

*FirstEnergy Nuclear Operating Company*

**FENOC**

**QUALITY ASSURANCE PROGRAM MANUAL**

FirstEnergy Nuclear Operating Company  
NUCLEAR QUALITY ASSURANCE PROGRAM POLICY

It is the policy of the FirstEnergy Nuclear Operating Company (FENOC) to operate the Davis-Besse Nuclear Power Station and the Perry Nuclear Power Plant to assure the highest degree of functional integrity and reliability of those systems, components, structures and processes that are essential to the prevention of nuclear incidents, the mitigation of the consequences of such incidents, and the protection of the health and safety of the public and company employees.

This policy has been incorporated through the development and implementation of the FENOC Quality Assurance Program Manual, satisfying the requirements of the Code of Federal Regulations – Title 10 Part 50, Appendix B, applicable NRC Regulatory Guides and ANSI Standards, and applicable sections of the ASME Boiler and Pressure Vessel Code. This FENOC Quality Assurance Program Manual defines specific individual and organizational responsibility and authority, describes procedures for compliance with regulatory requirements and establishes appropriate guidelines for implementation of these procedures. The FENOC Quality Assurance Program Manual is incorporated by reference into each plant's Updated Final Safety Analysis Report as the Operational Quality Assurance Program Description.

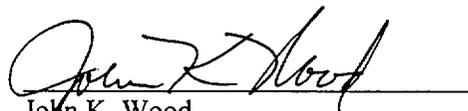
Proposed changes to the FENOC Quality Assurance Program Manual are evaluated by each facility in accordance with 10CFR50.54 to ensure that the program will continue to satisfy 10CFR50, Appendix B, and to determine the need for regulatory approval prior to implementation. Because the program requirements are applicable to both sites, such changes shall be coordinated to satisfy facility-specific administrative procedures governing the modification of the Updated Final Safety Analysis Reports and shall be implemented simultaneously at both sites. Such changes are to be endorsed by the Vice Presidents, Nuclear, and approved by the President, FENOC.

It is the responsibility of all company and contractor employees to implement the contents of this Nuclear Quality Assurance Program rigorously in the execution of their duties. Any employee who believes that the Nuclear Quality Assurance Program is not being followed has the right, and indeed the obligation, to inform management of such deviations, including the right of direct appeal to the President, FENOC.

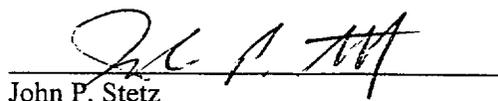
With the endorsement of the Vice Presidents, Nuclear, the FENOC Quality Assurance Program is approved as the governing quality assurance program description at the Davis-Besse Nuclear Power Station and the Perry Nuclear Power Plant, effective January 10, 2000.

Endorsed:

  
Guy G. Campbell  
Vice President, Nuclear – Davis-Besse

  
John K. Wood  
Vice President, Nuclear – Perry

Approved:

  
John P. Stetz  
President, FirstEnergy Nuclear Operating Company

*FirstEnergy Nuclear Operating Company*

# **FENOC**

## **QUALITY ASSURANCE PROGRAM MANUAL**

**Davis-Besse Nuclear Power Station**

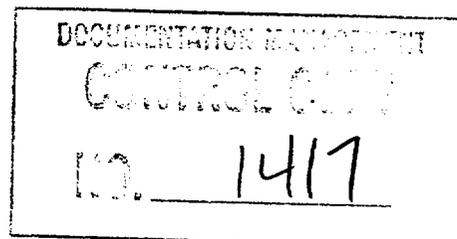
Docket No. 50-346

Operating License No. NPF-3

**Perry Nuclear Power Plant**

Docket No. 50-440

Operating License No. NPF-58



**QUALITY ASSURANCE PROGRAM MANUAL****TABLE OF CONTENTS**

<b><u>SECTION</u></b>		<b><u>PAGE</u></b>
Table of Contents		i – iv
<b>A. MANAGEMENT</b>		
1. Methodology		1
2. Organization		1
3. Responsibility		3
4. Authority		3
5. Personnel Training and Qualification		4
6. Corrective Action		4
7. Regulatory Commitments		5
<b>B. PERFORMANCE/VERIFICATION</b>		
1. Methodology		5
2. Design Control		6
3. Design Verification		7
4. Procurement Control		8
5. Procurement Verification		9
6. Identification and Control of Items		9
7. Handling, Storage, and Shipping		9
8. Test Control		10
9. Measuring and Test Equipment Control		10
10. Inspection, Test, and Operating Status		11
11. Special Process Control		12
12. Inspection		12
13. Corrective Action		13
14. Document Control		13
15. Records		14
<b>C. ASSESSMENT</b>		
1. Methodology		14
2. Audit		15
<b>D. INDEPENDENT SAFETY REVIEW</b>		
1. Description		16

**QUALITY ASSURANCE PROGRAM MANUAL****TABLE OF CONTENTS**

<b><u>SECTION</u></b>		<b><u>PAGE</u></b>
<b>Table 1 – Regulatory Commitments</b>		
A.	<b>Regulatory Guide 1.8 (Revision 1) [September 1975], <i>Personnel Selection and Training</i></b>	17
B.	<b>Regulatory Guide 1.26 (Revision 3-R) [March 1976], <i>Quality Group Classification and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants</i></b>	17
C.	<b>Regulatory Guide 1.28 (Revision 2) [February 1979], <i>Quality Assurance Program Requirements (Design and Construction)</i></b>	17
D.	<b>Regulatory Guide 1.29, <i>Seismic Design Classification</i></b>	17
E.	<b>Regulatory Guide 1.30 (Revision 0) [August 1972], <i>Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment</i></b>	18
F.	<b>Regulatory Guide 1.33 (Revision 2) [February 1978], <i>Quality Assurance Program Requirements (Operations)</i></b>	19
G.	<b>Regulatory Guide 1.37 (Revision 0) [March 1973], <i>Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants</i></b>	21
H.	<b>Regulatory Guide 1.38 (Revision 2) [May 1977], <i>Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants</i></b>	22
I.	<b>Regulatory Guide 1.39 (Revision 2) [September 1977], <i>Housekeeping Requirements for Water-Cooled Nuclear Power Plants</i></b>	23

