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FirstEnergy Nuclear Operating Company

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Beaver Valley Power Station Unit 1
Operating License No. DPR-66
Docket No. 50-334

Beaver Valley Power Station Unit 2
Operating License No. NPF-73
Docket No. 50-412

Davis-Besse Nuclear Power Station
Operating License No. NPF-3
Docket No. 50-346

Perry Nuclear Power Plant
Operating License No. NPF-58
Docket No. 50-440

Subject: Request for Approval of FENOC Quality Assurance Program Manual, Revision 1

Ladies and Gentlemen:

In accordance with 10 CFR 50.54(a)(3), FirstEnergy Nuclear Operating Company (FENOC) requests NRC review of the attached quality assurance program manual (FENOC QAPM, Revision 1). Upon approval, it is intended that the FENOC QAPM will serve as a common QA program description that would be incorporated by reference in the safety analysis report of each FENOC plant.

At present, the Davis-Besse Nuclear Power Station (DBNPS) and Perry Nuclear Power Plant (PNPP) are implementing Revision 0 of the QAPM which was developed using the Entergy Operations, Inc (EOI) QAPM as a model. Acquisition of the operating licenses for Beaver Valley Power Station (BVPS) Units 1 and 2 caused the QAPM to be evaluated for application at BVPS.

Rather than request NRC approval of reductions in commitments that would be necessary for BVPS to adopt the QAPM, FENOC has decided to request an NRC safety evaluation report (SER) permitting overall application of the revised FENOC QAPM to any FENOC plant. This decision was based on the following considerations:

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It is highly desirable to maintain a common quality assurance program basis for all plants rather than separate, plant-specific commitments. This promotes consistent understanding, implementation, administration and oversight of the QA program for all FENOC facilities.

- Approval of a common QAPM for all FENOC plants would permit more efficient use of FENOC and NRC resources by permitting a single 50.54(a) evaluation and/or submittal to the NRC (rather than four that would be otherwise required) when a single change to the QAPM is proposed. Periodic submittals of changes that do not require NRC approval would likewise be reduced.
- Upon FENOC acquisition of operating licenses for other plants, the QAPM would be more readily adopted by those plants due to the existence of a safety evaluation.

Attachment 1 describes details related to this request and describes the contents of the remaining attachments.

Since FENOC is planning to implement this QAPM in early 2001, we are prepared to support NRC review to achieve a March 30, 2001 safety evaluation.

If you have questions or require additional information, please contact, William R. Kanda, Director of Oversight and Process Improvement at (440) 280-5579.

Very Truly Yours,

Robert F Saunders

Attachments
Enclosure

cc: NRC Project Manager, Beaver Valley Power Station
NRC Project Manager, Davis-Besse Nuclear Power Station
NRC Project Manager, Perry Nuclear Power Plant
NRC Senior Resident Inspector, Beaver Valley Power Station
NRC Senior Resident Inspector, Davis-Besse Nuclear Power Station
NRC Senior Resident Inspector, Perry Nuclear Power Plant
NRC Region I
NRC Region III
Utility Radiological Safety Board

ATTACHMENT 1

Request For Approval of Revised FENOC Quality Assurance Program Manual

Request For Approval of Revised FENOC Quality Assurance Program Manual

Background

FENOC developed a corporate quality assurance program manual (FENOC QAPM, Revision 0) that is currently implemented at DBNPS and PNPP. This concept was discussed between the NRC staff and FENOC representatives on March 18, 1999.

This FENOC QAPM was developed utilizing the guidance of NUREG-0800, "Standard Review Plan," Section 17.3, "Quality Assurance Program Description," the Nuclear Regulatory Commission safety evaluation report for the Entergy Operations Incorporated (EOI) Quality Assurance Program Manual, and the DBNPS and PNPP quality assurance program descriptions contained in the respective facility's updated safety analysis report.

As part of the FENOC QAPM development process, the proposed FENOC QAPM was compared to each facility's docketed quality assurance program description. As a result of these reviews, several changes at each facility were determined to require prior review and approval by the NRC pursuant to 10 CFR 50.54(a). On December 8, 1999, the NRC issued a safety evaluation approving the changes proposed for DBNPS and PNPP. This completed regulatory actions necessary to implement the QAPM at these facilities. Revision 0 of the QAPM, including other changes that did not require NRC approval, was approved by FENOC management for implementation in January 2000.

As a result of efforts to standardize processes, FENOC has evaluated the existing BVPS-1 and BVPS-2 QA program descriptions with respect to FENOC QAPM, Revision 0. The purpose of this evaluation was to identify potential reductions in commitments for BVPS that must be approved by the NRC prior to adopting the QAPM. During the evaluation it was recognized that the existence of a safety evaluation for the QAPM would have substantially simplified the evaluation process. Therefore, FENOC is requesting the NRC to prepare a safety evaluation permitting overall application of the revised FENOC QAPM to any FENOC plant. It has also been recognized that this is an opportunity to refine the QAPM by replacing any remaining plant-specific quality assurance program elements with descriptions that are consistent for all of the FENOC plants.

Development of the FENOC QAPM

Due to different owners, architect/engineers, NSSS vendors, construction dates and operating license dates, each FENOC plant had originally provided a different QA program description in its safety analysis report. While many of the specific QA commitments varied between the sites, each of the quality assurance programs in existence prior to implementation of the FENOC QAPM was at some time previously submitted to the NRC and found acceptable for meeting the requirements of 10 CFR 50, Appendix B. Changes made to these programs since the time of NRC approval have been made in accordance with NRC regulations and therefore have preserved compliance with 10 CFR 50, Appendix B.

The currently implemented FENOC QAPM (Revision 0) was developed using the NRC approved EOI QAPM as a model. The format and content of the QAPM (except for Table 1) is very similar to the EOI QAPM. FENOC believes that, except for Table 1, differences between the FENOC and EOI QAPMs are inconsequential with respect to compliance with 10 CFR 50, Appendix B. Table 1 contains descriptions of quality assurance regulatory guide commitments that are mainly a combination of previously existing regulatory guide positions for DBNPS and PNPP. Reductions in commitments approved by the NRC for each of these plants were also included. However, reductions normally occurred only when it was necessary to align the commitments of one of the plants to an existing commitment of the other. Table 1 differs substantially from corresponding material in the EOI QAPM because of diversity of ownership, design and construction organizations and construction dates.

The revised FENOC QAPM incorporates additional program elements originating from existing QA program descriptions for BVPS. It also replaces some plant-specific elements with commitments that are more generic in nature so as to bound all FENOC plant positions. In a few cases, alternatives approved by the NRC in SERs for other licensees (mainly EOI) have also been incorporated.

Content of Submittal

The contents of attachments to this submittal are described as follows.

Attachment 2 is the revised FENOC QAPM for which NRC review is requested.

Attachment 3 is a redline version of FENOC QAPM, Revision 0 showing changes incorporated to develop the revised QAPM provided in Attachment 2. Specific revisions are annotated in the margin with identifying numbers. These numbers correspond to details for the particular revision element that are provided in Attachment 4.

Attachment 4 provides a table of details related to revision elements identified in Attachment 3. Typical details would include such information as related SERs or NRC approvals, identification of elements that currently reside in the BVPS QA program description, or identification of new elements that are not currently implemented at any FENOC plant.

Attachment 5 is an annotated copy of the BVPS QA program description (i.e. BVPS-2 UFSAR Section 17.2 and other selected sections of the BVPS-1 and BVPS-2 UFSARs). This description is annotated in the left margin with references to corresponding information in the revised QAPM. Where the QA program description differs from the revised QAPM, an identifying number for the difference is shown in the right margin. These numbers correspond to details for the particular differing element that are provided in Attachment 6.

Attachment 6 provides a table of details related to existing QA program description elements that differ from the revised FENOC QAPM and that are identified in Attachment 5. Typical details would include such information as related SERs or NRC approvals, identification of elements that currently reside in the FENOC QAPM (Revision 0), or identification of new elements that are not currently implemented at any FENOC plant.

ATTACHMENT 2

REVISED FENOC QAPM

FENOC

FirstEnergy Nuclear Operating Company

QUALITY ASSURANCE PROGRAM MANUAL

Beaver Valley Power Station
Units 1 & 2
Docket Nos. 50-334 & 50-412
Operating License Nos. DPR-66 & NPF-73

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

Revision 1

FENOC
FirstEnergy Nuclear Operating Company

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 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. 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.

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

1. The individual responsible for oversight reports to the president and chief nuclear 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.

a) The individual responsible for quality assurance reports to the individual responsible for oversight and has overall authority and responsibility for 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 president and chief nuclear officer when needed.

b. The executive responsible for overall plant nuclear safety, operations support, and engineering at each site reports to the president and chief nuclear 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. Conversely, responsibilities may be fulfilled by more than one individual.

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

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

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

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

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

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

7. The individual responsible for engineering is responsible for the development and maintenance of engineering programs, policies, and procedures and for providing engineering services.

8. 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.

9. The individual responsible for quality control has the responsibility for establishing, controlling, and implementing the quality control inspection program. The individual responsible for quality control has the authority and responsibility to escalate matters as needed.

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 individual responsible for oversight and to the president and chief nuclear 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 (including reactor operation through proper channels) 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 1.58, 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 apply wherever the defined term is used in the QAPM and associated guidance documents.

3. Clarifications and alternatives to a guidance document apply 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. In cases where a regulatory guide was originally intended to apply to design or construction phase activities, or where a regulatory guide adopts a design or construction phase standard for use during the operations phase, a commitment to the regulatory guide is not intended to include recommendations that are not pertinent to operations phase activities.

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

c. In cases where license requirements differ from the QAPM, the most stringent requirements apply.

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.

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.

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

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

12. Inspection

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

b. Provisions to ensure inspection planning is properly accomplished are to be established. Planning activities are to identify the characteristics and activities to be inspected, the inspection techniques, 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 control 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. The document control program shall be applied to documents that prescribe activities affecting quality of safety-related structures, systems or components. Such activities include design, procurement, material control, installation, inspection, testing, maintenance, modification, operation, refueling and decommissioning.

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. 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.

2. Audit schedules assure that the following areas are audited at the indicated frequencies, or more frequently as performance dictates. Not all of the following are Appendix B audits.

   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.

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

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

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

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

7. Audit reports are written and distributed to the appropriate levels of management for review. Follow-up action can be accomplished through written communication, re-audit, or other appropriate means, as deemed necessary.

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

9. Audits are conducted using predetermined acceptance criteria.

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

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 1.30 (Revision 0) [August 1972], *Quality Assurance Requirements for the Installation, Inspection, and Testing of Instrumentation and Electric Equipment*

1. During the operations phase, testing and inspection at FENOC will be performed in accordance with the intent of this guide and the requirements of the Technical Specifications and quality assurance program.

B. 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 alternatives:

   a. Regulatory Position C.3 specifies review of proposed license amendments by the independent review body prior to submittal to the NRC. As an alternative, a committee that is part of the onsite operating organization may perform this review.

   b. Regulatory Position C.4 specifies audit frequencies for several audit topics. QAPM Section C.2 (Audit) describes alternatives to these frequencies.

2. FENOC commits to the requirements of ANSI N18.7-1976/ANS 3.2 with the following clarifications:

   a. Section 1 requires that this Standard "apply to all activities affecting the safety-related functions of nuclear power plant structures, systems, and components." FENOC shall apply the requirements of this Standard to those structures, systems, and components identified as safety-related in the respective plant's USAR.

   b. 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.

   c. 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 the supervisor in charge of the shift and hold a senior operating license on the unit affected." In lieu of these requirements, FENOC commits to the requirements as delineated in the site's USAR, Technical Specifications or technical requirements manual.

d. 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.

e. 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."

f. Section 5.2.15 contains a requirement for biennial review of plant procedures. In lieu of this requirement, FENOC may use one of the following methods as alternatives:

1) Implement process controls that ensure procedures are reviewed for possible revision upon identification of new or revised source material potentially affecting the intent of procedures.

2) Implement process controls related to procedure review, a maximum six year review period and biennial audits of operating organizations that include a review of their procedures to assure that controls result in timely procedure revision in response to operations experience deficiencies and procedure deficiencies identified by users.

C. 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. Regulatory Position C.3 requires that 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.

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

D. 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.

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

E. 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 with the following alternative.

   a. 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.

F. 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. Regulatory Position C.2 indicates that SNT-TC-1A-1975 is to be used for the qualification of nondestructive examination (NDE) personnel who apply various NDE methods. It also indicates that personnel performing nondestructive examinations required by Section III and Section XI of the ASME Code should be qualified to SNT-TC-1A-1975 as well as additional provision of the Code. For the qualification of NDE personnel, FENOC commits to the ASME Section XI requirements specified within the applicable code year edition(s) as defined by 10CFR50.55a. This alternative may be applied regardless of whether examinations are of a type required by the Code.

2. FENOC commits to the requirements of ANSI N45.2.6-1978 as modified by the commitments to Regulatory Guide 1.58 with the following clarifications:

   a. Section 2.5 of this Standard discusses special physical characteristics. FENOC commits to the following: Examinations to verify that personnel have the required physical characteristics will be scheduled on an annual basis with a maximum allowable extension of 90 days.

b. Section 3.5 of this Standard discusses education and experience. FENOC commits to the following: The initial qualifications of individuals to Level I, II, or III will generally be to the education and experience recommendations in the Standard. However, in certain instances as determined by appropriate management, qualifications may be alternatively determined through test results and/or demonstration of capabilities. For Level I, FENOC will also accept a four year college degree plus one month of related experience or equivalent inspection, examination or testing activities. Individual requalification will meet or exceed the recommendation of this Standard.

G. 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. Regulatory Position 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:

      1) The other requirements of Regulatory Position 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.

H. 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.

I. 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 alternatives:

   a. Section 5.6 addresses records storage facilities. In lieu of this, the design and construction of quality assurance record storage facilities will follow the guidance of ANSI/ASME NQA-1-1983, Supplement 17S-1, Section 4.4. When temporary storage of records is required, the guidance of ASME NQA-1-1989, Supplement 17S-1, Section 4.4.3 will be followed. 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 (Also required by Section 5.4).

   b. 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, FENOC may store measuring and test equipment calibration records in one-hour fire rated containers. This exception does not apply to records of calibration required by the Technical Specifications.

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

1. FENOC commits to the regulatory position of this Guide.

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.

b. Alternatives to this Standard are taken with respect to frequency of calibration of impact wrenches and bolt projection criteria. Impact and torque wrenches shall be checked at least once daily per shift, and at least one full thread of all bolts shall project beyond the nut of all tightened connections. These criteria comply with the recommendations of the Research Council on Riveted and Bolted Structural Joints.

K. 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.

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, section B.4 (Procurement Control) of this manual describes the controls for equipment lacking quality documentation.

   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.

L. 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.

M. 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.

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 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.

   b. Sections 4.3.1 and 4.3.3 of this Standard discuss pre-audit and post-audit conferences. Pre-audit and post-audit conferences may be fulfilled by a variety of communications, such as telephone conversation.

   c. Section 4.3.1 and 4.3.3 of this Standard discuss pre-audit and post-audit conferences. Pre-audit and post-audit conferences are only held when deemed necessary by quality assurance or when requested by the audited organization.

d. Section 4.4 discusses audit reporting. Audit reports 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.

N. 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 with the following alternatives.

   a. Section 2.3.1.3 discusses other credentials of professional competence. Holders of NRC issued Reactor Operator/Senior Reactor Operator Licenses comply with the requirements of this section and may be awarded two credits.

   b. Section 2.3.4 discusses audit participation. 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 nuclear 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.

ATTACHMENT 3

Proposed FENOC Quality Assurance Program Manual

Red-Line Version

FENOC QUALITY ASSURANCE PROGRAM MANUAL
Red-Line Version

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~~. 1

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~~ president and chief nuclear 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~~ president and chief nuclear officer provides guidance with regards to company quality assurance policy. 2

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A.2.a. 1. The individual responsible for ~~operations support~~ oversight reports to the ~~chief executive officer~~ president and chief nuclear 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.

a. The individual responsible for quality assurance reports to the individual responsible for oversight and has overall authority and responsibility for 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 president and chief nuclear officer when needed.

b. The executive responsible for overall plant nuclear safety, operations support, and engineering at each site reports to the ~~chief executive~~ president and chief nuclear 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~~:~~. Conversely, responsibilities may be fulfilled by more than one individual.

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

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A.2.c.

~~3.~~2. The individual responsible for plant modification provides direction, control, and overall supervision of the implementation of plant modifications and assigned maintenance.

~~4.~~3. The individual responsible for training provides direction, control, and overall supervision of all training of personnel required by regulations.

~~5.~~4. The individual responsible for records management provides direction, control, and overall supervision of the records management program and associated activities.

~~6.~~5. The individual responsible for document control provides direction, control, and overall supervision of the document control program and associated activities.

~~7.~~6. The individual responsible for the corrective action program provides direction, control, and overall supervision of the corrective action program and associated activities.

~~8.~~7. The individual responsible for engineering is responsible for the development and maintenance of engineering programs, policies, and procedures and for providing engineering services.

~~9.~~8. 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.

3 9. The individual responsible for quality control has the responsibility for establishing, controlling, and implementing the quality control inspection program. The individual responsible for quality control has the authority and responsibility to escalate matters as needed.

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.

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A.3. 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 individual responsible for oversight and to the ~~chief executive~~ president and chief nuclear officer. 2, 3

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)~~ (including reactor operation through proper channels) and control further processing, delivery, installation, or use of non-conforming items or services. Cost and schedule considerations will not override safety considerations. 5

5. Personnel Training and Qualification

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

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A.5. 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).

