inspected or tested can be ~~achieved~~ without jeopardizing the assurance of quality. When a sampling method is used to verify acceptability, the sampling procedures shall provide justification for the sample size and selection process and shall be concurred with by the Director, Quality or his designee.

L.4

5.5 Indirect Inspection

5.5.1 When it is not possible or practical to verify conformance of processed material or products by direct inspection, indirect control may be employed by observation of processing methods, equipment, and personnel. To ensure adequate control, both direct inspection and process monitoring shall be provided when control by only one method is considered inadequate.

B.12.a

L.4

5.5.2 A combination of inspection and process monitoring methods, when used, shall be performed in a systematic manner to assure that the specified requirements for control of the process and quality of the item are being achieved throughout the duration of the process.

5.5.3 Controls, where required, shall be established and documented for the coordination and sequencing of these activities at established inspection points during successive stages of the process or construction.

5.6 Receiving Inspection

B.12.a

~~Receiving inspection~~ of purchased items and materials shall be performed by qualified and certified personnel in accordance with ~~written procedures~~/ instructions/checklists.

L.4

5.7 Identification of Hold Points

B.12.a

B.12.e

5.7.1 ~~Work plans, procedures, and instructions for maintenance, modification or test of~~ safety related structures, systems or components shall be reviewed to verify inclusion of inspection requirements, criteria, and hold points. Work in process shall not proceed past the identified hold points without satisfaction of inspection requirements.

L.4

5.1.3 In addition to the above, audits shall be conducted of other activities defined as a special scope quality assurance related activity in this manual. (A1)

5.2 SAFETY REVIEW COMMITTEE (SRC) AUDIT PROGRAM

5.2.1 The following audits of unit activities shall be performed under the cognizance of the SRC. These audits shall encompass: (NRC 754.5 clarification) Insert QAPM C.2.a.1 (L.23)

5.2.1.1 The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per ~~12~~ 24 months. (C.2.a.2.a) (L.9)

5.2.1.2 The performance, training, and qualifications of the entire unit staff at least once per ~~12~~ 24 months. (C.2.a.2.b)

5.2.1.3 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 ~~6~~ 24 months. (C.2.a.2.c)

5.2.1.4 The performance of activities required by the Operational Quality Assurance Program to meet the criteria of Appendix B, 10 CFR Part 50, at least once per 24 months. (C.2.a.2.d)

5.2.1.5 Any other area of unit operation considered appropriate by the SRC or the Vice President Operations. (A.5)

5.2.1.6 The fire protection programmatic controls including the implementing procedures at least once per 24 months by qualified licensee QA personnel (C.2.a.2.h) (Q-105)

5.2.1.7 The fire protection equipment and program implementation at least once per 12 months utilizing either a qualified offsite licensee fire protection engineer or an outside independent fire protection consultant. An outside independent fire protection consultant shall be used at least every third year. (C.2.a.2.g, C.2.a.2.i)

5.2.1.8 The Primary Coolant Sources Outside Containment Program at least once per 24 months. (C.2.a.2.g)

5.2.1.9 The In-Plant Radiation Monitoring Program at least once per 24 months.

5.2.1.10 The Secondary Water Chemistry Program at least once per 24 months.