**QUALITY ASSURANCE PROGRAM MANUAL****TABLE OF CONTENTS**

<b><u>SECTION</u></b>		<b><u>PAGE</u></b>
<b>Table 1 – Regulatory Commitments (Continued)</b>		
J.	<b>Regulatory Guide 1.54 (Revision 0) [June 1973], <i>Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants</i></b>	23
K.	<b>Regulatory Guide 1.55 (Revision 0) [June 1973], <i>Concrete Placement in Category 1 Structures</i></b>	24
L.	<b>Regulatory Guide 1.58 (Revision 1) [September 1980], <i>Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel</i></b>	24
M.	<b>Regulatory Guide 1.64 (Revision 2) [June 1976], <i>Quality Assurance Requirements for the Design of Nuclear Power Plants</i></b>	25
N.	<b>Regulatory Guide 1.74 (Revision 0) [February 1974], <i>Quality Assurance Terms and Definitions</i></b>	26
O.	<b>Regulatory Guide 1.88 (Revision 2) [October 1976], <i>Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records</i></b>	26
P.	<b>Regulatory Guide 1.94 (Revision 1) [April 1976], <i>Quality Assurance Requirements for Installation, Inspection and Testing of Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants</i></b>	28
Q.	<b>Regulatory Guide 1.116 (Revision 0) [May 1977], <i>Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems</i></b>	29
R.	<b>Regulatory Guide 1.123 (Revision 1) [July 1977], <i>Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants</i></b>	30

**QUALITY ASSURANCE PROGRAM MANUAL**

---

TABLE OF CONTENTS

<u>SECTION</u>		<u>PAGE</u>
Table 1 – Regulatory Commitments (Continued)		
S.	Regulatory Guide 1.144 (Revision 1) [September 1980], <i>Auditing of Quality Assurance Programs for Nuclear Power Plants</i>	30
T.	Regulatory Guide 1.146 (Revision 0) [August 1980], <i>Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants</i>	31
U.	Regulatory Guide 4.15 (Revision 1) [February 1979], <i>Quality Assurance for Radiological Monitoring Programs (Normal Operations) - Effluent Streams and the Environment</i>	31
V.	Regulatory Guide 1.78 [June 1974], <i>Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release</i>	31

**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 FirstEnergy Nuclear Operating Company's (FENOC'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 are promptly communicated when identified.
- c. The QAPM applies to all activities associated with structures, systems, and components which are safety related or controlled by 10CFR72. The requirements of the QAPM are applied to these items and activities to an extent commensurate with their 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 10CFR50 Appendix B and 10CFR72 Subpart G.
- d. The QAPM is implemented through the use of approved procedures (i.e., policies, directives, procedures, 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. The chief executive officer is responsible for providing top level direction of all activities associated with the safe and reliable operation of FENOC's nuclear sites. The chief executive officer provides guidance with regards to company quality assurance policy.
  1. The individual responsible for operations support reports to the chief executive officer and is responsible for establishing the policies, goals, and objectives and the implementation of the quality assurance program of FENOC's corporate activities and maintaining this QAPM in accordance with regulatory requirements.

## QUALITY ASSURANCE PROGRAM MANUAL

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- b. The executive responsible for overall plant nuclear safety, operations support, and engineering at each site reports to the chief executive officer. This executive is responsible for establishing and maintaining policies, goals, and objectives of this QAPM at the respective site and overseeing activities of the off-site safety review committee.
- c. The individuals fulfilling the following management functions report to the executive identified in Paragraph 2.b 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 individual 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 individual responsible for quality assurance has the authority and responsibility to escalate matters directly to the chief executive officer when needed.
  - 2. The individual responsible for plant operations assures the safe, reliable, and efficient operation of the plant within the constraints of applicable regulatory requirements and the operating license.
  - 3. The individual responsible for plant modification provides direction, control, and overall supervision of the implementation of plant modifications and assigned maintenance.
  - 4. The individual responsible for training provides direction, control, and overall supervision of all training of personnel required by regulations.
  - 5. The individual responsible for records management provides direction, control, and overall supervision of the records management program and associated activities.
  - 6. The individual responsible for document control provides direction, control, and overall supervision of the document control program and associated activities.
  - 7. The individual responsible for the corrective action program provides direction, control, and overall supervision of the corrective action program and associated activities.
  - 8. The individual responsible for engineering is responsible for the development and maintenance of engineering programs, policies, and procedures and for providing engineering services.

## QUALITY ASSURANCE PROGRAM MANUAL

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9. The individual responsible for materials, purchasing, and contracts is responsible for supplier evaluations, source verifications, procurement services, receipt, storage, and issue of materials, parts, and components.
- d. 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. FENOC has the responsibility for the scope and implementation of an effective quality assurance program.
- b. FENOC 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 continually assessed by the individual(s) responsible for quality assurance and the associated executive for overall plant nuclear safety, and is reported to the chief executive officer.
- d. FENOC 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 FENOC or by others.
- e. Responsible individuals are to ensure that personnel working under their management cognizance are provided the necessary training and resources to accomplish their assigned tasks within the scope of the 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.

### 4. Authority

- a. When FENOC delegates responsibility for planning, establishing, or implementing any part of the overall QA program, sufficient authority to accomplish the assigned responsibilities is delegated.
- b. The individual responsible for quality assurance has the responsibility and the authority to stop unsatisfactory work (except reactor operation) and control further processing, delivery, installation, or use of non-conforming items or services. Cost and schedule considerations will not override safety considerations.

**5. Personnel Training and Qualification**

- a. Personnel assigned to implement elements of the 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).

**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, significance evaluation, and correction of conditions adverse to quality. For significant conditions adverse to quality, the cause is determined and corrective action to preclude repetition is identified and tracked until it is completed and verified.
- c. Specific responsibilities within the corrective action program may be delegated, but FENOC 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 Section B.13 and the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33 and 1.144).

**7. Regulatory Commitments**

- a. Except where alternatives are identified, FENOC complies with the QA guidance documents listed on Table 1. If the guidance in any 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.
  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 10CFR72.
- b. The NRC is to be notified of QAPM changes in accordance with 10 CFR 50.54(a).