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A. 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~~.,~~ ~~E~~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. Clarifications and alternatives to a guidance document ~~applies~~ apply 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.~~

5. In cases where a regulatory guide was originally intended to apply to design or construction phase activities, or where a regulatory guide adopts a design or construction phase standard for use during the operations phase, a commitment to the regulatory guide is not intended to include recommendations that are not pertinent to operations phase activities.

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

c. In cases where license requirements differ from the QAPM, the most stringent requirements apply.

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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.

11 ~~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.

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B.2. 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.

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B.3. 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.

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B.4. 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).

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B. 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.

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B.8. 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.

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B.9. 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).

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B. 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,~~

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~~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.~~

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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.

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B.12. 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~~ control or an individual responsible for materials, purchasing, and contracts as appropriate. 3

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:~~ 14

~~1. Safety Analysis Report,~~

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~~2. design documents,~~

~~3. procurement documents,~~

~~4. Technical Specifications,~~

~~5. procedures and manuals,~~

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~~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.~~

B.14. b. The document control program shall be applied to documents that prescribe activities affecting quality of safety-related structures, systems or components. Such activities include design, procurement, material control, installation, inspection, testing, maintenance, modification, operation, refueling and decommissioning.

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.

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B.15 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. 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

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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. ~~1.~~2. Audit schedules assure that the following areas are audited at the indicated frequencies, or more frequently as performance dictates. Not all of the following are Appendix B audits.

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.

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C.2.a.2.

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.

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

~~3.~~4. 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.~~5. Scheduling and resource allocation are based on the status and safety importance of the activity or process being assessed.

~~5.~~6. Scheduling is dynamic and resources are supplemented when the effectiveness of the quality assurance program is in doubt.

~~6.~~7. 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.~~ action can be accomplished through written communication, re-audit, or other appropriate means, as deemed necessary.

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~~7.~~8. Implementation of delegated portions of the quality assurance program is assessed.

~~8.~~9. Audits are conducted using predetermined acceptance criteria.

~~9.~~10. Additional details concerning audits may be found in the Regulatory Guides and associated Standards as committed to in Section A.7 and Table 1 (e.g., Regulatory Guides 1.33 and 1.144).

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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."

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~~**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.~~

Table 1
Regulatory Commitments
Revision 1

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~~E.~~A. 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.~~

1. During the operations phase, testing and inspection at FENOC will be performed in accordance with the intent of this guide and the requirements of the Technical Specifications and quality assurance program.

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~~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~~

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~~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.~~

~~F.~~B. 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~~ alternatives:

~~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.~~

a. Regulatory Position C.3 specifies review of proposed license amendments by the independent review body prior to submittal to the NRC. As an alternative, a committee that is part of the onsite operating organization may perform this review.

b. Regulatory Position C.4 specifies audit frequencies for several audit topics. QAPM Section C.2 (Audit) describes alternatives to these frequencies.

2. FENOC commits to the requirements of ~~ANSI/ANS 3.2-1982~~ ANSI N18.7-1976/ANS 3.2 with the following clarifications:

a. Section 1.~~1~~ requires that this Standard ~~be "applied~~ "apply to all activities affecting ~~those~~ the safety-related 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.~~ identified as safety-related in the respective plant's USAR.

~~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~~

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~~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.~~

B.2. ~~e.~~b. 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.

~~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.~~c. 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~~ the supervisor in charge of the shift and hold a senior 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 or technical requirements manual.

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B.2. ~~h.~~d. 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.~~e. 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~~

31 f. Section 5.2.15 contains a requirement for biennial review of plant procedures. In lieu of this requirement, FENOC may use one of the following methods as alternatives:

1) Implement process controls that ensure procedures are reviewed for possible revision upon identification of new or revised source material potentially affecting the intent of procedures.

2) Implement process controls related to procedure review, a maximum six year review period and biennial audits of operating organizations that include a review of their

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procedures to assure that controls result in timely procedure revision in response to operations experience deficiencies and procedure deficiencies identified by users.

~~G.~~C. 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~~a. 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~~b. 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~~ that 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.

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C.2. 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 lieu of this, personnel who perform cleanliness inspections may alternatively be qualified in accordance with Regulatory Guide 1.8.

~~H.~~D. 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*

9 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~~ may 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.

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D.2. e. Various Sections of ANSI N45.2.2 address the use of non-halegenated 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 leak-proof barrier. In these cases, a positive pressure purge flow may be used as an alternative to a leak-proof barrier.

~~I.~~E. 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 with the following alternative.

32 a. 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.

~~**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~~
33 ~~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.~~

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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.

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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.

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~~K. Regulatory Guide 1.55 (Revision 0) [June 1973], *Concrete Placement in Category 1 Structures*~~

34 ~~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.~~F. **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.~~Regulatory Position C.2 indicates that SNT-TC-1A-1975 is to be used for the qualification of nondestructive examination (NDE) personnel who apply various NDE methods. It also indicates that
35 personnel performing nondestructive examinations required by Section III and Section XI of the ASME Code should be qualified to SNT-TC-1A-1975 as well as additional provision of the Code. For the qualification of NDE personnel, FENOC commits to the ASME Section XI requirements specified within the applicable code year edition(s) as

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defined by 10CFR50.55a. This alternative may be applied regardless of whether examinations are of a type required by the Code.

F. 2. FENOC commits to the requirements of ANSI N45.2.6-1978 as modified by the commitments to Regulatory Guide1.58. with the following clarifications:

a. Section 2.5 of this Standard discusses special physical characteristics. FENOC commits to the following: Examinations to verify that personnel have the required physical characteristics will be scheduled on an annual basis with a maximum allowable extension of 90 days.

b. Section 3.5 of this Standard discusses education and experience. FENOC commits to the following: The initial qualifications of individuals to Level I, II, or III will generally be to the education and experience recommendations in the Standard. However, in certain instances as determined by appropriate management, qualifications may be alternatively determined through test results and/or demonstration of capabilities. For Level I, FENOC will also accept a four year college degree plus one month of related experience or equivalent inspection, examination or testing activities. Individual requalification will meet or exceed the recommendation of this Standard.

~~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.~~

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~~M.~~G. **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~~ Regulatory Position 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:

      1) The other requirements of ~~Section~~ Regulatory Position 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.~~H. **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.

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~~O.~~I. **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:~~alternatives:

~~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.~~

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~~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~~

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~~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.~~

38 a. Section 5.6 addresses records storage facilities. In lieu of this, the design and construction of quality assurance record storage facilities will follow the guidance of ANSI/ASME NQA-1-1983, Supplement 17S-1, Section 4.4. When temporary storage of records is required, the guidance of ASME NQA-1-1989, Supplement 17S-1, Section 4.4.3 will be followed. 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 (Also required by Section 5.4).

~~3)~~b. 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~~FENOC may store measuring and test equipment calibration records in one-hour fire rated ~~cabinets outside of an ANSI N45.2.9 storage vault area.~~containers. 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.~~

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~~b) Forstorage 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.~~

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

9

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.

   b. Alternatives to this Standard are taken with respect to frequency of calibration of impact wrenches and bolt projection criteria. Impact and torque wrenches shall be checked at least once daily per shift, and at least one full thread of all bolts shall project beyond the nut of all tightened connections. These criteria comply with the recommendations of the Research Council on Riveted and Bolted Structural Joints.

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~~Q.~~K. 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.~~ section B.4 (Procurement Control) of this manual describes the controls for equipment lacking quality documentation.

   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.~~

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

9 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:

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M.2. 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 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.

b. Sections 4.3.1 and 4.3.3 of this Standard discuss pre-audit and post-audit conferences. Pre-audit and post-audit conferences may be fulfilled by a variety of communications, such as telephone conversation.

c. Section 4.3.1 and 4.3.3 of this Standard discuss pre-audit and post-audit conferences. Pre-audit and post-audit conferences are only held when deemed necessary by quality assurance or when requested by the audited organization.

d. Section 4.4 discusses audit reporting. Audit reports 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.

~~T.~~N. **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 with the following alternatives.

a. Section 2.3.1.3 discusses other credentials of professional competence. Holders of NRC issued Reactor Operator/Senior Reactor Operator Licenses comply with the requirements of this section and may be awarded two credits.

b. Section 2.3.4 discusses audit participation. 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 nuclear 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.

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~~U. **Regulatory Guide 4.15 (Revision 1) [February 1979],** ***Quality Assurance for Radiological Monitoring Programs (Normal Operations) – Effluent Streams and the Environment***~~

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~~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*~~

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~~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.~~

Table 1
Regulatory Commitments
Revision 1

ATTACHMENT 4

FENOC QAPM
Change Descriptions

FENOC QA Program Description (Revision 0)
Comparison to Revised FENOC QAPM

Side Bar*	FENOC QAPM Reference*	Change Description	Basis
1	A.1.c Old A.7.a.5	References to 10CFR72 have been deleted.	The FENOC QAP will be applied to the scope of activities conducted under 10 CFR 72 at the DBNPS as specified by the Dry Fuel Storage Certified Safety Analysis Report (CSAR).
2	A.2.a A.2.a.1 A.2.b A.3.c	Organization title changes.	Generic title change avoids confusion with FirstEnergy CEO.
3	A.2.a.1 A.2.a.1.a Old A.2.c.1 A.2.c.9 A.3.c B.12.f	Organization change creating oversight organization.	The change elevates the quality assurance oversight function from a site level to a central corporate level function. As a result, provisions were added to reflect continued independence of quality control functions that will remain on-site. This change promotes efficient use of resources and greater independence of the quality assurance oversight function.
4	A.2.c	Clarification regarding multiple individuals satisfying individual organizational element descriptions.	Clarification only.
5	A.4.b	Clarifies scope and execution of authority to stop work.	Clarification only.
6	A.5.d Old Table 1, Section A	Removed RG 1.8 reference.	RG 1.8 is a method acceptable for satisfying 10CFR50.34(b) and 10CFR55. Therefore, it should not be included within 10CFR50, Appendix B scope. The commitment to this guide will be maintained elsewhere in the USARs and/or as described in technical specifications as appropriate for each plant. It is not listed as a quality assurance Regulatory Guide in the Beaver Valley Power Station-2 SER.
7	A.7.a.2	Removed reference to non-existent RG 1.74 clarifications.	Table 1, Section H (RG 1.74 position) contains no clarifications.
8	A.7.a.3	Modified wording to distinguish between "clarifications" and "alternatives".	Clarifies terminology.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 3, "Proposed FENOC Quality Assurance Program Manual, Red-Line Version".

FENOC QA Program Description (Revision 0)
Comparison to Revised FENOC QAPM

Side Bar*	FENOC QAPM Reference*	Change Description	Basis
9	A.7.a.5 Table 1, Section C.1, D.1, J.1, K.1 and M.1	Added detail to explain interpretation of " comparable in nature and extent".	Clarification only.
10	A.7.c	Added statement describing which "requirement" applies when conflicts occur between documents or commitments.	Statement was added to recognize that differences between the QAPM and other licensing bases (e.g. technical specifications) may exist. It directs the use of the more stringent requirement.
11	Old B.1.e	Removed statement requiring administrative procedures for control of computer programs.	This detail is inappropriately located in QAPM B.1.e, "Performance/Verification." A more appropriate location would be Section B.14, but details of other activities subject to administrative procedures are not described therein. SRP 17.3 does not request a list of such activities. The EOI QAPM approved by SER dated November 6, 1998 does not include this specific item. No commitment has changed.
12	B.11.b	Removed detailed list of special processes.	A detailed list of special processes was removed due to plant differences and because the items on the list may or may not be treated as special processes depending on the application at a particular plant. ANSI N18.7 endorsed in QAPM, Table 1 provides guidance on activities regarded as special processes. No commitment has changed.
13	B.12.a	Removed redundancy with B.12.f.	Excessive duplication was removed. The requirement is unchanged.
14	B.14.b	Removed detailed list of controlled documents.	A detailed list of controlled documents was replaced with a general description due to plant differences and because the list cannot be made all-inclusive. Alternate wording provides a more comprehensive description of the document control program scope.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 3, "Proposed FENOC Quality Assurance Program Manual, Red-Line Version".

FENOC QA Program Description (Revision 0)
Comparison to Revised FENOC QAPM

Side Bar*	FENOC QAPM Reference*	Change Description	Basis
15	C.2.a. C.2.a.1	Added an alternative for determining required audit frequencies.	The new alternative provides for more efficient use of resources and focuses attention on areas with greater improvement potential. 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. This alternative has not previously been approved for any FENOC plant. 10CFR50, Appendix B is satisfied by ensuring that audits are conducted as required by the applicable Code of Federal regulations, technical specifications, safety analysis reports, and commitments by various correspondence with the NRC. The EOI QAPM approved by SER dated November 6, 1998 permits this alternative.
16	C.2.a.2	Added clarification regarding10CFR50, Appendix B basis for audits.	Clarification was added because the listed audits originated from technical specifications and do not necessarily relate to activities governed by 10CFR50, Appendix B.
17	Old C.2.a.1.k	Removed undefined audit from list.	The "management prerogative" audit was removed from a list of audits required to be performed at a specific frequency, because it is not possible to assign a frequency to such an audit and because its scope is undefined.
18	C.2.a.7	Clarified follow-up audit requirement.	This change clarifies that re-audit is not the only acceptable means of audit follow-up as acknowledged in SRP 17.3. The proposed wording is consistent with ANSI N45.2.12 endorsed by RG 1.144.
19	Old Table 1, Section B	RG 1.26 position removed.	Commitment to RG 1.26 and associated quality groups discussions are removed from the quality assurance program. The quality groups are described in the individual plant safety analysis 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 RG 1.64) along with the commitments in the safety analysis reports provide sufficient controls on the quality groups considering that the plants are in the operating phase. Removing this commitment is consistent with the quality assurance program approved by the NRC for Beaver Valley Power Station-2 and the EOI QAPM approved by SER dated November 6, 1998.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 3, "Proposed FENOC Quality Assurance Program Manual, Red-Line Version".

FENOC QA Program Description (Revision 0)
Comparison to Revised FENOC QAPM

Side Bar*	FENOC QAPM Reference*	Change Description	Basis
20	Old Table 1, Section C	RG 1.28 position removed.	RG 1.28 is applicable to construction phase activities. Its counterpart, RG 1.33, applies during the operations phase and is described in the QAPM.
21	Old Table 1, Section D	RG 1.29 position removed.	Commitment to RG 1.29 and associated seismic classification discussions are removed from the quality assurance program. The seismic classifications of equipment are described in the individual plant safety analysis 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 RG 1.64) along with the commitments in the safety analysis reports provide sufficient controls on seismic classification considering that the plants are in the operating phase. Removing this commitment is consistent with the quality assurance program approved by the NRC for Beaver Valley Power Station-2 and the EOI QAPM approved by SER dated November 6, 1998.
22	Table 1, Section A	RG 1.30 position revised.	RG 1.30 pertains to installation, inspection and testing of electrical equipment. Since it is mainly intended for major construction activities, applicability during the operation phase is limited. Therefore, the position is being revised to place reliance on more general requirements for installation, inspection and testing found elsewhere in the QAPM and in technical specifications. This guide is not an acceptance criterion in SRP 17.3. The proposed position is consistent with the Beaver Valley Power Station-2 position endorsed by SER at the time of licensing.
23	Old Table 1, Section F.1.a Old Table 1, Section F.1.b Table 1, Section B.2	Deleted two alternatives to RG 1.33.	Perry Nuclear Power Plant and Beaver Valley Power Station-2 were originally licensed to RG 1.33, Revision 2. The program implemented at Beaver Valley Power Station-1 currently follows this guide also. When the FENOC QAPM, Revision 0 was developed, Perry adjusted its position to reflect an existing Davis-Besse Nuclear Power Station position that was based on ANS 3.2-1982. RG 1.33, Revision 2 endorses ANSI N18.7/ANS 3.2-1976. ANS 3.2-1982 has not been endorsed by the NRC. To simplify NRC review, the proposed FENOC position cites alternatives relative to the most recent version of RG 1.33. Therefore, references to ANS 3.2-1982 have been removed and several alternatives or exceptions to ANS 3.2-1982 have also been removed.

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FENOC QA Program Description (Revision 0)
Comparison to Revised FENOC QAPM

Side Bar*	FENOC QAPM Reference*	Change Description	Basis
24	Table 1, Section B.1.a	Describes alternative to RG 1.33 regarding independent review of LARs.	The proposed alternative would permit license amendment requests (LARs) to be reviewed by a multi-disciplined committee of onsite operating organization members (e.g. PORC) chartered to advise the plant manager. This would replace the review currently performed by an "offsite" independent review body (CNRB). Because each plant maintains sufficient technical expertise onsite and because the PORC is composed of a variety of members with differing expertise, review of LARs by the PORC is sufficient to ensure the necessary quality, prior to NRC submittal. This alternative has not previously been approved for any FENOC plant. 10CFR50, Appendix B is satisfied by ensuring that LARs are reviewed for adequacy prior to being released.
25	Table 1, Section B.1.b	Describes alternative to RG 1.33 regarding audit frequencies.	Refer to Sidebar 15 above.
26	Table 1, Section B.2.a	Replaced plant-specific references with generic reference.	This change replaces plant-specific references with a generic reference for all plants. No commitment has changed.
27	Old Table 1, Section F.2.b	Removed clarification regarding application of ANSI N18.7 to non-10CFR50, Appendix B systems.	This is a removal of a clarification to an ANSI N18.7 recommendation. No commitment has changed.
28	Old Table 1, Section F.2.c Old Table 1, Section F.2.d Old Table 1, Section F.2.f	Removed alternatives not applicable to NRC approved ANSI N18.7.	These alternatives pertained to areas where ANS 3.2-1982 differed from the 1976 edition. They are no longer needed because the alternatives to the 1982 edition are not applicable to the 1976 edition.
29	Table 1, Section B.2.c	Modified wording to reflect NRC approved ANSI N18.7.	This change is necessary to reflect changed wording between the 1982 and 1976 editions of ANS 3.2. No commitment has changed.
30	Table 1, Section B.2.c	Added plant specific reference to technical requirements manual.	Since FENOC plants currently review temporary changes by different methods and because descriptions of these processes reside in different licensing documents, the existing position identifies the documents that describe the review process. The proposed change would add an option of describing this process in a technical requirements manual (subject to 10CFR50.59) because this is the normal location for maintaining commitments that were once contained in the technical specifications. No commitment has changed.