**B. PERFORMANCE/VERIFICATION****1. Methodology**

- a. Personnel performing work activities such as design, engineering, procurement, manufacturing, construction, installation, startup, maintenance, modification, operation, and decommissioning are responsible for achieving acceptable quality.
- b. Personnel performing verification activities are responsible for verifying the achievement of acceptable quality.
- c. Work is accomplished and verified using instructions, procedures, or other appropriate means that are of a detail commensurate with the activity's complexity and importance to safety.

- d. Criteria that define acceptable quality are specified, and quality is verified against these criteria.
- e. Computer programs used in safety related design analyses or operational activities are controlled through administrative procedures.

**2. Design Control**

- a. The design control program is established and implemented to assure that the activities associated with the design of systems, components, structures, and equipment and modifications thereto, are executed in a planned, controlled, and orderly manner.
- b. The program includes provisions to control design inputs, processes, outputs, changes, interfaces, records, and organizational interfaces.
- c. Design inputs (e.g., performance, regulatory, quality, and quality verification requirements) are to be correctly translated into design outputs (e.g., specifications, drawings, procedures, and instructions).
- d. The final design output is to relate to the design input in sufficient detail to permit verification.
- e. The design process is to ensure that items and activities are selected and independently verified consistent with their importance to safety to ensure they are suitable for their intended application.
- f. Changes to final designs (including field changes and modifications) and dispositions of non-conforming items to either use-as-is or repair are to be subjected to design control measures commensurate with those applied to the original design and approved by the organization that performed the original design or a qualified designee.
- g. Interface controls (internal and external between participating design organizations and across technical disciplines) for the purpose of developing, reviewing, approving, releasing, distributing, and revising design inputs and outputs are defined in procedures.
- h. Design documentation and records, which provide evidence 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. Verification methods include, but are not limited to, design reviews, alternative calculations, and qualification testing. The extent of this verification will be a function of the importance to safety of the item, the complexity of the design, the degree of standardization, the state of the art, and the similarity with previously proven designs. Standardized or previously proven designs will be reviewed for applicability prior to use.
- c. When a test program is used to verify the acceptability of a specific design feature, the test program is to demonstrate acceptable performance under conditions that simulate the most adverse design conditions that are expected to be encountered.
- d. Independent design verification is to be completed before design outputs are used by other organizations for design work and before they are used to support other activities such as procurement, manufacture, or construction. When this timing cannot be achieved, the unverified portion of the design is to be identified and controlled. In all cases, the design verification is to be completed before relying on the item to perform its function.
- e. Individuals or groups responsible for design reviews or other verification activities shall be identified in procedures and their authority and responsibility shall be defined and controlled. Design verification shall be performed by any competent individuals or groups other than those who performed the original design but who may be from the same organization. The designer's immediate supervisor may perform the design verification provided: the supervisor is the only technically qualified individual capable of performing the verification, the need is individually documented and approved in advance by the supervisor's management, and the frequency and effectiveness of the supervisors use as a design verifier are independently verified to guard against abuse.
- f. Design verification procedures are to be established and implemented to ensure that an appropriate verification method is used, the appropriate design parameters to be verified are chosen, the acceptance criteria are identified, the verification is satisfactorily accomplished, and the results are properly recorded.

- g. 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 10CFR21) are invoked for procurement of items and services.
- f. The program includes provisions for ensuring that documented evidence of an item's conformance to procurement requirements is available at the site before the item is placed in service or used unless otherwise specified in procedures.
- g. The program includes provisions for ensuring that procurement, inspection, and test requirements have been satisfied before an item is placed in service or used unless otherwise specified in procedures.
- h. The procurement of components, including spare and replacement parts, is subject to quality and technical requirements suitable for their intended service.
- i. Appropriate controls for the selection, determination of suitability for intended use (critical characteristics), evaluation, receipt, and quality evaluation of commercial grade items are to be imposed to ensure that the items will perform satisfactorily in service.
- j. Additional details concerning procurement control may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33 and 1.123).

**5. Procurement Verification**

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

**7. Handling, Storage, and Shipping**

- a. A program is established and implemented to control the handling, storage, shipping, cleaning, and preserving of items to ensure the items maintain acceptable quality.
- b. Special protective measures (e.g., containers, shock absorbers, accelerometers, inert gas atmospheres, specific moisture content levels, and temperature levels) are specified and provided when required to maintain acceptable quality.
- c. Specific procedures are developed and used for cleaning, handling, storage, packaging, shipping, and preserving items when required to maintain acceptable quality.
- d. Items are marked and labeled during packaging, shipping, handling, and storage to identify, maintain, and preserve the items' integrity and indicate the need for special controls.

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

**8. Test Control**

- a. A test control program is established and implemented to demonstrate that items will perform satisfactorily in service.
- b. Criteria are defined that specify when testing is required.
- c. The test control program includes, as appropriate, proof tests before installation, pre-operational tests, post-maintenance tests, post-modification tests, and operational tests.
- d. Test procedures are developed that include:
  - 1. instructions and prerequisites to perform the test,
  - 2. use of proper test equipment,
  - 3. acceptance criteria, and
  - 4. mandatory inspections as required.
- e. Test results are evaluated to assure that test objectives and inspection requirements have been satisfied.
- f. Unacceptable test results shall be evaluated.
- g. Additional details concerning test control may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guide 1.33).

**9. Measuring and Test Equipment Control**

- a. A program is established and implemented to control the calibration, maintenance, and use of measuring and test equipment. 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.
- 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 and brazing,
  - 2. heat treating,
  - 3. protective coatings,
  - 4. NDE (Non- Destructive Examination),
  - 5. chemical cleaning, and
  - 6. leak sealant of nuclear piping systems.
- c. Special processes are accomplished by qualified personnel, using appropriate equipment, and procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.
- d. Additional details concerning special process control may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guide 1.33).

**12. Inspection**

- a. A program is established and implemented for inspections of activities in order to verify conformance to the documented instructions, procedures and drawings for accomplishing the activity. The inspection program may be implemented by or for the organization performing the activity to be inspected. Inspections are performed by qualified personnel other than those who performed or directly supervised the work being inspected.
- b. Provisions to ensure inspection planning is properly accomplished are to be established. Planning activities are to identify the characteristics and activities to be inspected, the inspection techniques, 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 individual responsible for quality assurance or an individual responsible for materials, purchasing, and contracts as appropriate.
- g. Additional details concerning inspections may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33 and 1.58).