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FENOC QA Program Description (Revision 0)
Comparison to Revised FENOC QAPM

Side Bar*	FENOC QAPM Reference*	Change Description	Basis
31	Old Table 1, Section F.2.j Table 1, Section B.2.f	Added alternatives to biennial review of procedures.	The proposed change allows the biennial review to be replaced by biennial audits and a maximum six year review period. The procedure review period was previously approved by Region 1 staff in accordance with 10CFR50.54 on April 26, 1995 for Beaver Valley Power Station.
32	Table 1, Section E.2.a	RG 1.39 - Housekeeping zones may not be utilized.	The proposed change allows FENOC the flexibility to choose work and storage area controls that are consistent with requirements for an operating plant. These requirements will take into account radiation control considerations, security considerations, and personnel and equipment safety considerations. This alternative has not previously been approved for any FENOC plant. 10CFR50, Appendix B is satisfied by ensuring that activities affecting quality are accomplished under suitably controlled conditions. The proposed position is consistent with the EOI QAPM approved by SER dated November 6, 1998.
33	Old Table 1, Section J	RG 1.54 - Removed.	RG 1.54 pertains to quality assurance requirements for protective coatings. Since it is mainly intended for major construction activities, applicability during the operations phase is limited. It is not listed in SRP 17.3 as a Regulatory Guide issued in response to 10CFR50, Appendix B and is not listed in the Beaver Valley Power Station-2 SER as a quality assurance program acceptance criterion. The EOI QAPM approved by SER dated November 6, 1998 does not describe a position regarding this guide. Existing plant specific positions will be maintained in the respective USAR and controlled per 10CFR50.59.
34	Old Table 1, Section K	RG1.55 - Removed.	RG 1.55 pertains to concrete placement for category 1 structures. Since it is mainly intended for major construction activities, applicability during the operations phase is limited. It is not listed in SRP 17.3 as a Regulatory Guide issued in response to 10CFR50, Appendix B and is not listed in the Beaver Valley Power Station-2 SER as a quality assurance program acceptance criterion. The EOI QAPM approved by SER dated November 6, 1998 does not describe a position regarding this guide. Existing plant specific positions will be maintained in the respective USAR and controlled per 10CFR50.59.

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FENOC QA Program Description (Revision 0)
Comparison to Revised FENOC QAPM

Side Bar*	FENOC QAPM Reference*	Change Description	Basis
35	Table 1, Section F.1.c Old Table 1, Section L.3	RG 1.58 - Alternative to SNT-TC-1A qualification requirements.	To avoid identifying the specific year of SNT-TC-1A that each FENOC plant is committed to, FENOC is committing to the ASME Section XI requirements specified within the applicable code year edition(s) as defined by 10CFR50.55a. This will eliminate periodic changes to the year of the standard that each plant is committed to as would otherwise be necessary. The proposed position reflects code changes dictated by regulation.
36	Table 1, Section F.2.a	RG 1.58 - Extends the period for personnel physical examinations by 90 days.	The clarification provides a 25 percent grace period for personnel physical characteristics examinations. This will benefit applicable FENOC individuals who are away from their respective test location at the time examination is due. The 90 day extension for examinations was previously approved by Region 1 staff in accordance with 10CFR50.54 on March 16, 1995 for Beaver Valley Power Station.
37	Table 1, Section F.2.b	RG 1.58 - Alternative for qualifying inspection, examination and testing personnel will be applied to Davis-Besse Nuclear Power Station and Perry Nuclear Power Plant.	The proposed alternative would allow management discretion in qualifying inspection, examination and testing personnel by not rigidly adhering to education and experience requirements of the standard. In such cases, the subject individual must be evaluated by testing or otherwise demonstrate capabilities. An alternative to Level I education and experience requirements would also be provided. These proposed alternatives were contained in the Beaver Valley Power Station-2 quality assurance program description approved by an SER at the time of licensing.

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FENOC QA Program Description (Revision 0)
Comparison to Revised FENOC QAPM

Side Bar*	FENOC QAPM Reference*	Change Description	Basis
38	Table 1, Section I	RG 1.88 - Records. Alternatives to storage facility guidelines.	All existing quality assurance program descriptions for FENOC plants satisfy 10CFR50, Appendix B requirements for storage facilities. FENOC needs flexibility to use existing facilities for storing any record regardless of origin. As alternatives to the requirements of ANSI N45.2.9-1974, the SERs for Beaver Valley Power Station follow the guidance of ANSI/ASME NQA-1-1983, Supplement 17S-1, Section 4.4 for the design and construction of quality assurance record storage facilities and the guidance of ASME NQA-1-1989, Supplement 17S-1, Section 4.4.3 for the temporary storage of records. The storage facility guidelines were previously approved by Region 1 staff in accordance with 10CFR50.54 on August 14, 1987 and February 23, 1994 for Beaver Valley Power Station. It will also facilitate the development of FENOC common processes. An administrative change was made to eliminate a reference to any specific FENOC plant in support of a common QAPM. All exceptions are consistent with existing positions for at least one FENOC plant.
39	Table 1, Section J.2.b	RG 1.94 - Structural Concrete & Steel - Alternative to impact & torque wrenches calibration requirements and bolt projection criteria.	ANSI N45.2.5-1974 requires that torque wrenches used for inspection be calibrated at least twice daily. It also specifies a visual inspection criterion for bolt length requiring at least three threads to project beyond the nut. An alternative requiring calibration at least once daily per shift and bolt projection criterion of one thread is proposed for all FENOC plants. The alternative calibration frequency would avoid the need for a second check on days when only one shift is working. Wrenches would be checked each working shift, thus ensuring accuracy. A bolt projection criterion of one thread is sufficient to confirm that bolt length is adequate by ensuring that the nut is fully engaged. Proposed alternatives were contained in the Beaver Valley Power Station-2 design and construction quality assurance program description. The existing as-built condition of Beaver Valley Power Station-2 reflects this position.
40	Table 1, Section K.2.b	Replaced redundant statement with reference.	This change makes a new internal reference within the QAPM. It eliminates repeated text and ensures future consistency.
41	Old Table 1, Section Q.2.d	Removed historical statement.	A historical alternative describing the original method of flushing pipes at Perry Nuclear Power Plant is being removed due to obsolescence. The deleted information has no effect on current commitments.

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FENOC QA Program Description (Revision 0)
Comparison to Revised FENOC QAPM

Side Bar*	FENOC QAPM Reference*	Change Description	Basis
42	Old Table 1, Section Q.2.e	Removed clarification regarding inspection/testing of major modifications.	An alternative to requirements for pre-operational, cold functional, and hot functional checking, inspection, and testing of installed equipment will be removed because it is no longer necessary.
43	Table 1, Section M.2.b	RG 1.144 - Auditing - Pre-audit & Post audit conferences may be completed by a variety of methods including teleconferences.	Included a clarification previously implemented at Beaver Valley Power Station that recognizes that there are a variety of methods to conduct pre-audit conferences. 10CFR50, Appendix B does not contain any requirements concerning pre-audit conferences.
44	Table 1, Section M.2.c	RG 1.144 - Auditing - Pre-audit & post-audit conferences need only be conducted when necessary.	This change will benefit the recently implemented oversight organization by permitting the efficient use and sharing of resources between FENOC plants. This alternative has not previously been approved for any FENOC plant. 10CFR50, Appendix B is satisfied by ensuring that audit results are documented and provided to management for review. The proposed position is consistent with the EOI QAPM approved by SER dated November 6, 1998.
45	Table 1, Section M.2.d	RG 1.144 - Auditing - Audit reports due date extended to 30 working days.	This change will benefit the recently implemented oversight organization by permitting allocation of resources based on priorities. The effects of this change are negligible because management is formally notified of deficiencies / non-conformances on or before the post-audit conference date. This alternative has not previously been approved for any FENOC plant. 10CFR50, Appendix B is satisfied by ensuring that audit results are documented and provided to management for review. The proposed position is consistent with the EOI QAPM approved by SER dated November 6, 1998.
46	Table 1, Section N.2.a	RG 1.146 - Qualification of audit personnel - Award 2 credits for RO or SRO license.	This alternative will allow FENOC to award credits to prospective lead auditors who hold a Reactor Operator or Senior Reactor Operator License. FENOC believes this license to be as valuable if not more valuable than the existing methods for awarding credits (e.g. other credentials of profession competence). This alternative has not previously been approved for any FENOC plant. 10CFR50, Appendix B is satisfied by ensuring that audit personnel are appropriately trained and have no responsibility in the area being audited. The proposed position is consistent with the EOI QAPM approved by SER dated November 6, 1998.

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FENOC QA Program Description (Revision 0)
Comparison to Revised FENOC QAPM

Side Bar*	FENOC QAPM Reference*	Change Description	Basis
47	Table 1, Section N.2.b	RG 1.146 - Alternative to participating in 5 audits prior to qualification.	This alternative would allow substitution of a demonstrated ability to effectively lead audits in place of a five audit experience criterion. This alternative is intended for use in selective cases such as experienced individuals with lapsed qualifications. It would be used in conjunction with all other qualification requirements of the standard. It also would tend to make qualification more rigorous due to its qualitative nature. This alternative has not previously been approved for any FENOC plant. 10CFR50, Appendix B is satisfied by ensuring that audit personnel are appropriately trained and have no responsibility in the area being audited. The proposed position is consistent with the EOI QAPM approved by SER dated November 6, 1998.
48	Old Table 1, Section U	RG 4.15 – Removed RG 4.15 reference.	The 10CFR50, Appendix B quality asurance program is not required to be applied to radiological environmental monitoring program activities. Therefore the quality assurance program description need not address it. If the QAPM is selected as the means for satisfying quality assurance program regulations for environmental monitoring, the QAPM will be invoked through an appropriate administrative document. Where applicable, existing plant specific positions will be maintained in the respective USAR and controlled per 10CFR50.59.
49	Old Table 1, Section V	RG 1.78 – Removed RG 1.78 reference.	RG 1.78 pertains to control room habitability during a postulated hazardous chemical release. It is not listed in SRP 17.3 as a Regulatory Guide issued in response to 10CFR50, Appendix B. The EOI QAPM approved by SER dated November 6, 1998 does not describe a position regarding this guide. Where applicable, existing plant specific positions will be maintained in the respective USAR and controlled per 10CFR50.59.

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ATTACHMENT 5

BVPS Quality Assurance Program Description (QAPD)

17.2 QUALITY ASSURANCE PROGRAM DESCRIPTION, OPERATIONS

The following Quality Assurance Program (QAP) description applies to both Beaver Valley Power Station (BVPS) Unit 1 and BVPS Unit 2. The term BVPS as used in this QAP description applies to both BVPS-1 and BVPS-2. If a requirement applies to only one unit, the unit that it applies to is specifically identified.

Prior to the 1988 update of the BVPS-1 UFSAR, the QAP description was contained in Appendix A of the BVPS-1 UFSAR and the QAP description for BVPS-2 was contained in Section 17 of the BVPS-2 FSAR. 200

An Operations Quality Assurance (QA) Program is established for the operations phase of Beaver Valley Power Station (BVPS). The program is written to conform to the requirements of 10 CFR 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," and U.S. Nuclear Regulatory Commission (USNRC) Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operations)."

Table 1
P B
ANSI N18.7

The purpose of the Operations QA Program is to assure that the installed quality of the BVPS is maintained throughout the life of both plants.

The Operations QA Program applies to all safety-related structures, systems, and components throughout the life of the plant.

17.2.1 Organization

The Senior Vice President, the Plant General Manager, and the Plant Directors comprise those members of the Executive Management Group who have Nuclear responsibility. The Operations QA Program identifies the functional responsibilities of the organizations which participate in quality-related activities. 201

Personnel who participate in the program, perform their duties in accordance with the requirements of the Operations Quality Assurance Program. Quality Services also performs audits of groups participating in the program in accordance with UFSAR Section 17.2.18.

17.2.1.1 FENOC 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

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

The individual responsible for oversight reports to the president and chief nuclear 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

The individual responsible for quality assurance reports to the individual responsible for oversight and has overall authority and responsibility for establishing, controlling, and verifying the implementation and adequacy of the quality assurance program as described in the QAPM. The individual responsible for quality assurance has the authority and responsibility to escalate matters directly to the president and chief nuclear officer when needed.

A.2

The executive responsible for overall plant nuclear safety, operations support, and engineering at each site reports to the president and chief nuclear 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.

The individuals fulfilling the following management functions report to the executive identified in the paragraph 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. Conversely, responsibilities may be fulfilled by more than one individual.

- The individual responsible for quality control has the responsibility for establishing, controlling, and implementing the quality control inspection program. The individual responsible for quality control has the authority and responsibility to escalate matters when needed.

- 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.

- The individual responsible for plant modification provides direction, control, and overall supervision of the implementation of plant modifications and assigned maintenance.

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

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

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

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

A.2

- The individual responsible for engineering is responsible for the development and maintenance of engineering programs, policies, and procedures and for providing engineering services.

- 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.

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.

A.3

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 individual responsible for oversight and to the president and chief nuclear officer.

B.12

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 control or an individual responsible for materials, purchasing, and contracts as appropriate.

D.1

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". The ISE function will be maintained by the Nuclear Quality Assessment Engineering focus group.

202

17.2.1.2 Quality Services

Table 1

B.2.f

A random review of the implementation of lower tier administrative procedures will be conducted through QS oversight activities such as biennial audits, surveillances or assessments to assure compliance with QA Program requirements.

203

17.2.1.3 Onsite Safety Committee (OSC, also known as the Plant Operations Review Committee (PORC))

The OSC shall function to advise the Plant General Manager on all matters related to nuclear safety and shall provide review capability in the areas of:

1. Nuclear power plant operations.
2. Radiological safety.
3. Maintenance.
4. Nuclear engineering.
5. Nuclear power plant testing.
6. Technical advisory engineering.
7. Chemistry.
8. Quality control.
9. Instrumentation and control.

The Chairman Onsite Safety Committee shall appoint all members of the OSC. The membership shall consist of a minimum of one individual from each of the areas designated above.

OSC members and alternates shall meet or exceed the minimum qualifications of ANSI N18.1-1971 Section 4.4 for comparable positions. The nuclear power plant operations individual shall meet the qualifications of Section 4.2.2 and the maintenance individual shall meet the qualifications of Section 4.2.3.

All alternate members shall be appointed in writing by the OSC Chairman to serve on a temporary basis; however, no more than two alternates shall participate as voting members in OSC activities at any one time. 204

The OSC shall meet at least once per calendar month and as convened by the OSC Chairman or his designated alternate. A quorum of the OSC shall consist of the Chairman or his designated alternate and at least one half of the members including alternates.

The OSC shall be responsible for:

1. Review of new procedures requiring 10 CFR 50.59 safety evaluations and changes to existing procedures that require 10 CFR 50.59 safety evaluations.

2. Review of all proposed tests and experiments that affect nuclear safety.

3. Review of all proposed changes to the Technical Specifications.

4. Review of all proposed changes or modifications to plant systems or equipment that affect nuclear safety.

5. Investigation of all violations of the Technical Specifications including the preparation and forwarding of reports covering evaluation and recommendations to prevent recurrence to the Plant General Manager, and to the Chairman of the Company Nuclear Review Board.

6. Review of all reportable events of the type described in 10 CFR 50.73.

7. Review of facility operations to detect potential safety hazards.

8. Performance of special reviews, investigations or analyses and reports thereon as requested by the Chairman of the Company Nuclear Review Board.

The OSC shall:

1. Recommend to the Plant General Manager, written approval or disapproval of items considered under OSC responsibility 1 through 4 above.

2. Render determinations in writing with regard to whether or not each item considered under OSC responsibility 1 through 5 above constitutes an unreviewed safety question.

3. Provide written notification within 24 hours to the Senior Vice President and the Company Nuclear Review Board of disagreement between the OSC and the Plant General Manager, however, the Plant General Manager shall have responsibility for resolution of such disagreements pursuant to Technical Specification 6.1.1.

The OSC shall maintain written minutes of each meeting and copies shall be provided to the Plant General Manager and Chairman of the Company Nuclear Review Board.

204

17.2.1.4 Company Nuclear Review Board (CNRB)

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

1. Nuclear power plant operations.
2. Nuclear engineering.
3. Chemistry and radiochemistry.
4. Metallurgy.
5. Instrumentation and control.
6. Radiological safety.
7. Mechanical and electrical engineering.
8. Administrative control and quality assurance practices.
9. Nondestructive testing.
10. Emergency planning.

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The Chairman and all members of the CNRB shall be appointed by the FENOC President. The membership shall consist of a minimum of five individuals who collectively possess a broad based level of experience and competence enabling the committee to review and audit those activities designated above and to recognize when it is necessary to obtain technical advice and counsel. An individual may possess expertise in more than one specialty area. The collective competence of the committee will be maintained as changes to the membership are made.

Appointment of committee members, chairman, alternate chairman, and task force members will be documented in the meeting minutes. Consultants shall be utilized as determined by the CNRB Chairman to provide expert advice to the CNRB.

The CNRB shall meet at least twice per year. A quorum of the CNRB shall consist of not less than a majority of the principles or duly appointed alternates. The Chairman or his appointed alternate shall be present for all formal meetings. No more than a minority of the quorum shall have line responsibility for operation of the facility. No more than two alternates shall participate as voting members in CNRB activities at any one time.

The CNRB shall review:

1. The safety evaluations for a) changes to procedures, equipment or systems and b) tests or experiments completed under the provision of Section 50.59, 10 CFR, to verify that such actions did not constitute an unreviewed safety question.

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

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

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4. Proposed changes in Technical Specifications or licenses.

5. Violations of applicable statutes, codes, regulations, orders, Technical Specifications, license requirements, or of internal procedures or instructions having nuclear safety significance.

6. Significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety.

7. All reportable events of the type described in 10 CFR 50.73.

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

9. Reports and meeting minutes of the OSC.

10. The results of the Radiological Environmental Monitoring Program annual report provided in accordance with Technical Specification 6.9.1.10, prior to submittal.

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

C.2.a.2

1. The conformance of facility operations to provisions contained within the Technical Specifications and applicable license conditions.

2. The performance, training, and qualifications of the entire facility staff.

3. The results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, or methods of operation that affect nuclear safety.

4. The performance of activities required by the Quality Assurance Program to meet the criteria of Appendix "B", 10 CFR 50.

5. Any other area of facility operation considered appropriate by the CNRB or the Senior Vice President. 206

6. The Facility Fire Protection Program and implementing procedures at least once per 24 months.

7. 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

8. 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.

9. The Offsite Dose Calculation Manual and implementing procedures.

10. The Process Control Program and implementing procedures for processing and packaging of radioactive waste.

The CNRB shall report to and advise the FENOC President on those areas of responsibility specified in the paragraphs above that list CNRB review and audit topics.

Records of CNRB activities shall be prepared, approved and distributed as indicated by the following:

1. Minutes of each CNRB meeting shall be prepared for and approved by the CNRB Chairman or Vice Chairman within 30 days following each meeting. 205

2. Reports of reviews encompassed by the CNRB review topics listed above, shall be documented in the CNRB meeting minutes.

3. Audit reports encompassed by the CNRB audit topics listed above, shall be forwarded to the Senior Vice President and to the management positions responsible for the areas audited within 30 days after completion of the audit.

A.3.b TABLE 1 PL ANSI N45.2.13 PP 1,2,2

17.2.1.5 Contractors

Contractors who perform activities affecting quality shall be required to establish and implement a QA program that is consistent with the pertinent requirements of 10 CFR 50, Appendix B and reviewed by BVPS Quality Services or implement the applicable portions of the BVPS Operations Quality Assurance Program. The applicable QA Program shall be in effect when the safety-related work is performed. The licensee retains responsibility for assuring that the requirements of 10 CFR 50, Appendix B are satisfied regardless of specific responsibilities assigned to contractors or vendors.

17.2.1.6 Vendors

Vendors supplying safety-related items shall document and implement a Quality Assurance Program that addresses safety-related activities performed by the vendor. Quality Services shall review and concur with the vendor's Quality Assurance Program. The vendor's Quality Assurance Program shall be in effect when the safety-related work is performed.

17.2.2 Quality Assurance Program

The Operations Quality Assurance Program is established and managed by the Manager, Nuclear Quality Assessment Beaver Valley who reports to the Director, Oversight and Process Improvement. 201

A.2.a.1.a The Manager, Nuclear Quality Assessment Beaver Valley has the authority to report quality matters to any level necessary within Corporate Management, including any member of the Executive Management Group who have nuclear responsibility in order to establish effective corrective action.

A.4.b The effort of the Manager, Nuclear Quality Assessment Beaver Valley is directed solely to quality assurance. No responsibilities for station costs or schedule considerations are assigned to this position.

Qualification requirements of the principal Nuclear Quality Assessment positions are described in Table 17.2-1. 207

The Quality Assurance Program for the operations phase of BVPS is the Operations Quality Assurance Program. The Operations Quality Assurance Program Introduction and Letter of Promulgation was prepared by the Manager, Nuclear Quality Assessment Beaver Valley and approved by the President and Chief Nuclear Officer, FENOC. The Manager, Nuclear Quality Assessment Beaver Valley is responsible for the approval of the Operations Quality Assurance Program, Quality Assurance Procedures and appendices. The Manager, Configuration Management is responsible for the controlled distribution of Quality Assurance Procedures and appendices. Table 17.2-2 cross references select procedures contained in the Operations Quality Assurance Program with the 18 Criteria of 10 CFR 50 Appendix B. 208 209

200

The Operations Quality Assurance Program was implemented at BVPS-2 at least 90 days prior to fuel loading.

The Operations Quality Assurance Program applies to plant operations, maintenance, and modifications associated with safety-related structures, systems, and components. (Appended to this Operations Quality Assurance Program is the Nuclear Fuel Program.)

A.1

The Nuclear Fuel Program appendix establishes the requirements necessary for the procurement, fabrication, receipt of fuel assemblies, and administrative controls. In addition, this appendix shall be applied to all activities of the fuel contractor as such activities relate to the procurement and fabrication of nuclear fuel assemblies and related components, including control rod assemblies and burnable poison assemblies.

210

Activities and software which affect the safety function or quality of safety related structures, systems and components are also subject (to a degree consistent with their importance to safety and complexity) to the controls of the Operations Quality Assurance Program. Activities in this category and the extent to which the Operations Quality Assurance Program requirements apply are described in the appendices and include areas such as fire protection and station blackout.

The extent to which the Operations Quality Assurance Program utilizes the NRC Regulatory Guides is as follows:

Table 1

For BVPS-1, the NRC Regulatory Guides and American National Standards Institute (ANSI) Standards are utilized as indicated in Section 1.3.4 of the BVPS-1 Updated Final Safety Analysis Report. The following exception should be noted: An alternate set of Quality Assurance Terms and Definitions has been developed, and is included as Appendix A to the Quality Assurance Program Manual. BVPS-1 structures, systems, and components controlled by the Operations Quality Assurance Program are identified in the BVPS-1 UFSAR, Appendix A, Table A.1-1.

For BVPS-2, UFSAR Section 1.8 describes the extent to which the Licensee will conform to various provisions of the Regulatory Guides.

Table 1
B.2.a

BVPS-2 structures, systems, and components controlled by the Operations Quality Assurance Program are listed in Tables 3.2-1 and 3.2-2.

A.2.c.9
B.11

In addition to the Operations Quality Assurance Program, a quality control program is established which describes the activities performed by Quality Control and NDE.

211

B.12.f

Quality Control and NDE are independent of station operations and maintenance activities.

Table 1
pp B
ANSI N18.7
pp 5.1 & 5.3

Activities affecting quality will be accomplished under suitably controlled conditions including:

1. The use of special processes, tools, test equipment, skilled personnel,

Table 1
pp E

Table 1 A B
ANSI N 18.7 A 5.1 + 5.3
Table 1 A E
B.8 B.12

2. Proper environmental conditions, such as adequate cleanliness,

3. Satisfactory evidence of all prerequisites having been met, and

4. Adequate testing and inspections performed.

The Operations Quality Assurance Program requires that indoctrination and training be provided to assure that:

A.3 A.5

1. Personnel performing activities affecting quality are appropriately trained in the principles and techniques of the activity being performed,

ANSI N18.7 A 3.3 Table 1 A B

2. Personnel performing activities affecting quality are instructed as to purpose, scope, and implementation of governing manuals, policies, and procedures,

A.5

3. Appropriate training procedures are established, and

A.5

4. Proficiency of personnel performing activities affecting quality is maintained.

Table 1 A B ANSI N18.7 A 3.3

Indoctrination and training measures assure that all responsible organizations and individuals are aware of quality policies, procedures and manuals and have an adequate understanding of these requirements, the methods of meeting such requirements, and the methods of enforcement.

Table 1 A L ANSI N45.2.13 A 1.2.2

The quality assurance programs of outside organizations participating in the maintenance, repair, or modification are reviewed by Nuclear Quality Assessment. This review includes the subject of indoctrination and training and will be to assure that other organizations adequately provide for indoctrination and training of their personnel who perform activities affecting quality.

A.2.a.1

The Manager, Nuclear Quality Assessment Beaver Valley, the Quality Control Supervisor, and the NDE Level III have sufficient authority and organizational freedom to:

A.4.6

1. Identify quality problems,

2. Initiate, recommend, or provide solutions to quality problems through designated channels,

3. Verify implementation of solutions to quality problems, and

4. Control further processing, delivery, or installation of a nonconforming item, deficiency, or unsatisfactory condition until proper dispositioning has occurred.

A.4.6

The Operations Quality Assurance Program delineates in writing the responsibility and authority of the Manager, Nuclear Quality Assessment Beaver Valley and staff to stop unsatisfactory work pending resolutions of quality matters.

A.2.a.1

Disputes involving quality are resolved as described in Section 17.2.16.

B.12.f
C.1.C

The Operations Quality Assurance Program requires that the individuals assigned the responsibility for checking, auditing, inspecting, or otherwise verifying that any activity has been correctly performed, shall be independent of those directly responsible for the performance of that activity.

The Operations Quality Assurance Program goals are to:

A.2

1. Identify quality-related functions for the licensed plants and designated responsibilities for performing those functions, and delegate the authority necessary to meet the assigned responsibilities.

B.14

2. Specify control measures for quality-related documents.

A.5
TABLE 1 FP B
ANSI N18.7
FP 5.3

3. Prescribe administrative controls to assure that adequate training and planning are provided and prerequisites are met prior to performance of critical quality achievement, and quality verification tasks.

B.8
B.12, B.13

4. Provide for testing, inspection, surveillance, and auditing to prevent, or detect and correct deviations and deficiencies that would degrade the installed plant quality.

B.15
TABLE 1 FP I
ANSI N45.2.9

5. Provide for accumulation and retention of records that define or attest to the quality of plant structures, systems, and components.

Table 1
FP B.2.a

6. Identify the safety-related elements of the station.

Activities affecting quality will be accomplished under suitably controlled conditions including:

This information is repeated from Pages 9 & 10

1. The use of special processes, tools, test equipment, skilled personnel,

2. Proper environmental conditions, such as adequate cleanliness,

3. Satisfactory evidence of all prerequisites having been met, and

4. Adequate testing and inspections performed.

Table 1 FP B
ANSI N18.7
FP 4.1

The Operations Quality Assurance Program requires that a management review of the status and adequacy of the QA Program be conducted on a biennial basis by the Senior Vice President or appropriate designee.

The Operations QA Program is reviewed at a regular frequency and revised as appropriate, based upon the results of the review.

17.2.3 Design Control

B.2
B.3

The Operations QA Program provides measures to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. The Operations QA Program includes provisions for assuring that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled.

Table 1
RG
ANSI N45.2.11
R 3.2

The design control measures applied to design changes include provisions for the selection and review for suitability of the application of materials, parts, equipment, and processes that are essential to the safety-related functions of structures, systems, and components.

B.2
Table 1
RG
ANSI N45.2.11
R3.2

Design control measures will provide for, but are not limited to, the following:

1. Reactor physics,
2. Stress, thermal, hydraulic, and accident analyses,
3. Compatibility of materials,
4. Suitability of application of materials, parts, equipment, and processing,
5. Accessibility for operation, in-service inspection (ISI), maintenance, and repair,
6. Acceptance criteria for inspections and tests, and
7. Applicability of codes and standards.

B 3
Table 1
RG
ANSI N45.2.11
R6

The adequacy of design is verified or checked by appropriate methods such as:

1. Performance of design reviews,
2. Use of alternate or simplified calculational methods, and
3. Performance of a suitable testing program.

If a testing program is used in lieu of other verifying or checking processes, to verify the adequacy of a design feature, the test program will include suitable qualification testing of a prototype unit under the most adverse design conditions.

B.3

The Operations QA Program requires that the verifying or checking process be performed by individuals or groups other than those who performed the original design, but who may be from the same organization.

B.2

The Operations QA Program establishes measures for the identification and control of design interfaces and for coordination among participating design organizations. These measures require the establishment of procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces.

B.14 The Operations QA Program requires that design changes be incorporated into revised design documents, including specifications, procedures, and as-built drawings. The revised design documents will be distributed to responsible individuals and organizations in a controlled manner, and obsolete documents will be removed and disposed of in a similarly controlled manner.

B.2 B.14 The Operations QA Program provides measures to assure that changes or deviations from specified design requirements or quality standards are identified, documented, and controlled.

B.2 Design changes at BVPS after release and acceptance of design documents are subject to design control measures commensurate with those originally applied to the design. The Operations QA Program requires that, whenever practical, changes should be reviewed and approved by organizations that originally performed the review and approval of the design. In the event that it is not practical for the original organizations to perform the required review and approval, other responsible organizations will be designated. The designated organization shall have access to pertinent background information, have competence in the specific design area of interest, and have adequate understanding of the requirements and intent of the original design.

B.2.A Design documentation, including design review reports, specifications, drawings, and revisions thereto shall be collected, filed, stored, and maintained in a systematic manner.

The Operations QA Program requires that all design changes of safety-related items shall be reviewed by the OSC and the CNRB in accordance with this quality assurance program description and the requirements of the Operations QA Program. Safety evaluations are conducted, as required by 10 CFR 50.59. 204 205

17.2.4 Procurement Document Control

B.4.e The Operations QA Program establishes measures to assure that applicable regulatory requirements, design bases, quality assurance program requirements, and other requirements which are necessary to assure quality are suitably included or referenced in the documents for procurement of material, equipment, and services, whether purchased by the Licensee or by its contractors or subcontractors.

B.4 Table 1 TPB ANSI N18.7 PS.2.13.1(3) The procurement documents shall contain provisions which allow access to vendor facilities and records for the purpose of audits and inspections. The procurement document will define, as applicable, the requirements for the retention, control, submittal, and maintenance of records such as drawings, specifications, procedures, qualifications, material, chemical and physical test results.

B.4 When applicable, procurement documents shall contain basic technical requirements including component identification, drawings, specifications, codes and industrial standards, including their revision status, tests and inspection requirements, and special process instructions for activities

B.4

such as fabrication, cleaning, erecting, packaging, handling, shipping, storing, and inspecting.

B.4 Table 1 PL ANSI N45.2.13 #8

Procurement documents are required to specify appropriate reporting and dispositioning requirements for vendor identified nonconformances.

B.4

The Operations QA Program requires that procedures be established which describe the sequence of preparation, review, approval, and control of procurement documents, and will identify the responsibilities of the individuals and organizations which are associated with those activities.

B.1 Table 1 PL ANSI N45.2.13 #3.3

The procurement documents will be reviewed to determine that all quality requirements are correctly stated, and to assure that the procurement document has been prepared in accordance with the requirements of the Operations QA Program. The review of procurement documents will be performed by an individual or organization other than the person responsible for preparing the procurement documents, in accordance with the provisions of the Operations QA Program. 212

B.14 Table 1 PL ANSI N45.2.13 #3.3

Revisions or changes to quality or technical requirements in procurement documents will be subjected to the same review requirements as the original document. The review and approval of procurement documents, including any revisions or changes thereto, will be documented, and such evidence will be maintained available for verification.

B.4.b B.4.e B.4.i

For items or services designed or fabricated specifically as safety-related, the supplier's QA Program will be evaluated by the Supplier Quality Group. Purchasing or its designee shall not issue the purchase order for safety related items unless the supplier(s) is on the BVPS Qualified Suppliers List. Purchase orders for these items shall require the supplier to implement appropriate portions of their QA Program. The evaluation and selection will be based on factors such as:

1. The ability to comply with the pertinent provisions of 10 CFR 50, Appendix B, and to meet the established technical and quality requirements set forth in the procurement documents,

2. Previous performance of the supplier and experience in supplying similar items of the type being procured,

3. Audits and evaluations of the supplier's Quality Assurance Program.

4. A review of qualification information supplied by another utility or outside organization.

An engineering evaluation will be performed to verify the safety related function of off the shelf items (components and piece parts). Off the shelf type items which are used in safety related applications (i.e., perform a safety related function) may be purchased as safety-related, or purchased and then dedicated in accordance with the BVPS Commercial Grade Dedication Program.

B.4.b
Table 1 PL
ANSI N45.2.13
¶ 3.2.4

The Operations QA Program includes provisions for extending applicable requirements of procurement documents to lower tier subcontractors and suppliers, including Purchaser's access to facilities and records.

A.1
B.1.c
Table 1 PB
ANSI N18.7

17.2.5 Instructions, Procedures, and Drawings

The Operations QA Program requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and will be accomplished in accordance with these instructions, procedures, or drawings.

B.1.d
Table 1 PB
ANSI N18.7

These instructions, procedures, or drawings include, as appropriate, the requirements for special tools, test equipment, processes, controls, or skills, in order to attain the required level of quality. The instructions, procedures, or drawings will include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Table 1
PB
ANSI N18.7
B.1

The Beaver Valley Power Station Operating Manual includes instructions and procedures covering the requirements of NRC Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operations)", Appendix A, as they apply to Pressurized Water Reactors. The Operating Manual is implemented, enforced, and maintained by the Manager, Operations and staff. These procedures and/or instructions include step-by-step procedures for operating and securing the various systems, actions to be taken in the event of abnormal or emergency conditions and precautions to preclude exceeding system or equipment design. The applicable requirements of NRC Regulatory Guide 1.33 were used as guidance in the development of startup, operating, emergency, maintenance, and testing procedures. Maintenance, repair, modifications, testing, and refueling activities which affect the quality or safety of Category I items are prescribed by documented instructions, procedures, or drawings. These instructions, procedures, or drawings include, as appropriate, the requirements for special tools, test equipment, processes, controls, or skills, in order to attain the required level of quality. 213

B.1

Each procedure or revision thereto of Technical Specification 6.8.1 shall be reviewed and approved, as described below, prior to implementation.