**13. Corrective Action**

- a. Procedures shall provide for identification, evaluation, and resolution of conditions adverse to quality.
- b. Reworked, repaired, and replacement items are to be inspected and tested in accordance with the original inspection and test requirements or specified alternatives.
- c. Additional details concerning corrective action activities may be found in Section A.6 and the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33 and 1.144).

**14. Document Control**

- a. A program is established and implemented to control the development, review, approval, issue, use, and revision of documents.
- b. At a minimum, the following documents are included in the document control program:
  - 1. Safety Analysis Report,
  - 2. design documents,
  - 3. procurement documents,
  - 4. Technical Specifications,
  - 5. procedures and manuals,

6. corrective action documents,
  7. Dry Spent Fuel Storage Certificate of Compliance and Site Certified Safety Analysis Report, and
  8. other documents as defined in procedures.
- c. Revisions of controlled documents are reviewed for adequacy and approved for release by the same organization that originally reviewed and approved the documents or by a designated organization that is qualified and knowledgeable.
  - d. Controlled documents are available to and used by the person performing the activity.
  - e. The distribution of new and revised controlled documents is in accordance with procedures. Superseded documents are controlled to prevent inadvertent use.
  - f. Additional details concerning document control may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory 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, preoperation, 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. ASSESSMENT**

**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 procedures, or other appropriate means that are of a detail commensurate with the activity's complexity and importance to safety.

## 2. Audit

- 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. Audits will be conducted as required by the applicable Code of Federal Regulations, Technical Specifications, safety analysis reports, and commitments by various correspondence to the NRC.
  - 1. Audit schedules assure that the following areas are audited at the indicated frequencies, or more frequently as performance dictates.
    - a. The conformance of unit operation to provisions contained within the Technical Specifications and applicable license conditions at least once per 24 months.
    - b. The performance, training and qualification of the station staff at least once per 24 months.
    - c. The results of actions taken to correct deficiencies occurring in unit equipment, structures, systems or method of operation that affect nuclear safety at least once per 24 months.
    - d. The performance of activities required by the QAPM to meet the requirements of 10CFR50, Appendix B at least once per 24 months.
    - e. The fire protection program controls and implementing procedures at least once per 24 months.
    - f. The fire protection equipment and program implementation at least once per 12 months utilizing either qualified licensee personnel or an outside fire protection consultant.
    - g. The fire protection equipment and program implementation at least once per 36 months utilizing a qualified outside fire protection consultant.
    - h. The Radiological Environmental Monitoring Program (REMP) and radiological effluents monitoring activities and implementing procedures at least once per 24 months.
    - i. The Offsite Dose Calculation Manual and implementing procedures at least once per 24 months.
    - j. The Process Control Program and implementing procedures for processing and packaging of radioactive wastes at least once per 24 months.

- k. Any other area of facility operation considered appropriate by the offsite review committee or the site executive responsible for overall plant nuclear safety, operations support, and engineering.
- 2. Audits shall provide an objective evaluation of quality related practices, procedures, instructions, activities, and items and a review of documents and records, as applicable.
- 3. 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.
- 4. Scheduling and resource allocation are based on the status and safety importance of the activity or process being assessed.
- 5. Scheduling is dynamic and resources are supplemented when the effectiveness of the quality assurance program is in doubt.
- 6. Audit reports are written and distributed to the appropriate levels of management for review. Follow-up action, including reaudit of deficient areas, is initiated as deemed appropriate.
- 7. Implementation of delegated portions of the quality assurance program is assessed.
- 8. Audits are conducted using predetermined acceptance criteria.
- 9. 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**

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

**A. Regulatory Guide 1.8 (Revision 1) [September 1975], *Personnel Selection and Training***

1. FENOC commits to the regulatory position of this Guide with the following clarifications:
  - a. Regulatory Guide 1.8 states “The RPM should have a bachelor’s degree or the equivalent in a science or engineering subject including some formal training in radiation protection and at least 5 years of professional experience in applied radiation protection.” It is FENOC’s position that equivalent as used in this Regulatory Guide for the bachelor’s degree means (a) four years of post secondary schooling in science or engineering, or (b) four years of applied experience at a nuclear facility in the area for which qualification is sought, or (c) four years of operational or technical experience or training in nuclear power, or (d) any combination of the above totaling four years. The years of experience used to meet the education requirements as allowed by this exception shall not be used to also meet the experience requirements.
  - b. Other modifications to the regulatory position of this Guide are as specified in the site’s Technical Specifications and USARs.
2. FENOC commits to the requirements of ANSI N18.1-1971 as modified by the site’s Technical Specifications and USARs.

**B. Regulatory Guide 1.26 (Revision 3-R) [March 1976], *Quality Group Classification, and Standards for Water-, Steam-, and Radioactive-Waste-Containing Components of Nuclear Power Plants***

1. FENOC commits to the regulatory position of this Guide as described in each plant’s USARs.

**C. Regulatory Guide 1.28 (Revision 2) [February 1979], *Quality Assurance Program Requirements (Design and Construction)***