Each procedure or revision thereto shall be reviewed by an Independent Qualified Reviewer (IQR), who is knowledgeable in the functional area affected. This IQR is not the individual who prepared the procedure or associated procedure revision. The IQR shall ensure that cross disciplinary reviews of new procedures and procedure revisions are completed prior to approval of the procedure. 214

The responsible IQR shall ensure each procedure or revision thereto includes a determination of whether a procedure requires a 10 CFR 50.59 safety evaluation. If a procedure or revision thereto requires a 10 CFR 50.59 safety evaluation, the Responsible Discipline Manager or his designee shall ensure that the procedure, with the associated 10 CFR 50.59 safety

evaluation, is forwarded to the OSC for review. Pursuant to 10 CFR 50.59, NRC approval of items involving unreviewed safety questions shall be obtained prior to approval of the procedure or revision thereto for implementation. Final procedure approval shall be by the Responsible Discipline Manager or his designee, as specified in administrative procedures.

214

IQRs shall meet the applicable qualifications of ANSI/ANS 18.1-1971, Section 4.2.4 for a Technical Manager. IQRs shall be qualified to perform 10 CFR 50.59 safety evaluations under a training program which meets the requirements of ANSI/ANS 18.1-1971, Section 5.3. Personnel recommended to be IQRs shall be reviewed by the OSC and approved and documented by the Plant General Manager as specified in administrative procedures. Responsible Discipline Managers having authority to approve procedures, including any designee, shall meet the applicable qualifications of ANSI/ANS 18.1-1971, Section 4.2.4 for a Technical Manager.

Temporary changes to procedures will be approved by two knowledgeable members of the Beaver Valley staff prior to implementation. At least one of these persons will be a member of supervision. If the change affects operations procedures, at least one of these persons will hold a senior reactor operator license for the unit affected. Prior to implementation, the OSC shall review and recommend approval of temporary changes to procedures which require a 10 CFR 50.59 safety evaluation. Within 14 days of implementation, temporary changes will be reviewed by an independent qualified reviewer and approved by the responsible manager or his designee.

215

17.2.6 Document Control

The Operations QA Program establishes measures to control the issuance of documents such as instructions, procedures, and drawings, affecting the quality of safety-related structures, systems, and components.

The Operations QA Program includes provisions for assuring that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel, and are distributed to and used at the location where the prescribed activity is performed, prior to the onset of work. Control measures are applied to assure that obsolete or out-dated information is removed to prevent its inadvertent use or application.

B.14

Changes to approved and released documents will be reviewed and approved by the same individuals or organizations which performed the original review and approval, whenever practical. In the event that it is not practical for the original individuals or organizations to perform the required review and approval, other responsible individuals or organizations will be designated, provided the designated individuals or organizations have access to pertinent background information, have competence in the particular area of interest, and have adequate understanding of the requirements and intent of the original documents.

B.14

Each organization involved in activities affecting quality is responsible for identifying documents requiring control and for specifying requirements for review, approval, and issuance of these documents, including changes.

17.2.7 Control of Purchased Material, Equipment, and Services

B.4
B.5

The Operations QA Program establishes measures to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to written procurement documents. The measures include provisions, as appropriate, for source evaluation and selection, vendor surveillance, source inspection, receipt inspection, examination of tests and/or inspection reports from the supplier, examination of objective evidence from the supplier such as certificates of conformance, or any combination of these. The extent and frequency of source evaluations shall be governed by factors such as the importance, complexity, quantity of items involved, level of confidence in the supplier established by past performance, and the ability to meet the applicable requirements of 10 CFR 50, Appendix B.

B.4
Table 1 PD
ANSI N45.2
P5.2

Receipt inspection will be performed by designated individuals, using written predetermined instructions and/or checklists in accordance with the provisions of the Operations QA Program. The receipt inspection will include examination of material and equipment to assure that the quality had not been impaired during transit, that the correct count had been received, and that required procurement quality records had been received at the site prior to use or installation of the material or equipment.

The documentary evidence that the material and equipment conform to the procurement requirements will have been received at BVPS prior to installation or use of such material and equipment.

Table 1 PB
ANSI N 18.7
P5.2.6

In cases where documentary evidence is not available, the associated material or equipment shall be considered nonconforming. Until suitable documentary evidence is available at the nuclear power plant site to show the material or equipment is in conformance, affected systems shall be considered to be inoperable and reliance shall not be placed on such systems to fulfill their intended safety functions.

B.4
B.5

The Operations QA Program requires that the effectiveness of the control of quality by contractors and suppliers will be assessed by BVPS, or its designee, at intervals consistent with the importance, complexity, and quantity of the product or service.

A.5
B.4
Table 1 P Para
ANSI N45.2.6
ANSI N45.2.23

The Operations QA Program also includes measures to assure that source inspections or audits are conducted by qualified personnel to determine conformance to the requirements of procurement documents, specifications, drawings, and applicable codes and standards. Such inspections and/or audits are determined in advance and performed in accordance with written instructions.

17.2.8 Identification and Control of Material, Parts, and Components

B.6 TABLE 1 ¶D N45.2.2

The Operations QA Program requires that measures be established for the identification and control of materials, parts, and components, including partially fabricated assemblies. These measures shall assure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, erection, installation, and use of the item. Physical identification shall be used to the maximum extent possible. Where physical identification is either impractical or insufficient, physical separation, procedural control, or other appropriate means will be employed. Identification may be either on the item or on records traceable to the item as appropriate. Where identification marking is employed, the marking will be clear, unambiguous, and indelible, and shall be applied in such a manner as not to affect the function of the item. Markings will be transferred to each part of an item when subdivided, and shall not be obliterated or hidden by surface treatment or coatings unless other means of identification are substituted. Traceability shall be identified in procurement documents or by reference to the requirements of applicable codes and standards.

B.6 B.10

These identification and control measures will be designed to prevent the use of incorrect or defective material, parts, and components. Materials and equipment received at BVPS will be properly identified to correspond with the receiving documentation and quality records.

B.6

Identification of installed items will be retained in order to provide traceability to associated quality documentation.

17.2.9 Control of Special Processes

B.11

The Operations QA Program establishes measures to assure that special processes, including welding, heat treating, and non-destructive testing are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

A.5, B.11 TABLE 1 ¶B ANSI N18.7 ¶5.2.18

Documentation will be maintained for currently qualified personnel, processes, and equipment in accordance with the requirements of governing codes and standards. For special processes not covered by existing codes and standards, or where the item quality requirements exceed the requirements of established codes and standards, the necessary qualification of personnel, processes, or equipment will be defined.

B.4 TABLE 1 ¶B ANSI N18.7 ¶5.2.13.1

In addition, vendors and contractors supplying safety-related material, equipment, or services will be required to address the applicable portions of these requirements in written instructions and procedures. Outside service organizations performing special processes at BVPS will use procedures which are reviewed and approved by the Licensee. 216

B.12 TABLE 1 ¶B ANSI N.18.7 ¶5.2.17

17.2.10 Inspection

The Operations QA Program requires that measures for the inspection of activities affecting quality be established to verify conformance with the documented instructions, procedures,

B.12 Table 1 RB ANSI N18.7 R 5.2.17 Table 1 RB ANSI N18.7 R 5.2.17

and drawings for accomplishing the activity. Such inspection will be performed by individuals other than those who performed the activity being inspected. Examinations, measurements, or tests of materials or processed products will be performed for each work operation, where necessary, to assure quality. Indirect control of monitoring the processing method, equipment, and personnel will be provided when inspection of processed material or products is impossible or disadvantageous. Both inspection and process monitoring will be provided when control is inadequate without both.

Table 1 RB ANSI N18.17 R 5.2.17

When required by governing codes and standards, inspectors will be qualified in accordance with those codes and standards. In these cases documentation demonstrating the current qualifications of the inspectors will be maintained. Also inspection procedures will be made available for use by the inspector prior to the performance of the inspection. Such procedures will include accept/reject criteria, a description of the method of inspection, and a directive for the reporting of results including nonconformance.

B.12 B.13 Table 1 RB ANSI N18.7 R 5.3.10

Measures will include provisions which require items that have been reworked or repaired following the original inspection to be subjected to a re-inspection. Acceptance criteria for the re-inspection will be, as a minimum, equal to that which was specified for the original inspection.

B.13

B.11, B.12 During the operational phase, Quality Control and NDE will be responsible for performing the inspection requirements. 201

B.12.C Work shall not proceed beyond mandatory inspection holdpoints, which require witnessing or inspecting, without the consent of the Licensee or its designated representative. Specific holdpoints will be indicated in appropriate documents.

A program for inservice inspection of completed structure, systems, and components will be established by BVPS in accordance with the requirements of Section XI of the ASME Boiler & Pressure Vessel Code. 217

The Inservice Inspection (ISI) Program including inspection schedules, procedures, etc., shall be implemented, administered, and maintained in a controlled manner by the Licensee.

B.8 B.5 A.1.C Table 1 RB ANSI N18.7 R 5.2.19

17.2.11 Test Control

The Operations Quality Assurance Program requires that a test program be established to assure that structures, systems, and components will perform satisfactorily in service. Testing will be performed by trained and qualified personnel in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. The test program will include, as appropriate, proof tests, functional tests, and operational tests of structures, systems, and components.

B.8.d.1 Test procedures shall include:

1. Detailed instructions regarding the method by which the test shall be performed,

2. The identification of requirements for any special processes to be used during testing, 218

3. The identification of holdpoints for witnessing by a specified inspector,

4. Definite acceptance and rejection limits, and

5. The means for recording and maintaining test data and results.

As appropriate, test procedures shall include prerequisites such as calibrated instrumentation, adequate test equipment, and instrumentation, including their accuracy requirements, completeness of item to be tested, suitable and controlled environmental conditions, and provisions for data collection and storage.

Test results will be documented and evaluated by qualified personnel to assure that test requirements have been satisfied.

17.2.12 Control of Measuring and Test Equipment

The Operations QA Program establishes measures to assure that tools, gages, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods or prior to use in order to maintain accuracy within necessary limits. Specific procedures will include the identification of the calibration technique, the calibration frequency, and the method established for the tagging of measuring devices to positively indicate their status. The criteria used to establish the method and interval of calibration shall be based on the type of equipment, stability characteristics, required accuracy, and other conditions affecting the measurement. Provisions will include the requirement for the maintenance of documentation, which will indicate the status of equipment including the last and future calibration dates and the results of previous calibration tests. Provisions will require that a piece of measuring or test equipment that is found to be consistently out of calibration will be repaired or replaced. 219

The Operations QA Program requires that all measuring and test equipment will be calibrated on or before the calibration due date. All items which have been measured by equipment found to be out of calibration will be suspect, and an evaluation will be made to determine what action is necessary to assure compliance of the item to its applicable specification.

The laboratory standards against which measuring and testing devices are calibrated are maintained, calibrated, and used in an environment compatible with the required accuracy and operating characteristics. The requirement includes control of temperature, humidity, and cleanliness.

All measuring and testing devices are calibrated against certified equipment having known valid relationships to nationally recognized standards (for example, the National Institute of Services and Technologies). Reference standards

B.9.e
B.9.f

are calibrated against equipment of a higher level and a closer tolerance than the reference standard being calibrated. Measuring and test equipment is calibrated against working standards having tolerances not greater than one-fourth of the tolerance of the equipment being calibrated unless limited by the "State-of-the-art." If no national standard exists, the method of calibration is documented.

17.2.13 Handling, Storage, and Shipping

B.7

The Operations QA Program establishes measures to control the handling, storage, shipping, cleaning, and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration. When necessary for particular products, special protective environments such as inert gas atmosphere, specific moisture content levels, and temperature levels will be specified and provided. The methods of verification of the existence of these environments during handling, storage, and shipping shall also be specified.

Table 1 RB ANSI N18.7 RS.2.13.4

17.2.14 Inspection, Test, and Operating Status

B.10.a
B.10.b

The Operations QA Program requires that measures be established to indicate by the use of markings such as stamps, tags, labels, routing cards, or other means, the status of inspections and tests performed upon individual items of the nuclear power plant. These measures will provide for the identification of items which have satisfactorily passed required inspections and tests, where necessary, to preclude the inadvertent by-passing of such inspections and tests. These measures will include provisions for the control of issuance and use of status indicators including the authority for application and removal of identification markings. Measures shall also be established for indicating the operating status of structures, systems, and components of the nuclear power plants, such as by tagging valves and switches, in order to prevent inadvertent operation.

17.2.15 Nonconforming Material, Parts, or Components

A.6.d

Table 1 RB ANSI N18.7 RS.2.14

B.13

Table 1 RD ANSI N45.2.2 RS.3.2 & 6.2.1

The Operations QA Program establishes measures to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to the affected organization. The responsibility and authority for the disposition of nonconforming items will be defined and a method of notification to affected organizations will be documented in instructions and procedures. Inspection requirements and the acceptance criteria for repairs, replacements, or modifications will be consistent with those imposed originally. Nonconforming items will be reviewed and accepted, rejected, repaired, or reworked in accordance with documented procedures. Nonconforming items will be positively identified and, whenever practical, physically separated into hold areas. Access to such hold areas, including the authority for the removal of such items, will be specified.

Table 1 RA 2.2.6 ANSI N45.2.13, 3.2.6, 8.2

Outside contractors who identify nonconformances while performing safety-related work will be required to obtain Licensee approval of corrective action waivers. Outside

Table 1 R L-4 L.2.6
ANSI N45.2.13 R 5.2.6, 8.2
L→ B.4

contractors are also required to obtain Licensee approval when modifying a requirement which was specified or approved by the Licensee.

17.2.16 Corrective Action

A.6
B.13

The Operations QA Program requires that measures be established to assure that conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures will assure that the cause of the condition is determined and corrective action taken to preclude repetition.

Table 1 R B
ANSI N18.7
R 5.2.11

The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken will be documented and reported to appropriate levels of management. Provisions will be established for the maintenance of documents providing objective evidence that conditions adverse to quality have been identified and corrective action has been taken.

A.6

The Manager, Nuclear Quality Assessment Beaver Valley has the authority to prepare written notices to the appropriate level of management requesting changes and/or revisions to any program or procedure which may have resulted in the generation of repeated nonconformances. In addition, the Manager Nuclear Quality Assessment Beaver Valley, the Quality Control Supervisor, the NDE Level III and designated staff may direct the stopping of all work pending corrective action.

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A.4

Table 1 R I
ANSI N45.2.9

17.2.17 Quality Assurance Records

The Operations QA Program requires that sufficient records be maintained to furnish evidence of activities affecting quality. The records will include at least the following: operating logs and results of reviews, drawings, inspections, tests, audits, monitoring of work performance, and material analyses. The records will also include closely related data such as qualifications of personnel, procedures, and equipment.

Table 1 R B
ANSI N18.7
R 5.2.17 &
5.3.10
B.15

Inspection and test records will, as a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. BVPS sections responsible for generating records for a particular activity will transmit these records to the Beaver Valley Records Center.

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A records management system has been established to assure that records will be identifiable and retrievable. Optical disk document imaging systems for the storage and retrieval of record copies of quality assurance records may be used provided the requirements of Generic Letter 88-18, "Plant Record Storage On Optical Disks," are satisfied with the exception that optical disk storage requirements meet BVPS commitments to Regulatory Guide 1.88 for records storage. All station records relating to nuclear safety are retained as required by 10 CFR 50.71.

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A2, B.15
Table 1 R I
ANSI N45.2.9

The Licensee has established requirements concerning record retention such as duration, location, and assigned

A.2, B.15
Table 1 A I
ANSI N45.2.9

responsibility. Provisions include facilities for permanent records retention, including steps taken to assure preservation, protection, and controlled access.

A.2

The Configuration Management Section is responsible for the generation and maintenance of a document listing the location and type of all pertinent documents which will be stored offsite.

The following records shall be retained for at least five (5) years:

1. Records and logs of facility operation covering the time interval at each power level.
2. Records and logs of principal maintenance activities, inspections, repair and replacement of principal items of equipment related to nuclear safety.
3. All reportable events of the type described in 10 CFR 50.73.
4. Records of surveillance activities, inspections and calibrations required by the Technical Specifications.
5. Records of reactor tests and experiments.
6. Records of changes made to operating procedures.
7. Records of radioactive shipments.
8. Records of sealed source leak tests and results.
9. Records of annual physical inventory of all sealed source material of record.

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

1. Records and drawing changes reflecting facility design modifications made to systems and equipment described in the Final Safety Analysis Report.
2. Records of new irradiated fuel inventory, fuel transfers and assembly burnup histories.
3. Records of facility radiation and contamination surveys.
4. Records of radiation exposure for all individuals entering radiation control areas.
5. Records of gaseous and liquid radioactive material released to the environs.
6. Records of transient or operational cycles for those facility components designed for a limited number of transients or cycles.
7. Records of training and qualification for current numbers of the plant staff.

8. Records of in-service inspections performed pursuant to the Technical Specifications.
9. Records of Quality Assurance activities required by the QA Manual.
10. Records of reviews performed for changes made to procedures or equipment or reviews of tests and experiments pursuant to 10 CFR 50.59.
11. Records of meetings of the OSC and the CNRB.
12. Records of the service lives of all hydraulic and mechanical snubbers including the date at which the service life commences and associated installation and maintenance records.
13. Records of analyses required by the Radiological Environmental Monitoring Program.
14. Records of reviews performed for changes made to the Offsite Dose Calculation Manual and the Process Control Program.

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17.2.18 Audits

C.2

The Operations QA Program requires that a comprehensive system of planned and periodic audits be carried out to verify compliance with all aspects of the QA Program and to determine its effectiveness.

These aspects include, but are not limited to the following:

C.2.a, 2.d 1. Regulatory requirements,

C.2.a.2.a 2. License provisions,

C.2.a.2.d 3. Operating procedures,

4. Operations QA Program administrative controls

A.5
C.1
C.2
TABLE 1 PM
Answer 13.2.12
PP 4.5
C.2.a.7

Audits will be performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results will be documented and reported to management having direct responsibility in the area audited. Responsible management will take the necessary action to respond to any deficiencies or nonconformances identified in the audit report. Follow-up action, including re-audit of deficient areas, will be taken as necessary to assure that all deficiencies or nonconformances noted have been corrected.

TABLE 1
PM
Answer 13.2.12
PP 3.2

The Oversight and Process Improvement Department (FENOC) is responsible for the auditing of site organizations performing safety related functions as well as vendors or contractors. These audits include, but are not limited to:

1. Audits to provide an objective evaluation of quality-related procedures, instructions, and practices,

2. Audits to evaluate the effectiveness of the implementation of these procedures, instructions, and practices,

Table 1 R M
ANSI N45.2.12
R 3.2

3. Audits to determine the adequacy of work areas, activities, and processes, and

4. Audits to verify that required documentation and records are complete and are adequately controlled and maintained.

Table 1 R M
ANSI N45.2.12
R 3.5
C.2
C.2

These audits will be performed at a frequency commensurate with their safety significance as well as the quality record of the group involved. Audits may be announced or unannounced. Audit reports will be prepared on a timely basis and will clearly identify any nonconformances and quality assurance program deficiencies. Copies of all audit nonconformances, quality assurance program deficiencies, and recommendations are transmitted to the appropriate management level of the organization involved. The audit program shall include vendor audits necessary to prepare and maintain a qualified suppliers list as described in Section 17.2.4.

Table 1 R M
ANSI N45.2.12
R 3.5.3.2
C.2.a.3
C.2a.2.d

The audit program will include a system of internal audits of station quality related activities, including quality control activities, to assure conformance to the Operations Quality Assurance Program.

The audit program is supplemented by the Company Nuclear Review Board (CNRB) which performs audits to assess the technical adequacy of procedures as well as their implementation. The CNRB audits the Station Operations including the performance of both equipment and operating personnel. The CNRB may delegate the responsibility for the actual auditing to a separate group, but reviews the results of any such audits and initiates action to correct deficiencies as a result of the audit.

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TABLE 17.2-1

QUALIFICATION AND EXPERIENCE REQUIREMENTS OF BVPS NUCLEAR QUALITY ASSESSMENT PERSONNEL

Title	Minimum Required Degree*	Minimum Years Experience	Experience
Nuclear Quality Assessment Manager Beaver Valley	BS	10	At least 10 years experience in electric generation, transmission or engineering
Nuclear Quality Assessment Supervisor	BS	5	At least 5 years of experience in electric generation, plant engineering and construction, operations, maintenance, or testing.

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NOTE:

* Equivalent qualifications in related physical science or 2 years of experience in the design, construction, or operation of a power plant per year of college education.

TABLE 17.2-2

DUQUESNE LIGHT COMPANY
SELECT OPERATIONS QUALITY ASSURANCE PROCEDURES VS. APPENDIX B
TO 10 CFR 50

Procedure Number and Description		10 CFR 50 Appendix B
OP-1	Operations QA Program	I, II
OP-2	Organization and Responsibilities	I, II
OP-3	Administrative Controls	II, V
OP-4	Design Change Control	III, XVII
OP-5	Procurement Control	IV, VII, VIII
OP-6	Material Control	VII, VIII, XIII, XV
OP-7	Test Program Prior to Operations	(DELETED)
OP-8	Document Control	V, VI
OP-9	Procedure Control for Operations and Maintenance	II, V
OP-10	Maintenance and Modification Planning	V, IX, X
OP-11	Control of Maintenance and Modification	V, IX, X, XI, XIV
OP-12	Control of Measuring and Test Equipment	XII
OP-13	Control of Nonconforming Items	VIII, XV, XVI
OP-14	Indoctrination and Training	II, IX
OP-15	Quality Assurance Records	XVII
OP-16	Audits	II, XVI, XVIII

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TABLE 1.8-1 (Cont)

Category I requirements but, since the piping is not required to be ASME III Class 1, 2, or 3, shall not be designated Seismic Category I). By this means, the Seismic Category I boundary is defined with respect to safety-related function, and the interfacing portions meet the seismic design requirements in order to ensure the integrity of the boundary.

N/A

Structures, systems, and components designed in accordance with Paragraphs C.2 and C.3 of the regulatory guide are designated Seismic Category II and are constructed to QA Category II or III requirements.

RG No. 1.30, Rev. 0
UFSAR Reference Sections 17.1, 17.2

Table 1 QA

QUALITY ASSURANCE REQUIREMENTS FOR THE INSTALLATION, INSPECTION, AND TESTING OF INSTRUMENTATION AND ELECTRIC EQUIPMENT (AUGUST 11, 1972)

The guidance provided by this regulatory guide for quality assurance requirements for the installation, inspection, and testing of instrumentation and electric equipment was followed during the construction phase of Beaver Valley Power Station Unit 2. During the operating phase, the testing and inspection will be performed in accordance with the intent of this guide and the requirements of the Technical Specifications (UFSAR Chapter 16) and the Operations Quality Assurance Program (UFSAR Chapter 17).

RG No. 1.31, Rev. 3
UFSAR Reference Sections 4.5.2.4, 5.2.3.4.6, 5.3.1.4, 6.1.1.1, 10.3.6.2

CONTROL OF FERRITE CONTENT IN STAINLESS STEEL WELD METAL (APRIL 1978)

For nuclear steam supply system fabrication, Beaver Valley Power Station - Unit 2 (BVPS-2) meets the intent of Regulatory Guide 1.31 for control of ferrite content in stainless steel weld metal by following acceptable alternative criteria. Westinghouse submitted a delta ferrite verification program for austenitic stainless steel weldments in WCAP-8324-A, June 1974, which the staff subsequently approved as a valid approach in a letter on December 30, 1974.

N/A

For balance of plant fabrication, BVPS-2 meets the intent of Regulatory Guide 1.31 by following the guidance of either Safety Guide 31, Regulatory Guide 1.31, Revision 1, Materials Engineering Branch Technical Position MTEB 5-1, or Regulatory Guide 1.31, Revision 3.

TABLE 1.8-1 (Cont)

Following the guidance of any of the preceding document revisions was based primarily on the revision in effect on the date of the last specification revision wherein the regulatory guide was invoked. Since each revision of the regulatory guide is less restrictive than the foregoing, following the guidance of any of the revisions is considered acceptable.

RG No. 1.32, Rev. 2
UFSAR Reference Sections 7.5, 8.1.5, 8.2, 8.3.1, 8.3.2, 7.5.2.3.1.3

CRITERIA FOR SAFETY-RELATED ELECTRIC POWER SYSTEMS FOR NUCLEAR POWER PLANTS (FEBRUARY 1977)

The design of the safety-related electric power systems for Beaver Valley Power Station - Unit 2 (BVPS-2) follows IEEE Standard 308-1974, and the guidance of Regulatory Guide 1.32, with the following clarifications:

Two immediate access offsite power circuits are provided. Each circuit is designed to be immediately available following a loss of onsite alternating current power supplies so that sufficient power capacity remains for an orderly shutdown and to supply all train related engineered safety feature loads:

N/A

Each battery charger that supplies Class IE 125 V dc systems is designed with full capacity and capability to supply the largest combined demands of the various steady state loads while simultaneously providing sufficient power for adequate charging capacity to restore the battery from the design minimum charged state to the charged state irrespective of the BVPS-2 status during which these demands occur.

For test methods, procedures, and intervals for all Class IE battery performance discharge and service tests, refer to the position on Regulatory Guide 1.129.

Table 1
PB

RG No. 1.33, Rev. 2
UFSAR Reference Sections 13.4, 13.5, 17.2

A 7.a.4

QUALITY ASSURANCE PROGRAM REQUIREMENTS (OPERATION) (FEBRUARY 1978)

The Quality Assurance Program for the operating phase of Beaver Valley Power Station - Unit 2 will follow the guidance of this regulatory guide with the following clarification of Paragraphs C.2 and C.4, and alternative to the biennial review described in ANSI N18.7.

Paragraph C.2

The applicability of the referenced regulatory guides (1.8, 1.17, 1.28, 1.30, 1.37, 1.38, 1.39, 1.54, 1.58, 1.64, 1.74, 1.88, 1.94, 1.116, and 1.123) is as stated in the respective positions on these regulatory guides.

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TABLE 1.8-1 (Cont)

Table 1 ¶ B1.b

Paragraph C.4

Except for audit frequencies mandated by Title 10 of the Code of Federal Regulations, internal audits of selected aspects of operational phase activities shall be performed to ensure that audits described in Section 17.2 are completed within a period of 2 years (biennially). 224 200

Alternative To Biennial Review 227

Table 1 ¶ B.2.f

The biennial review of safety related plant procedures described in ANSI N18.7 will be replaced by programmatic controls related to procedure review found in plant administrative procedures, and a maximum six year procedure review period. Biennial audits of operating organizations will include a review of their procedures to provide additional assurance that existing programmatic controls are resulting in the timely revision of their procedures in response to operations experience deficiencies and procedure deficiencies identified by users. 203 228

RG No. 1.34, Rev. 0
UFSAR Reference Section 5.2.3

CONTROL OF ELECTROSLAG WELD PROPERTIES (DECEMBER 28, 1972)

The guidance provided by this regulatory guide regarding control of electroslag weld properties was followed for fabrication of applicable components for Beaver Valley Power Station - Unit 2.

RG NO. 1.35, Rev. 2

INSERVICE INSPECTION OF UNGROUTED TENDONS IN PRESTRESSED CONCRETE CONTAINMENT STRUCTURES (JANUARY 1976)

This regulatory guide is not applicable to Beaver Valley Power Station - Unit 2.

RG No. 1.36, Rev. 0
UFSAR Reference Sections 5.2.3, 6.1.1 N/A

NONMETALLIC THERMAL INSULATION FOR AUSTENITIC STAINLESS STEEL (FEBRUARY 23, 1973)

Nonmetallic thermal insulation for austenitic stainless steel used at Beaver Valley Power Station - Unit 2 meets the intent of this regulatory guide. As an alternative to controlled packaging and shipping described in Paragraph C.1, receipt inspection and tests are required by specification. This testing and inspection consists of visual inspection for physical or water damage to all cartons. Damaged cartons are segregated. Potentially contaminated insulation is not accepted, unless randomly selected samples from each carton are shown to be acceptable after being resubjected to the production test outlined in this regulatory guide.

TABLE 1.8-1 (Cont)

Table 1

RC

RG NO. 1.37, Rev. 0
UFSAR Reference Sections 6.1.1.1, 17.2, 5.2.3.4.1

QUALITY ASSURANCE REQUIREMENTS FOR CLEANING OF FLUID SYSTEMS AND ASSOCIATED COMPONENTS OF WATER-COOLED NUCLEAR POWER PLANTS (MARCH 16, 1973)

Quality assurance requirements for cleaning of fluid systems and associated components at Beaver Valley Power Station - Unit 2 meet the intent of this regulatory guide with the following alternatives:

TABLE 1.8-1 (Cont)

Task 1
RC.1

Paragraph 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 content.

Dissolved oxygen content of water cannot be maintained at reactor quality during flushing of open systems. 229

The maximum particle size criteria for class B cleanness is consistent with Section 3.1.2 except in the Recirculation Spray System (RSS).

Particles of a maximum size of 1/8 inch in any dimension are allowed in the RSS. This particle size limit was chosen since it is smaller than the openings in the recirculation spray system nozzles and the smallest coolant flow channel in the reactor core. Therefore, this exception will have no effect on the recirculation spray systems ability to perform its intended safety function. 230

Paragraph C.4

Expendable materials, that is, inks and related products, temperature indicating sticks, tapes, gummed labels, wrapping materials (other than polyethylene), water soluble dam materials, lubricants, nondestructive testing penetrant materials and couplants which contact stainless steel or nickel alloy surfaces are in accordance with the following:

1. They do not contain the following as basic and essential chemical constituents: lead, zinc, copper, mercury, cadmium and other low melting point metals, their alloys and/or compounds. 231

2. Prescribed maximum levels of water leachable chlorides, total halogens, and sulfur and its compounds are imposed on expendable products.

Contamination levels in expendable products are based upon safe practices and industrial availability. Contaminant levels are controlled such that subsequent removal by standard cleaning methods will result in the achievement of final acceptable levels which are not detrimental to the materials.

231a

232

TABLE 1.8-1 (Cont)

TABLE 1 RD

RG No. 1.38, Rev. 2
UFSAR Reference Section 17.2

QUALITY ASSURANCE REQUIREMENTS FOR PACKAGING, SHIPPING, RECEIVING, STORAGE, AND HANDLING OF ITEMS FOR WATER-COOLED NUCLEAR POWER PLANTS (MAY 1977)

Quality assurance requirements for packaging, shipping, receiving, storage, and handling of items at Beaver Valley Power Station - Unit 2 follow the guidance of this regulatory guide. 233 234 235 236 237 238 239

TABLE 1.8-1 (Cont)

Table 1
QA E

RG No. 1.39, Rev. 2 UFSAR Reference Sections 12.5.3, 17.2

HOUSEKEEPING REQUIREMENTS FOR WATER-COOLED NUCLEAR POWER PLANTS (SEPTEMBER 1977)

Housekeeping requirements at Beaver Valley Power Station - Unit 2 follow the guidance of this regulatory guide. 240

RG No. 1.40, Rev. 0
UFSAR Reference Sections 3.11, 8.3

QUALIFICATION TESTS OF CONTINUOUS-DUTY MOTORS INSTALLED INSIDE THE CONTAINMENT OF WATER-COOLED NUCLEAR POWER PLANTS (MARCH 16, 1973)

This regulatory guide is not applicable to Beaver Valley Power Station - Unit 2 since there are no continuous-duty Class IE motors installed inside the containment.

RG No. 1.41, Rev. 0
UFSAR Reference Sections 8.1, 8.3, 14.2.12.54

PREOPERATIONAL TESTING OF REDUNDANT ONSITE ELECTRIC POWER SYSTEMS TO VERIFY PROPER LOAD GROUP ASSIGNMENTS (MARCH 16, 1973)

Onsite electric power systems at Beaver Valley Power Station - Unit 2 designed in accordance with Regulatory Guides 1.6 and 1.32 will be tested in accordance with the intent of Regulatory Guide 1.41 during preoperational testing. Following major modifications or repairs appropriate testing will be performed to demonstrate operability and functional capability as required.

RG No. 1.42, Rev. 1

INTERIM LICENSING POLICY ON AS LOW AS PRACTICABLE FOR GASEOUS RADIOIODINE RELEASES FROM LIGHT-WATER COOLED NUCLEAR POWER REACTORS (MARCH 1976)

This regulatory guide was withdrawn March 1976.

RG No. 1.43, Rev. 0
UFSAR Reference Section 5.3.1.4, 5.2.3.3.2

CONTROL OF STAINLESS STEEL WELD CLADDING OF LOW-ALLOY STEEL COMPONENTS (MAY 1973)

For balance-of-plant components, Regulatory Guide 1.43 is not applicable, since stainless steel weld cladding of low-alloy steel is not used in fabrication of such components.

TABLE 1.8-1 (Cont)

General membrane...1.5 S_m

Local membrane...the greater of 1.8S_m or 1.5S_m

Bending plus local membrane...the greater of 1.8S_m or 1.5S_m.

3. The bellows assemblies were designed, fabricated, tested, and installed to the following criteria in lieu of the requirements of paragraphs C.2.a and b. The fuel transfer tube expansion bellows shall be in accordance with Code Case 1330-3 (special ruling) Special Equipment Requirements Section III. An N-2 form in accordance with Code Case 1177 shall be furnished by the bellows vendor. A duplicate bellows shall be required for pressure and fatigue testing by the Contractor in accordance with ASME III, Winter 1974 Addendum, paragraph NE-3365.2(e)(2). The 15-percent maximum convolution pitch in accordance with paragraph NE-3365.2(c) for unreinforced bellows may be exceeded provided the bellows remain within the elastic range.

N/A

Table 1
R F

RG No. 1.58, Rev. 1
UFSAR Reference Sections 17.1, 17.2

QUALIFICATION OF NUCLEAR POWER PLANT INSPECTION, EXAMINATION, AND TESTING PERSONNEL (SEPTEMBER 1980)

Qualification of inspection, examination, and testing personnel at Beaver Valley Power Station - Unit 2 (BVPS-2) follows the guidance of this regulatory guide with the following clarifications:

ANSI N45.2.6, Paragraph 2.5:

Table 1
R F.2.a

ANSI N45.2.6-1978 recommends that organizations identify any special physical characteristics needed in the performance of each activity, and that personnel requiring these characteristics have them verified by examination at intervals not to exceed one year. At BVPS, examinations to verify personnel have the required physical characteristics will be scheduled on an annual basis with a maximum allowable extension of 90 days.

Regulatory Guide 1.58, Paragraph C.6:

Table 1
R F.2.b

The initial qualifications of individuals to Levels I, II, or III will generally be to the education and experience recommendations of ANSI N45.2.6-1978. However, in certain instances as determined by appropriate management, qualifications may alternatively be determined through test results and/or demonstration of capabilities. Individual requalifications will meet or exceed the recommendation of the standard.

Paragraph 3.5.1 of ANSI N45.2.6-1978 lists recommended education and experience for qualification to Level I. BVPS-2 will also accept a 4-year college degree plus 1 month of related experience or equivalent inspection, examination, or testing activities.