1. FENOC commits to the regulatory position of this Guide.
2. FENOC commits to the requirements of ANSI N45.2-1977.

**D. Regulatory Guide 1.29, *Seismic Design Classification***

1. FENOC commits to the regulatory position of this Guide as described in each plant’s USARs.

- E. **Regulatory Guide 1.30 (Revision 0) [August 1972], *Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment***
1. FENOC commits to the regulatory position of this Guide for activities that are comparable in nature and extent to construction phase activities.
  2. FENOC commits to the requirements of ANSI N45.2.4-1972 for activities that are comparable in nature and extent to construction phase activities with the following clarifications:
    - a. Section 1.1 specifies equipment to which this Standard applies. In lieu of this, requirements of this Standard shall apply to those systems and components listed in the Davis-Besse Q-List or Perry USAR Table 3.2-1. This Standard is also applied to other systems and components when required by approved procedures, engineering specifications, or other work controlling documents.
    - b. Section 2.2 requires that evidence of compliance by the manufacturer with purchase requirements, including quality assurance requirements, be available at the site prior to applying the requirements of ANSI N45.2.4. In lieu of this requirement, installation, inspection, and testing activities of equipment lacking its quality documentation may proceed provided that this equipment has been identified and released in accordance with non-conforming material procedures and that all required quality documentation has been received and accepted prior to the item being placed in service.
    - c. Section 3 requires that records of protective measures maintained during storage for conformance to storage requirements be checked to verify that items are in satisfactory condition for installation. This check shall be made only if equipment requires special storage or handling as specified in procurement documents.
    - d. Sections 5.2 and 6.2 list the tests which are to be conducted during construction and post-construction activities. In lieu of these tests, FENOC shall conduct only those tests necessary to verify that work activities specified by work controlling documents have been satisfactorily accomplished during maintenance or modification activities. The requirements of Sections 5.2 and 6.2 of ANSI N45.2 shall be used as guidelines in determining these testing requirements.
    - e. Section 6.2.1 states in part that "Items requiring calibration shall be tagged or labeled on completion indicating date of calibration and identity of person that performed the calibration." In lieu of this requirement, FENOC may alternatively implement programs that require the equipment to be suitably marked to indicate the date of the next calibration and the identity of the person that performed the calibration.

**Table 1**  
**Regulatory Commitments**  
Revision 0

**F. Regulatory Guide 1.33 (Revision 2) [February 1978], *Quality Assurance Program Requirements (Operations)***

1. FENOC commits to the regulatory position of this Guide with the following clarifications:
  - a. ANSI N18.7/ANS 3.2-1976 is referenced in this Guide. In lieu of this Standard, ANSI/ANS 3.2-1982 will be applied by FENOC with the clarifications listed below.
  - b. Davis-Besse only commits to Appendix A of this Guide.
2. FENOC commits to the requirements of ANSI/ANS 3.2-1982 with the following clarifications:
  - a. Section 1.1 requires that this Standard be “applied to all activities affecting those functions important to the safety of nuclear power plant structures, systems, and components.” FENOC shall apply the requirements of this Standard to those structures, systems, and components defined by the Davis-Besse USAR Section 3.2 or the Perry USAR Table 3.2-1.
  - b. Section 1.2 states in part that “the administrative controls and quality assurance provisions of this Standard shall be applied to other important plant equipment at a level commensurate with the importance of the equipment to reliable and efficient plant operation.” In lieu of this requirement, the requirements of this Standard shall apply to items as discussed in F.2.a. The requirements of this Standard are also applied in a graded manner to other items included within the scope of the FENOC Quality Assurance Program (e.g., fire protection equipment). The quality assurance program is applied to these items and to those activities that can affect their quality or safe operation.
  - c. Section 2.2 – In lieu of the definition of “inspection” in this Standard, FENOC commits to the definition of inspection as delineated in ANSI N45.2.10-1973.
  - d. Section 3.4.3 requires that personnel qualified in the technical areas indicated be capable of responding within two hours for the purpose of providing technical advise to the Shift Supervisor on a 24 hour-a-day basis. In lieu of the specified two hour response time, the response times delineated in the site’s Emergency Plans shall be utilized.
  - e. Section 5.1 states in part that “a summary document should be compiled by each owner organization to identify the sources, to index such sources to the requirements of this Standard, and to provide a consolidated base for the description of the program.” In lieu of this requirement, a method of cross-referencing these requirements to the implementing procedures will be maintained.

**Table 1**  
**Regulatory Commitments**  
Revision 0

- f. Section 5.2.1.6 – In lieu of the requirements which limit the scheduled work time of the Davis-Besse required shift compliment of licensed operators, senior operators and the shift technical advisor, and the members of the Perry unit operating staff performing safety related activities, FENOC commits to the requirements as delineated in the site’s Technical Specifications.
- g. Section 5.2.2 requires that “temporary changes which clearly do not change the intent of the approved procedure shall, as a minimum, be approved by two members of the plant staff knowledgeable in the areas affected by the procedure. At least one of these shall be a member of plant supervision. For changes to procedures which may affect the operational status of plant systems or equipment, the changes shall be approved by two members of plant supervision, at least one of whom holds a senior reactor operating license on the unit affected.” In lieu of these requirements, FENOC commits to the requirements as delineated in the site’s USAR or Technical Specifications.
- h. Section 5.2.6 requires that a log be maintained to identify the current status of temporary modifications such as bypass lines, electrical jumpers, lifted electrical leads, and temporary trip point settings. FENOC takes exception to this requirement when the installation and removal of such temporary modifications is specifically addressed in approved procedures. These procedures ensure that the circuitry is returned to its original configuration when the operation is completed.
- i. Section 5.2.7 – Since certain emergency situations could arise which might prevent preplanning activities, FENOC complies with an alternative to the first sentence in the second paragraph as follows: “Except under emergency or abnormal operating conditions where immediate actions are required to protect the health and safety of the public, to protect equipment or personnel, or to prevent the deterioration of plant conditions to a possibly unsafe or unstable level, maintenance or modification of equipment shall be preplanned and performed in accordance with approved procedures. When written procedures would be required and are not used, the activities that are accomplished are documented after-the-fact and receive the same degree of reviews as if they had been preplanned.”
- j. Section 5.2.15 requires that “Plant procedures shall be reviewed by an individual knowledgeable in the area affected by the procedure no less frequently than every two years to determine if changes are necessary or desirable. This requirement for routine follow-up review can be accomplished in several ways, including (but not necessarily limited to): documented step-by-step use of the procedure (such as occurs when the procedure has a step-by-step check-off associated with it) or detailed scrutiny of the procedure as part of a documented training program, drill, simulator exercise, or other such activity. A revision of a procedure constitutes a procedure review.” In lieu of these requirements, 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.