241
242

TABLE 1.8-1 (Cont)

~~RG No. 1.63, Rev. 2~~
UFSAR Reference Section 8.3

~~ELECTRIC PENETRATION ASSEMBLIES IN CONTAINMENT STRUCTURES FOR LIGHT-WATER COOLED NUCLEAR POWER PLANTS (JULY 1978)~~

Since Beaver Valley Power Station - Unit 2 (BVPS-2) was docketed before August 31, 1978, the methods described in Regulatory Guide 1.63 were not required to be used in the evaluation of the BVPS-2 Construction Permit application. However, the design and construction of the electric penetration assemblies on BVPS-2 follow the guidance of this regulatory guide, except that a ASME Code data report, (ANI) third party inspection and ASME Code stamping of the penetrations are not required as the penetrations are an extension of the containment liner boundary which is not code stamped as discussed in Section 3.8.1.2.1.2.

N/A

Table 1
PG

RG No. 1.64, Rev. 2
UFSAR Reference Section 17.2

QUALITY ASSURANCE REQUIREMENTS FOR THE DESIGN OF NUCLEAR POWER PLANTS (JUNE 1976)

Quality Assurance Programs in effect at the time of systems design were followed in the design of BVPS-2 and meet the intent of Regulatory Guide 1.64 with the following clarifications and alternative:

Duquesne Light Company has developed a Quality Assurance Program which conforms to 10 CFR 50, Appendix B. The DLC Quality Assurance Department verifies, through the audit process, that Stone & Webster Engineering Corporation (SWEC) and Westinghouse Electric Corporation are regularly reviewing the status and adequacy of their own QA programs.

The original BVPS-2 Quality Assurance Program was described in Appendix A of the PSAR. This QA Program was initially implemented in accordance with Regulatory Guide 1.64, Rev. 0, dated October 1973. Subsequent Revisions 1 and 2 of the guide required upgrading of the design process, with the most significant changes being independent design verification by individuals not having immediate supervisory responsibility for the individual performing the design. Accordingly, SWEC Engineering Assurance Division issued a change to Engineering Assurance Procedure (EAP) 3.1, "Verification of Nuclear Plant Designs," which requires the following:

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All initial issues of key design documents issued after February 8, 1977, shall be subject to independent objective review.

Subsequent revisions to all key design documents, other than calculations, which contain a change in design concept shall be

TABLE 1.8-1 (Cont)

subject to independent objective review. This review shall be limited to that portion of design being changed. Revisions that do not involve a change in design concept shall be reviewed, approved, and issued in accordance with applicable EAPs.

For calculations, the applicable portions of this EAP and independent objective review requirements contained in EAP 5.3 shall be applied to initial issues and all subsequent revisions.

Westinghouse has also updated their Quality Assurance Program to reflect changes in the regulatory process and, in particular, Regulatory Guide 1.64. Changes are described in Westinghouse Topical Reports WCAP-8370, "Westinghouse Quality Assurance Program," and WCAP-7800, "Nuclear Fuel Division Quality Assurance Program." WCAP-8370 revisions applicable to activities for specific time periods are Rev. 7A (June 1, 1975 - Sept. 30, 1977), Rev. 8A (Oct. 1, 1977 - Oct. 31, 1979), and Rev. 9A (Nov. 1, 1979 - present). WCAP-7800, Rev. 5, is applicable to the activities for the entire time period.

243

Westinghouse has followed the alternative to Regulatory Guide 1.64 that the designer's immediate supervisor may perform design verification in exceptional cases when the supervisor is the only qualified engineer available. For such a case,

TABLE 1.8-1 (Cont)

justification is documented and approved in advance by the supervisor's management. 243

Table 1 R G. 1

The Duquesne Light Company Quality Assurance Program during the operation of BVPS-2 will follow the guidance of this regulatory guide. 244 and 245

RG No. 1.65, Rev. 0
UFSAR Reference Section 5.3.1.7

MATERIALS AND INSPECTIONS FOR REACTOR VESSEL CLOSURE STUDS (OCTOBER 1973)

Materials and inspections for reactor vessel closure studs meet the intent of Regulatory Guide 1.65 with the following alternatives:

1. The use of modified SA-540, Grade B24, as specified in the ASME Code (Code Case 1605) is permitted by Westinghouse but is not listed in this regulatory guide.

   This alternative is based on ASME Code Case 1605 which has been found acceptable to the NRC for application in the construction of components for water-cooled nuclear power plants within the limitations discussed in Regulatory Guide 1.85, which are followed by the Westinghouse practice and one use of Code Case 1605 for reactor vessel closure stud materials is not precluded by this regulatory guide.

2. A maximum ultimate tensile strength of 170,000 psi is not specified by Westinghouse, as recommended by this regulatory guide.

   The ASME Code requirement for toughness for reactor vessel bolting has precluded the regulatory guide's additional recommendation for tensile strength limitation, since to obtain the required toughness levels, the tensile levels are reduced.

   Westinghouse has specified both 45 ft-lb and 25 mils lateral expansion for control of fracture toughness determined by Charpy-V testing, required by the ASME Code, Section III, and 10 CFR 50, Appendix G, "Fracture Toughness Requirements," (Paragraph IV.A.4). These toughness requirements ensure optimization of the stud bolt material tempering operation with the accompanying reduction of the tensile strength level when compared with previous ASME Code requirements.

TABLE 1.8-1 (Cont)

~~RG No. 1.73, Rev. 0~~
~~UFSAR Reference Section 3.11.2~~

~~QUALIFICATION TESTS OF ELECTRIC VALVE OPERATORS INSTALLED INSIDE THE CONTAINMENT OF NUCLEAR POWER PLANTS (JANUARY 1974)~~

~~Qualification tests of electric valve operators installed inside the containment at Beaver Valley Power Station - Unit 2 follow the guidance of this regulatory guide.~~

N/A

TABLE 1 PH

RG No. 1.74, Rev. 0
UFSAR Reference Section 17.2

QUALITY ASSURANCE TERMS AND DEFINITIONS (FEBRUARY 1974)

Quality assurance terms and definitions used at Beaver Valley Power Station - Unit 2 will follow the guidance of this regulatory guide with the following exception:

An alternative set of Quality Assurance Terms and Definitions has been developed, and is included as Appendix A to the Duquesne Light Company Quality Assurance Program Manual.

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~~RG No. 1.75, Rev. 2~~
~~UFSAR Reference Sections 7.1.2, 7.5.2, 8.3.1.4, 8.3.2.2~~

~~PHYSICAL INDEPENDENCE OF ELECTRIC SYSTEMS (SEPTEMBER 1978)~~

~~Beaver Valley Power Station - Unit 2 (BVPS-2) follows the guidance of Regulatory Guide 1.75 for physical independence of electrical systems with the following clarifications:~~

~~1. General~~

~~For the purposes of electrical separation, equivalent protection is provided through enclosure by rigid aluminum conduit, rigid steel conduit, electro-metallic tubing (EMT), flexible aluminum conduit, and flexible steel conduit. Enclosures provided to meet the requirements of BTP CMEB 9.5-1 are considered equivalent to enclosures provided for electrical separation and will have 1 hour or longer fire rating.~~

N/A

~~Metal clad cable, type MC, utilized in low energy, 120 V ac and 125 V dc nominal circuits and in low density applications is considered adequately protected. As such, the minimum separation between these cables and other cables, or raceway (where required) is 1 in. These cables are further described as follows:~~

~~a. Type MC cable is a factory assembly of conductors, each individually insulated, enclosed in a metallic sheath of interlocking type, or a smooth or corrugated tube.~~

TABLE 1.8-1 (Cont)

RG No. 1.86, Rev. 0
UFSAR Reference Section 5.8 (ER-OLS)

TERMINATION OF OPERATING LICENSES FOR NUCLEAR REACTORS (JUNE 1974)

The guidance of this Regulatory Guide will be followed when termination of the Beaver Valley Power Station - Unit 2 operating license is desired.

N/A

RG No. 1.87, Rev. 1

GUIDANCE FOR CONSTRUCTION OF CLASS 1 COMPONENTS IN ELEVATED TEMPERATURE REACTORS (SUPPLEMENT TO ASME SECTION III CODE CASES 1592, 1593, 1594, 1595, AND 1596) (JUNE 1975)

This regulatory guide is not applicable to Beaver Valley Power Station - Unit 2.

RG No. 1.88, Rev. 2
UFSAR Reference Sections 9.5.1, 17.2

Table 1
QA I

COLLECTION, STORAGE, AND MAINTENANCE OF NUCLEAR POWER PLANT QUALITY ASSURANCE RECORDS (OCTOBER 1976)

The collection, storage and maintenance of quality assurance records at BVPS will meet the intent of this Regulatory Guide with the following alternative:

1. The design and construction of Quality Assurance Record storage facilities will follow the guidance of ANSI/ASME NQA-1-1983, Supplement 17S-1, Section 4.4.

2. When temporary storage of records is required, the guidance of ASME NQA-1-1989, supplement 17S-1, Section 4.4.3 will be followed.

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RG No. 1.89, Rev. 1
UFSAR Reference Section 3.11

ENVIRONMENTAL QUALIFICATION OF CERTAIN ELECTRIC EQUIPMENT IMPORTANT TO SAFETY FOR NUCLEAR POWER PLANTS (JUNE 1984)

BVPS-2 electric equipment important to safety is qualified to meet or exceed the intent of IEEE Std. 323-1971 and Category II of NUREG 0588, Rev. 1. For BVPS-2, this includes both safety-related and certain post-accident equipment. When determined possible by Duquesne Light Company, the qualification of this equipment will be upgraded to meet the standards set forth in Category I of NUREG-0588, Rev. 1. In accordance with 10CFR50.49(k), BVPS-2 is not required to requalify electric equipment important to safety (except replacement equipment) in accordance with Regulatory Guide 1.89, Rev. 1. Replacement electric equipment important to safety will be qualified in accordance with the guidance provided in Paragraph C.6 of this regulatory guide. Qualification records for replacement electric equipment will meet the intent of Appendix E of this regulatory guide by meeting the applicable requirements of 10CFR50.49.

N/A

TABLE 1.8-1 (Cont)

a method similar to the ten percent method as discussed in Paragraph 1.2.2 but with the inclusion of coupling factors as in the double sum method.

Responses from the orthogonal earthquake inputs are obtained by either the absolute addition of the worst horizontal plus vertical responses or the SRSS combination of the two horizontal direction responses and then the absolute addition of the vertical response.

N/A

RG No. 1.93, Rev. 0
UFSAR Reference Sections 8.1, 8.3

AVAILABILITY OF ELECTRIC POWER SOURCES (DECEMBER 1974)

BVPS-2 will follow the guidance of this regulatory guide for operation of the plant in the event of loss of electric power sources.

TABLE 1 PP J

RG No. 1.94, Rev. 1
UFSAR Reference Sections 3.8.1, 3.8.3, 3.8.4, 17.1, 17.2

QUALITY ASSURANCE REQUIREMENTS FOR INSTALLATION, INSPECTION, AND TESTING OF STRUCTURAL CONCRETE AND STRUCTURAL STEEL DURING THE CONSTRUCTION PHASE OF NUCLEAR POWER PLANTS (APRIL 1976)

Quality assurance requirements for installation, inspection, and testing of structural concrete and structural steel during the construction phase at BVPS-2 meet the intent of this Regulatory Guide with the following clarifications and alternatives:

259

The BVPS-2 Quality Assurance Program for structural concrete and steel follows WASH 1283, dated May 24, 1984, and WASH 1309, dated May 10, 1974.

The provisions of Articles CC4334 and CC4330 of the "Code for Concrete Reactor Vessels and Containments" (ASME Boiler and Pressure Vessel Code, Section III, Division 2, 1975 Edition) were not applied to BVPS-2 since the BVPS-2 reactor containment purchase order had been placed prior to the 1975 edition of the Division 2 ASME Code.

Alternatives to ANSI N45.2.5-1974 are taken with respect to frequency of calibration of impact wrenches and bolt projection criteria. Impact and torque wrenches shall be checked at least once daily per shift, and at least one full thread of all bolts shall project beyond the nut of all tightened connections. These criteria comply with the recommendations of the Research Council on Riveted and Bolted Structural Joints.

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260

TABLE 1.8-1 (Cont)

A.7.a.5

During the operations phase, BVPS-2 will follow the guidance of this Regulatory Guide for any maintenance or modification activities that are comparable in nature and extent to related activities occurring during initial plant design and construction.

RG No. 1.95, Rev. 1
UFSAR Reference Sections 2.2.1, 2.2.2, 6.4.4.2, 9.4.1

PROTECTION OF NUCLEAR POWER PLANT CONTROL ROOM OPERATORS AGAINST AN ACCIDENTAL CHLORINE RELEASE (JANUARY 1977)

Protection of the Beaver Valley Power Station - Unit 2 control room operators against an accidental chlorine release meets the intent of Regulatory Guide 1.95 with the following alternatives and clarifications:

An evaluation of control room habitability is performed using the general design considerations of Regulatory Guide 1.78 in lieu of Paragraph C.3. Specific design features and procedures are defined, to the extent necessary, to assure the chlorine concentration inside the control room could not exceed 15 ppm by volume (45 mg/m^3) within 2 minutes of detection and that the operator is protected.

The charcoal filters will not be used for chlorine removal as discussed in Paragraph C.4a because the filters are not designed to remove or limit chlorine accumulation. The design basis of the filters is purely radiological.

N/A

The surveillance requirements of the BVPS-1 Technical Specifications, Amendment 68, are used in lieu of those suggested in Paragraph C.4.

RG No. 1.96, Rev. 1
DESIGN OF MAIN STEAM ISOLATION VALVE LEAKAGE CONTROL SYSTEMS FOR BOILING WATER REACTOR NUCLEAR POWER PLANTS (JUNE 1976)

This regulatory guide is not applicable to Beaver Valley Power Station - Unit 2.

RG No. 1.97, Rev. 2
UFSAR Reference Sections 6.2, 7.4, 7.5, 9.3.2, 11.5, 12.3

INSTRUMENTATION FOR LIGHT-WATER-COOLED NUCLEAR POWER PLANTS TO ASSESS PLANT AND ENVIRONS CONDITIONS DURING AND FOLLOWING AN ACCIDENT (DECEMBER 1980)

The instrumentation provided to monitor Beaver Valley Power Station - Unit 2 during and after postulated accident conditions meets the intent of this regulatory guide with the following clarifications and alternatives:

TABLE 1.8-1 (Cont)

~~A not-to-be-exceeded ultrasonic inspection interval and inservice inspection program is provided in Section 10.2.3 to insure missile generation probability values well below the 10^{-5} limit. This missile generation probability, in combination with the probability of resulting damage to safety-related equipment, maintains the total probability of turbine missile damage below the regulatory guide limit of 10^{-7} per year.~~ N/A

TABLE 1 PK

RG No. 1.116, Rev. 0-R
UFSAR Reference Section 17.2

QUALITY ASSURANCE REQUIREMENTS FOR INSTALLATION, INSPECTION, AND TESTING OF MECHANICAL EQUIPMENT AND SYSTEMS (MAY 1977)

Quality assurance requirements for installation, inspection, and testing of mechanical equipment and systems at Beaver Valley Power Station - Unit 2 follow the guidance of this regulatory guide. 248

~~RG No. 1.117, Rev. 1
UFSAR Reference Sections 3.2, 3.5, 3.8~~

~~TORNADO DESIGN CLASSIFICATION (APRIL 1978)~~

~~The method used for identifying those structures, systems, and components at Beaver Valley Power Station Unit 2 that should be designed to withstand the effects of the design basis tornado follows the guidance of this regulatory guide.~~

~~RG No. 1.118, Rev. 2
UFSAR Reference Sections 7.5, 8.1, 8.3~~

~~PERIODIC TESTING OF ELECTRIC POWER AND PROTECTION SYSTEMS (JUNE 1978)~~ N/A

~~Periodic testing of electric power and protection systems at Beaver Valley Power Station - Unit 2 follows IEEE Standard 338-1977 and the guidance of Regulatory Guide 1.118 with the following clarifications:~~

~~Equipment performing control functions, but activated from protection system sensors is not part of the safety system and is not tested for time response.~~

TABLE 1.8-1 (Cont)

Paragraph C.3.e(6)

Computer code names and references will be supplied rather than the actual codes.

Paragraph C.3.f(1)

A minimum acceptable tube wall thickness (plugging limit) will be established based on structural requirements and consideration of loadings, measurement accuracy, and, where applicable, a degradation allowance as discussed in this position and in accordance with the general intent of this regulatory guide. Analyses to determine the maximum acceptable number of tube failures during a postulated condition are normally done to entirely different bases and criteria and are not within the scope of this regulatory guide.

RG No. 1.122, Rev. 1
UFSAR Reference Section 3.7B.2.5

DEVELOPMENT OF FLOOR DESIGN RESPONSE SPECTRA FOR SEISMIC DESIGN OF FLOOR-SUPPORTED EQUIPMENT OR COMPONENTS (FEBRUARY 1978)

N/A

The development of floor design response spectra for seismic design of floor-supported equipment or components at Beaver Valley Power Station - Unit 2 meets the intent of this regulatory guide with the following alternative and clarification:

The response spectra peak resonant period values are broadened +25 percent and -20 percent with vertical sides for use in the design basis.

When ASME III Code Case N-411 damping values are applied for piping analysis peak resonant period values are broadened plus and minus 15 percent with parallel sides. The use of this code case is limited to pipe stress reconciliation and support optimization.