**G. Regulatory Guide 1.37 (Revision 0) [March 1973], *Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants***

1. FENOC commits to the regulatory position of this Guide with the following clarifications:
  - a. For operations, Regulatory Guide 1.37 will be applied to activities comparable in nature and extent to construction activities.
  - b. Regulatory Position C.3 requires that the water quality for final flushes of fluid systems and associated components be at least equivalent to the quality required for normal operation. This requirement is not applied to dissolved oxygen or nitrogen nor does it infer that additives normally in the system water shall be added to the flush water.
  - c. Regulatory Position C.4 requires that chemical components that could contribute to intergranular cracking or stress corrosion cracking should not be used with austenitic stainless steel and nickel-based alloys. It is FENOC's position that materials such as inks, temperature indicating crayons, labels, wrapping materials (other than polyethylene), water soluble materials, desiccants, lubricants, and NDE penetrant materials and couplants, which contact stainless steel or nickel-based alloy material surfaces contain no more than trace amounts of lead, zinc, copper, or lower melting alloys or compounds. Maximum allowable levels of water leachable chloride ions, total halogens and sulfur compounds shall be defined and imposed on the aforementioned materials. These materials will be controlled through administrative procedures which are, in part, designed to minimize their effects on intergranular cracking or stress corrosion cracking.
2. FENOC commits to the requirements of ANSI N45.2.1-1973 with the following clarifications:
  - a. During maintenance and modification activities, FENOC shall control the opening of clean systems and shall conduct inspections to verify that affected system cleanliness levels shall not be adversely affected by the maintenance or modification activity. When system cleanliness is affected, specific cleaning procedures which incorporate the applicable portions of this Standard shall be developed and implemented to maintain system cleanliness.
  - b. Section 2.4 requires that personnel who perform inspection, examination or testing activities required by this Standard be qualified in accordance with ANSI N45.2.6. In

**Table 1**  
**Regulatory Commitments**  
Revision 0

lieu of this, personnel who perform cleanliness inspections may alternatively be qualified in accordance with Regulatory Guide 1.8.

**H. Regulatory Guide 1.38 (Revision 2) [May 1977], *Quality Assurance Requirements for Packaging, Shipping, Receiving, Storage, and Handling of Items for Water-Cooled Nuclear Power Plants***

1. FENOC commits to the regulatory position of this Guide for activities comparable in nature and extent to construction phase activities
2. FENOC commits to the requirements of ANSI N45.2.2-1978 with the following clarifications:
  - a. Sections 3 and 4 specify a four level classification system for the packaging and shipping of items. In lieu of these requirements, commercial grade items shall be packaged and shipped in accordance with standard commercial practices.
  - b. Section 5.2.1 requires preliminary visual inspection or examination for shipping damage to be performed prior to unloading. In lieu of this requirement, visual inspection shall be performed during unloading and unpacking.
  - c. Section 5.5 provides for "rework" and "use-as-is" dispositions for nonconforming items. As an alternative, the "repair" disposition (as defined by ANSI N45.2.10-1973) shall also be used.
  - d. Section 6.5 requires that items released from storage and placed in their final locations within the power plant be inspected and cared for in accordance with the requirements of Section 6 of this Standard and other applicable Standards. In lieu of this requirement, FENOC shall, whenever feasible, store items within their appropriate storage area and move the equipment to the plant areas for staging only in sufficient time to support its installation. Within the plant, the equipment shall be staged at locations which provide equivalent environmental conditions under which it is designed to operate. Materials placed in staging areas shall be stored in accordance with the applicable requirements of Paragraphs 6.1, 6.3 and 6.4.2 of ANSI N45.2.2.
  - e. Various Sections of ANSI N45.2.2 address the use of non-halogenated materials when in contact with austenitic stainless steel or nickel-based alloys. The exceptions applicable to Regulatory Guide 1.37 regarding this subject also apply to ANSI N45.2.2.
  - f. Section A.3.4.2 addresses inert gas blankets. There may be cases involving large or complex shapes for which an inert or dry air purge flow is provided rather than static gas blankets in order to provide adequate protection due to difficulty of providing a

**Table 1**  
**Regulatory Commitments**  
Revision 0

leak-proof barrier. In these cases, a positive pressure purge flow may be used as an alternative to a leak-proof barrier.

**I. Regulatory Guide 1.39 (Revision 2) [September 1977], *Housekeeping Requirements for Water-Cooled Nuclear Power Plants***

1. FENOC commits to the regulatory position of this Guide.
2. FENOC commits to the requirements of ANSI N45.2.3-1973.

**J. Regulatory Guide 1.54 (Revision 0) [June 1973], *Quality Assurance Requirements for Protective Coatings Applied to Water-Cooled Nuclear Power Plants***

1. FENOC commits to the regulatory position of this Guide with the following clarifications:
  - a. This Regulatory Guide and its associated ANSI Standard implies that a significant amount of coating work is required at the plant site. Although this is correct for construction sites, the coating work at an operating site generally consists of repair and touchup work following maintenance and repair activities or the initial coating of components such as hangers, supports, and piping during facility modifications. Therefore, in lieu of the full requirements of this Regulatory Guide and ANSI N101.4, FENOC shall impose the following requirements:
    - 1) The quality assurance requirements of Section 3 of ANSI N101.4 applicable to the coating manufacturer shall be imposed on the coating manufacturer through the procurement process.
    - 2) Coating application procedures shall be developed based on the manufacturer's recommendations for application of the selected coating systems.
    - 3) Coating applicators shall be qualified to demonstrate their ability to satisfactorily apply the coatings in accordance with the manufacturer's recommendations.
    - 4) Quality control personnel shall perform inspections to verify conformance of the coating application procedures. Section 6 of ANSI N101.4 shall be used as guidelines in the establishment of the inspection program.
    - 5) Quality control personnel shall be qualified to the requirements of Regulatory Guide 1.58 (Revision 1).
    - 6) Documentation demonstrating conformance to the above requirements shall be maintained.

- b. The requirements of Position A of this Guide apply to surfaces within containment with the following exceptions:
    - 1) Surfaces to be insulated.
    - 2) Surfaces contained within a cabinet or enclosure.
    - 3) Repair/touchup areas less than 30 square inches or surface areas such as: cut ends; bolt heads, nuts and miscellaneous fasteners; and damage resulting from spot, tack or arc welding.
    - 4) Small items such as small motors, handwheels, electrical cabinets, control panels, loud speakers, motor operators, etc. where special painting requirements would be impracticable.
    - 5) Stainless steel or galvanized surfaces.
    - 6) Banding used for insulated pipe.
  - 2. FENOC commits to the requirements of ANSI N101.4-1972 for activities comparable in nature and extent to construction phase activities as modified by the commitment to Regulatory Guide 1.54.
- K. Regulatory Guide 1.55 (Revision 0) [June 1973], *Concrete Placement in Category 1 Structures***
- 1. FENOC commits to the regulatory position of this Guide for activities that are comparable in nature and extent to construction phase activities for the Perry Nuclear Power Plant.
- L. Regulatory Guide 1.58 (Revision 1) [September 1980], *Qualification of Nuclear Power Plant Inspection, Examination and Testing Personnel***
- 1. FENOC commits to the regulatory position of this Guide with the following clarifications:
    - a. The guidance of this Regulatory Guide shall be followed as it pertains to the qualification of personnel who verify conformance of work activities to quality requirements.
    - b. Personnel will not be certified as stated in this Guide in the following areas:
      - 1) Individuals that handle test results or perform document control activities.
      - 2) Quality assurance and staff personnel responsible for the review of documents for clarity and completeness.

- 3) Test personnel utilizing gas test methods for information or data collection activities (this includes those personnel performing local leak rate testing (LLRT) as stated in 10CFR50 Appendix J). The qualifications of these personnel shall conform to the requirements of Regulatory Guide 1.8.
- 4) Plant operation personnel concerned with day-to-day operation, maintenance, and certain technical services (the qualifications of these personnel shall conform to the requirements of Regulatory Guide 1.8).
- c. Personnel who perform nondestructive examination activities shall meet the qualification requirements of SNT-TC-1A (1980) as described below.
2. FENOC commits to the requirements of ANSI N45.2.6-1978 as modified by the commitments to Regulatory Guide 1.58.
3. FENOC commits to the requirements of SNT-TC-1A (1980) with the following clarifications:
  - a. For Davis-Besse:
    - 1) The word "should" in the following paragraphs of SNT-TC-1A (1980) shall be considered "shall": 4.3(1), 4.3(2), 4.3(3), 6.3, 7.1, 7.2, 8.1, 8.1.1(1), 8.1.1(2), 8.1.1(3), 8.1.1(4), 8.1.2(1), 8.1.2(2), 8.1.3(1), 8.1.3(2), 8.1.4(1), 8.1.4(2), 8.1.4(3), 8.1.5, 8.3, 8.3.1(1), 8.3.1(2), 8.3.2(3), 8.3.4, 8.4.2, and 9.7.3.
    - 2) Paragraph 8.4.4 recommends a composite grade of 80% and a grade of 70% for the general, specific, and practical or the basic method, and specific examination. Davis-Besse commits to this recommendation.
  - b. For Perry:
    - 1) Personnel who perform nondestructive examination activities (including NDE gas leak testing) shall meet the qualification requirements of SNT-TC-1A (1980) as modified by ASME Code Case 356.
- M. **Regulatory Guide 1.64 (Revision 2) [June 1976], *Quality Assurance Requirements for the Design of Nuclear Power Plants***
  1. FENOC commits to the regulatory position of this Guide with the following clarifications:
    - a. Section C.2(1) addresses the use of a supervisor in design verification. If, in exceptional circumstances, the supervisor is the only technically qualified individual available, the design verification or checking shall be conducted by the supervisor with the following provisions:

**QUALITY ASSURANCE PROGRAM MANUAL**

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- 1) The other requirements of Section C.2 of this Guide shall be met.
  - 2) The justification shall be individually documented and approved by the next level of supervision.
  - 3) Quality assurance audits shall include review of frequency and effectiveness of the use of the immediate supervisor to assure that this provision is used only in exceptional circumstances.
- b. An individual who contributed to a given design may participate in a group verification of that design provided that the individual who contributed to the design does not (1) verify his contribution to the design, or (2) serve as chairman or leader of the group verification activity.
2. FENOC commits to the requirements of ANSI N45.2.11-1974 with the clarifications as noted above for the use of an immediate supervisor for design verification activities and conduct of group verification activities.
- N. Regulatory Guide 1.74 (Revision 0) [February 1974], *Quality Assurance Terms and Definitions***
1. FENOC commits to the regulatory position of this Guide.
  2. FENOC commits to the requirements of ANSI N45.2.10-1973.
- O. Regulatory Guide 1.88 (Revision 2) [October 1976], *Collection, Storage and Maintenance of Nuclear Power Plant Quality Assurance Records***
1. FENOC commits to the regulatory position of this Guide.
  2. FENOC commits to the requirements of ANSI N45.2.9-1974 with the following clarifications:
    - a. For Davis-Besse:
      - 1) Add the following definitions to those of ANSI N45.2.9:
        - a) As-Built – Documented data that describes the condition achieved in a product. An installation shall be considered to be in an “as built” or “as constructed” condition if it is installed within the tolerance indicated in the design output documents or has been evaluated and documented as an acceptable condition.

- b) Authentication – Documents shall be considered complete only if stamped or initialed, or signed and dated by authorized personnel or otherwise authenticated. Authentication may take the form of a statement by the responsible individual or organization. Handwritten signatures/initials are not required if the document is clearly identified with a statement by the responsible individual or organization. Partial records shall not be considered to be fully completed until the associated record package is authenticated and completed.
  - c) Completed Record – A document which has all applicable information recorded and has been authenticated by authorized personnel.
  - d) Completed Record Package – A compilation of partial records that are designated to be submitted as a unit. A record package is complete when all individual documents have been authenticated.
  - e) Partial Record – An authenticated record which is part of a record package. These documents are not to be considered completed records (for final record storage) until the completed record package has been authenticated. Examples would include a closed audit finding report within an open audit report package or a closed inspection report within an open modification package.
  - f) Quality Assurance Record – Authenticated documents which furnish documentary evidence of the quality of items or activities affecting quality.
- 2) Section 5.6 requires the storage facility to maintain a four-hour fire rating. In lieu of this requirement, the minimum two-hour fire rating as specified by ANSI N45.2.9-1979 is an acceptable alternative.
- 3) Appendix A of ANSI N45.2.9 requires that records of measuring and test equipment calibration be maintained “until recalibration.” This implies that the full storage requirements of this Standard apply until the equipment is recalibrated. In lieu of this requirement, Davis-Besse may store measuring and test equipment calibration records in one-hour fire rated cabinets outside of an ANSI N45.2.9 storage vault area. This exception does not apply to records of calibration required by the Davis-Besse Technical Specifications.

- b. For Perry:
  - 1) Where duplicate records are not maintained, records will be stored in a facility whose construction incorporates features recommended in ANSI N45.2.9, with the following exceptions:
    - a) Door assemblies are Underwriter's Laboratory listed with a three-hour rating to provide fire protection in accordance with ASTM E-152.
    - b) For storage of special processed records (such as radiographs and microfilm), humidity and temperature controls shall be provided so as to maintain an environmental condition as prescribed in Paragraph 6.1.1 of ANSI PH 1.43-1979 in lieu of the last paragraph in Section 5.6 of ANSI N45.2.9-1974.
    - c) Active records may be temporarily stored in one-hour fire rated cabinets. The use of the one-hour fire rated cabinets for such records shall be limited to temporary storage prior to the time records are transferred to the permanent records storage facility. This temporary storage is limited to approximately three months.

**P. Regulatory Guide 1.94 (Revision 1) [April 1976], *Quality Assurance Requirements for Installation, Inspection and Testing of Concrete and Structural Steel During the Construction Phase of Nuclear Power Plants***

- 1. FENOC commits to the regulatory position of this Guide for activities comparable in nature and extent to construction phase activities.
- 2. FENOC commits to the requirements of ANSI N45.2.5-1974 with the following clarification:
  - a. Section 2.2 requires that installation, inspection, and test procedures be kept current with the latest information. This Standard was written to address requirements associated with construction phase activities. However, during the operations phase, activities associated with installation, inspection, and testing of structural concrete and structural steel are very minor in frequency and extent. Consequently, procedures for these activities shall only be reviewed or updated prior to commencing the activity. The procedures for structural concrete and structural steel installation, inspection, and testing activities will be developed using the provisions of ANSI N45.2.5 – 1974.

- Q. **Regulatory Guide 1.116 (Revision 0) [May 1977], *Quality Assurance Requirements for Installation, Inspection and Testing of Mechanical Equipment and Systems***
1. FENOC commits to the regulatory position of this Guide for activities comparable in nature and extent to construction phase activities.
  2. FENOC commits to the requirements of ANSI N45.2.8-1975 with the following clarifications:
    - a. Sections 2.4 and 2.6 require that procedures define system restoration requirements as needed to prevent contamination after cleanliness class is achieved in accordance with commitments to ANSI N45.2.1 and ANSI N45.2.3.
    - b. Section 2.9 requires that evidence of compliance by the manufacturer with purchase requirements, including quality assurance requirements, be available at the site prior to applying the requirements of this Standard. In lieu of this requirement, FENOC may proceed with installation, inspection, and testing activities of equipment lacking its quality documentation provided that this equipment has been identified and released in accordance with nonconforming materials procedures.
    - c. Section 4.5.1 provides requirements for the cleaning, flushing, and conditioning of installed systems. FENOC's position on Regulatory Guide 1.37 and ANSI N45.2.1 also apply to this Section and take precedence over the requirements of ANSI N45.2.8 when conflicts exist.
    - d. Section 4.5.1.b: At Perry, pipes were flushed to maximum velocity using permanent plant equipment or hydrolaser cleaning.
    - e. Section 5 provides requirements for the preoperational, cold functional, and hot functional checking, inspection, and testing on installed systems. These requirements are applicable only for major modifications requiring prior NRC approval. In these cases, the requirements of Section 5 of this Standard shall be used as guidance in determining the checking, inspection, and testing requirements following such modifications. For modifications not requiring prior NRC approval or maintenance performed during the operational phase, FENOC shall perform checking, inspection, and/or post-modification or post-maintenance tests to verify that work has been satisfactorily accomplished.

**R. Regulatory Guide 1.123 (Revision 1) [July 1977], *Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants***

1. FENOC commits to the regulatory position of this Guide.
2. FENOC commits to the requirements of ANSI N45.2.13-1976 with the following clarifications:
  - a. Section 4 provides for the selection of procurement sources. For “commercial grade” items and for non-safety related items within the scope of the Quality Assurance Program for which there are no quality assurance program or quality documentation requirements, the requirements of this Section need not be adhered to. However, the procurement documents shall specify requirements specific to the item being procured, sufficient to provide adequate certification or other records to ensure that items and activities meet the specified requirements.
  - b. Section 8.2 provides requirements for the control of nonconformances. Suppliers qualified by FENOC as design agents in accordance with Regulatory Guides 1.64 and 1.123 may be permitted under specific contractual provisions to disposition nonconformances as “use-as-is” or “repair” on behalf of FENOC. All nonconformances dispositioned “use-as-is” or “repair” by suppliers qualified by FENOC as design agents on behalf of FENOC are required to be submitted to FENOC for engineering approval at the time equipment is received on site. If FENOC determines that a disposition has been incorrectly made, a nonconformance report is generated on site to document the problem and effect resolution.
  - c. Section 10.2.d is interpreted as follows: The person attesting to a certificate shall be an authorized and responsible employee of the supplier and shall be identified by the supplier.

**S. Regulatory Guide 1.144 (Revision 1) [September 1980], *Auditing of Quality Assurance Programs for Nuclear Power Plants***

1. FENOC commits to the regulatory position of this Guide for activities that are comparable in nature and extent to construction phase activities.
2. FENOC commits to the requirements of ANSI N45.2.12-1977 with the following clarification:
  - a. Section 4.5.1 of this Standard discusses follow-up and corrective actions. FENOC may utilize the provisions of the corrective action program outlined

**Table I**  
**Regulatory Commitments**  
Revision 0

in Section A.6 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.

- T. **Regulatory Guide 1.146 (Revision 0) [August 1980], *Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants***
  - 1. FENOC commits to the regulatory position of this Guide.
  - 2. FENOC commits to the requirements of ANSI N45.2.23-1978.
  
- U. **Regulatory Guide 4.15 (Revision 1) [February 1979], *Quality Assurance for Radiological Monitoring Programs (Normal Operations) – Effluent Streams and the Environment***
  - 1. FENOC commits to the regulatory position of this Guide for the Davis-Besse Nuclear Power Station.
  
- V. **Regulatory Guide 1.78 [June 1974], *Assumptions for Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release***
  - 1. FENOC commits to the regulatory position of this Guide for the Davis-Besse Nuclear Power Station, and the Perry Nuclear Power Plant as outlined in USAR Table 1.8-1.