RG No. 1.123, Rev. 1
UFSAR Reference Section 17.2

TABLE 1
P L

QUALITY ASSURANCE REQUIREMENTS FOR CONTROL OF PROCUREMENT OF ITEMS AND SERVICES FOR NUCLEAR POWER PLANTS (JULY 1977)

Quality assurance requirements for control of procurement of items and services at BVPS-2 meets the requirements of Appendix B to 10 CFR 50 and follows the guidance of Regulatory Guide 1.123 with the following clarifications:

TABLE 1.8-1 (Cont)

The original BVPS-2 Quality Assurance Program was described in Appendix A of the PSAR. This Quality Assurance Program followed the guidance of Regulatory Guide 1.123, Rev. 0. During procurement activities, the Quality Assurance program was upgraded to reflect changes in regulatory requirements, including Regulatory Guide 1.123, Rev. 1. 249

Westinghouse topical reports applicable to specific time periods are WCAP-8370, "Westinghouse Quality Assurance Program," Rev. 7A (June 1, 1975 - September 30, 1977), Rev. 8A (October 1, 1977 - October 31, 1979), Rev. 9A (November 1, 1979 - present) and 250

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TABLE 1.8-1 (Cont)

WCAP-7800, "Nuclear Fuel Division Quality Assurance Program Plan," Rev. 5 (applicable to the entire time period). 249

TABLE 1 9 L

The Duquesne Light Company Quality Assurance Program during the operation of BVPS-2 will follow the guidance of this regulatory guide.

RG No. 1.124, Rev. 1
UFSAR Reference Sections 3.9B.3.4.1, 5.4.14

SERVICE LIMITS AND LOADING COMBINATIONS FOR CLASS 1 LINEAR-TYPE COMPONENT SUPPORTS (JANUARY 1978)

The design limits and appropriate loading combinations associated with normal operation, postulated accidents and specified seismic events for the design of Class 1 linear-type component supports, as defined in Subsection NF of Section III of the ASME code, are not applicable to Beaver Valley Power Station - Unit 2 since the design and placement of the purchase order for these supports precedes the first issue of ASME III, Subsection NF. The only exception is the reactor pressure vessel leveling devices which were procured after July 1974. The design rules for the leveling devices follow ASME III, Subsection NF, as a guide and meet the intent of Regulatory Guide 1.124 with the following alternative: N/A

Paragraph C.8

Supports for the "active" components that are required only during an emergency or faulted plant condition and that are subjected to loading combinations described in Regulatory Positions C.6 and C.7 should be designed within the design limits described in Regulatory Position C.5 or other justifiable design limits. These limits should be defined by the design specification and stated in the PSAR, such that the function of the supported system will be maintained when they are subjected to the loading combinations described in Regulatory Positions 6 and 7.

The design limits and loading combinations for the component supports are presented in Section 5.4.14.

TABLE 1.8-1 (Cont)

Paragraph C.5.2.2

Beaver Valley Power Station - Unit 2 complies with this section, except that the spectra described in Sections 3.7B.1 and 3.7B.2 are used.

Paragraph C.5.2.3

Beaver Valley Power Station - Unit 2 uses the modal time-history technique to generate floor response spectra. Refer to Section 3.7B.2.

Paragraph C.5.2.4

Beaver Valley Power Station - Unit 2 uses ACI-318-71. This was the code in effect at the time of design. The differences between this code and ACI-318-77 are insignificant.

N/A

Paragraph C.6

Quality assurance programs used for the design, manufacture, construction, and inspection of the equipment used in the radwaste management systems are in accordance with a QA Category II classification and the codes and standards specified in the equipment purchase specifications.

Table 1
PM

RG No. 1.144, Rev. 1
UFSAR Reference Section 17.2

AUDITING OF QUALITY ASSURANCE PROGRAMS FOR NUCLEAR POWER PLANTS (SEPTEMBER 1980)

Beaver Valley Power Station - Unit 2 (BVPS-2) will meet the intent of Regulatory Guide 1.144 for the auditing of its Quality Assurance Program during the operations phase with the following clarifications and alternatives:

PM.2.6

The pre-audit and post-audit conferences required by Sections 4.3.1 and 4.3.3 of ANSI N45.2.12-1977 may be fulfilled by a variety of communications such as telephone conversation.

Paragraph C.3.a

Table 1
PB.1.b

Refer to Regulatory Guide 1.33 position for internal audit frequency requirements.

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TABLE 1.8-1 (Cont)

~~RG No. 1.145, Rev. 1~~
UFSAR ~~Reference~~ Sections 2.3, 13.3

~~ATMOSPHERIC DISPERSION MODELS FOR POTENTIAL ACCIDENT CONSEQUENCE ASSESSMENTS AT NUCLEAR POWER PLANTS (NOVEMBER 1982)~~

N/A

~~Atmospheric dispersion models used for potential accident consequence assessments at Beaver Valley Power Station - Unit 2 follow the guidance of this regulatory guide.~~

RG No. 1.146, Rev. 0
UFSAR Reference Section 17.2

TABLE 1

QUALIFICATION OF QUALITY ASSURANCE PROGRAM AUDIT PERSONNEL FOR NUCLEAR POWER PLANTS (AUGUST 1980)

PN

Beaver Valley Power Station - Unit 2 meets the intent of Regulatory Guide 1.146 for qualification of its Quality Assurance Program audit personnel as of January 1, 1982, with the following alternative and clarification:

One individual will be qualified as an audit team leader under the existing Duquesne Light Company Quality Assurance Department Program. This individual will (1) meet the ANSI N45.2.23 requirements for education, rights of management, and communication skills, (2) have received training to the extent necessary to assure competence in auditing skill, (3) have passed a lead auditor examination, and (4) have participated in a minimum of five nuclear quality assurance audits before being assigned as an audit team leader. When acting as an audit team leader, the individual will be accompanied by an individual qualified as a lead auditor in accordance with ANSI N45.2.23-1978.

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258

Paragraph C.1

A.7.a.4

The applicability of the referenced regulatory guides (1.28, 1.74, and 1.88) is as stated in the respective positions on these regulatory guides.

~~RG No. 1.147, Rev. 5~~
UFSAR ~~Reference~~ Section 6.6

~~INSERVICE INSPECTION CODE CASE ACCEPTABILITY ASME SECTION XI DIVISION 1 (AUGUST 1986)~~

N/A

~~Utilization of inservice inspection code cases for BVPS-2 follows the guidance of this regulatory guide.~~

be required to determine the acceptability of the welds. The sample size shall be 10 percent of the welds in the system or component. If any of these weld samples are defective, that is, fail to pass bend tests as prescribed by ASME Code, Section IX, all remaining welds shall be sampled and all defective welds shall be removed and replaced."

1.3.3.32 Use of IEEE STD-308-1971 "Criteria for Class 1E Electric Systems for Nuclear Power Generating Stations" (Safety Guide 32)

Class 1E electric systems, to the greatest extent possible, comply with Safety Guide 32.

Availability of offsite power is discussed in Appendix 1A.17. N/A

The capacity of each battery charger supply is based on the largest combined demands of the various steady state loads and the charging capacity to restore the battery to the fully charged state, irrespective of the status of the plant during which these demands occur.

1.3.3.33 Quality Assurance Program Requirements (Operation) (Safety Guide 33)

BVPS-1 has formed a Quality Assurance Department. This department is responsible for the administration of the operational quality assurance program.

The BVPS-1 Quality Assurance Manual has been revised to incorporate quality assurance for operations. This program complies with AEC Safety Guide 33. ANSI N45.2 and ANSI N18.7(*) (previously ANS 3.2) requirements are referenced within Safety Guide 33.

BVPS-1 Quality Control is responsible for the preparation of the quality control procedures necessary to comply with Safety Guide 33.

1.3.4 Guidelines Used for the Operations Quality Assurance Program

1.3.4.1 Regulatory Guides

Table 1 RB

REGULATORY GUIDE 1.33, NOVEMBER 3, 1972: QUALITY ASSURANCE PROGRAM REQUIREMENTS (OPERATIONS)	100
The Operations Quality Assurance Program requirements follow the guidance of Regulatory Guide 1.33, November 3, 1972 [including referenced standards ANSI N45.2, 1971 and ANSI N18.7, 1972 (formerly ANS 3.2)]. A.7.a.4	101

TABLE 1 RB

Appendix A of Regulatory Guide 1.33, (Revision 2, February 1978), is used as guidance to ensure minimum procedural coverage for plant activities.

RB.2.F

The biennial review of safety related plant procedures described in ANSI N18.7 will be replaced by programmatic controls related to procedure review found in plant administrative procedures, and a maximum six year procedure review period. Biennial audits of operating organizations will include a review of their procedures to provide additional assurance that existing programmatic controls are resulting in the timely revision of their procedures in response to operations experience deficiencies and procedure deficiencies identified by users. 102

TABLE 1 RC

REGULATORY GUIDE 1.37, MARCH 16, 1973: QUALITY ASSURANCE REQUIREMENTS FOR CLEANING OF FLUID SYSTEMS AND ASSOCIATED COMPONENTS OF WATER-COOLED NUCLEAR POWER PLANTS 103

The Operations Quality Assurance Program requirements follow the guidance of Regulatory Guide 1.37. Procedures and/or specifications were developed prior to, and implemented concurrent with the start of the operations phase. 104

TABLE 1 RD

REGULATORY GUIDE 1.38, MARCH 16, 1973: QUALITY ASSURANCE REQUIREMENTS FOR PACKAGING, SHIPPING, RECEIVING, STORAGE, AND HANDLING OF ITEMS FOR WATER-COOLED NUCLEAR POWER PLANTS 105

The Operations Quality Assurance Program requirements follow the guidance of Regulatory Guide 1.38. Procedures and/or specifications were developed prior to, and implemented concurrent with the start of the operations phase. 104 106

TABLE 1 RE

REGULATORY GUIDE 1.39, MARCH 16, 1973: HOUSEKEEPING REQUIREMENTS FOR WATER-COOLED NUCLEAR POWER PLANTS 107 108

The Operations Quality Assurance Program requirements follow the guidance of Regulatory Guide 1.39. Procedures and/or specifications were developed prior to, and implemented concurrent with the start of the operations phase. 104

REGULATORY GUIDE 1.54, JUNE, 1973: QUALITY ASSURANCE REQUIREMENTS FOR PROTECTIVE COATINGS APPLIED TO WATER-COOLED NUCLEAR POWER PLANTS

The Operations Quality Assurance Program requirements follow the guidance of Regulatory Guide 1.54. Procedures and/or specifications were developed prior to, and implemented concurrent with the start of the operations phase. 109

TABLE 1 PF

REGULATORY GUIDE 1.58, REVISION 1, SEPTEMBER, 1980: QUALIFICATION OF NUCLEAR POWER PLANT INSPECTION, EXAMINATION AND TESTING PERSONNEL

Qualification of inspection, examination, and testing personnel at Beaver Valley Power Station (BVPS) follows the guidance of this regulatory guide with the following clarifications: 110

ANSI N45.2.6, Paragraph 2.5:

ANSI N45.2.6-1978 recommends that organizations identify any special physical characteristics needed in the performance of each activity, and that personnel requiring these characteristics have them verified by examination at intervals not to exceed one year. At BVPS, examinations to verify personnel have the required physical characteristics will be scheduled on an annual basis with a maximum allowable extension of 90 days.

Regulatory Guide 1.58, Paragraph C.6:

The initial qualifications of individuals to Levels I, II, or III will generally be to the education and experience recommendations of ANSI N45.2.6-1978. However, in certain instances as determined by appropriate management, qualifications may alternatively be determined through test results and/or demonstration of capabilities. Individual requalification will meet or exceed the recommendation of the standard.

Paragraph 3.5.1 of ANSI N45.2.6-1978 lists recommended education and experience for qualification to Level I. BVPS will also accept a 4-year college degree plus 1 month of related experience or equivalent inspection, examination, or testing activities.

TABLE 1 PG

REGULATORY GUIDE 1.64: QUALITY ASSURANCE REQUIREMENTS FOR DESIGN OF NUCLEAR POWER PLANTS 111 112

The Operations Quality Assurance Program requirements follow the guidance of Regulatory Guide 1.64.

REGULATORY GUIDE 1.68, DRAFT 4, OCTOBER 2, 1973: PRE-OPERATIONAL AND INITIAL START-UP TEST PROGRAM FOR WATER-COOLED POWER REACTORS 113

The Operations Quality Assurance Program follows the guidance of Regulatory Guide 1.68.

REGULATORY GUIDE 1.70.11: INFORMATION FOR SAFETY ANALYSIS REPORTS QUALITY ASSURANCE SAFETY OPERATIONS PHASE 114

The Operations Quality Assurance Program requirements follow the guidance of Regulatory Guide 1.70.11.

TABLE 1 PI

REGULATORY GUIDE 1.88, OCTOBER, 1976: COLLECTION, STORAGE, AND MAINTENANCE OF NUCLEAR POWER PLANT QUALITY ASSURANCE RECORDS

The collection, storage and maintenance of quality assurance records at Beaver Valley Power Station will meet the intent of this regulatory guide with the following alternatives: 115

1. The design and construction of quality assurance record storage facilities will follow the guidance of ANSI/ASME NQA-1-1983, Supplement 17S-1, Section 4.4.

2. When temporary storage of records is required, the guidance of ASME NQA-1-1989, Supplement 17S-1, Section 4.4.3 will be followed.

TABLE 1 PM

REGULATORY GUIDE 1.144, SEPTEMBER 1980: AUDITING OF QUALITY ASSURANCE PROGRAMS FOR NUCLEAR POWER PLANTS

Beaver Valley Power Station - Unit 1 (BVPS-1) will meet the intent of Regulatory Guide 1.144 for the auditing of its Quality Assurance Program during the operations phase with the following clarifications and alternatives: 116

A.7.a.4

Paragraph C.1

The applicability of the referenced regulatory guides/ANSI standards [RG 1.28: ANSI N45.2, RG 1.28: ANSI N45.2.9, and RG 1.74: ANSI N45.2.10] is as stated in the respective positions on these regulatory guides/ANSI standards as described in the UFSAR.

C.2 TABLE 1 PB.1.b

Paragraph C.3

Except for audit frequencies mandated by Title 10 of the Code of Federal Regulations, internal audits of selected aspects of operational phase activities shall be performed to ensure that audits described in Section 17.2 of the BVPS-2 UFSAR are completed within a period of 2 years (biennially).

TABLE 1 PM.2.b

The pre-audit and post-audit conferences required by Sections 4.3.1 and 4.3.3 of ANSI N45.2.12-1977 may be fulfilled by a variety of communications such as telephone conversations.

REGULATORY GUIDE 1.155, JUNE 1988: STATION BLACKOUT

The utilization of BVPS emergency diesel generators as alternate AC (AAC) power sources for coping with station blackout, and the reliability program for these generators follow the guidance of Regulatory Guide 1.155 (June 1988).[10,11] 117

REGULATORY GUIDE 1.163, SEPTEMBER 1995: PERFORMANCE-BASED CONTAINMENT LEAK TEST PROGRAM

The Containment Leakage Rate Testing Program is in accordance with the guidelines contained in Regulatory Guide 1.163. This regulatory guide provides guidance on an acceptable performance based leak test program, leakage rate test methods, procedures, and analyses that may be used to comply with the performance based Option B in Appendix J of 10 CFR 50. Refer to UFSAR Section 5.6 for additional discussion of containment leakage rate tests. 118

1.3.4.2 American National Standards Institute (ANSI) Standards

TABLE 1 P J

N45.2.5: DRAFT 3, REVISION 1, JANUARY 1974, "SUPPLEMENTARY QUALITY ASSURANCE REQUIREMENTS FOR INSTALLATION, INSPECTION AND TESTING OF STRUCTURAL CONCRETE AND STRUCTURAL STEEL DURING THE CONSTRUCTION PHASE OF NUCLEAR POWER PLANTS" 119

BVPS-1 follows the guidance of ANSI N45.2.5, Draft 3, Revision 1, January 1974. Procedures and/or specifications were developed prior to, and implemented concurrent with the start of the operations phase. 104 120

TABLE 1 P K

N45.2.8: DRAFT 3, REVISION 2, SEPTEMBER 1973, "SUPPLEMENTARY QUALITY ASSURANCE REQUIREMENTS FOR INSTALLATION, INSPECTION, AND TESTING OF MECHANICAL EQUIPMENT AND SYSTEMS FOR THE CONSTRUCTION PHASE OF NUCLEAR POWER PLANTS" 121

BVPS-1 follows the guidance of ANSI N45.2.8, Draft 3, Revision 2, September 1973. Procedures and/or specifications were developed prior to, and implemented concurrent with the start of the operations phase. 104 122

TABLE 1 P L

N45.2.13: DRAFT 2, REVISION 4, APRIL 1974, "QUALITY ASSURANCE REQUIREMENTS FOR CONTROL OF PROCUREMENT OF ITEMS AND SERVICES FOR NUCLEAR POWER PLANTS" 123

The Operations Quality Assurance Program follows the guidance of ANSI N45.2.13, Draft 2, Revision 4, April 1974. 124

ATTACHMENT 6

BVPS Change Descriptions

BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
200	BVPS-2 UFSAR 17.2 17.2.2 Table 1.8-1, RG 1.33	Removed introductory, background and historical information		Plant-specific introductory information regarding the QA program description (BVPS QAPD) is general in nature and contains no commitments that are not described in more detail elsewhere in the BVPS QAPD. RG 1.33 details are addressed in FENOC QAPM Table 1.
201	BVPS-2 UFSAR 17.2.1 17.2.2 17.2.10	Organization description changes		Organizational information is changed to reflect the existing FENOC organizational structure. The organization chart and other detailed information not necessary for demonstrating conformance to 10CFR 50, Appendix B will be removed. Instead, a written functional description is provided to identify elements of the organization needed to show sufficient independence, authority, and organizational freedom of individuals responsible for quality functions.
202	BVPS-2 UFSAR 17.2.1.1	Relocated Independent Safety Engineering Group (ISEG) details.		Details of ISEG functions and composition have previously been relocated to BVPS-2 UFSAR Section 13.4. The BVPS QAPD contains a commitment to maintain an ISEG function. This change has previously been evaluated per 10 CFR 50.54 and approved for implementation by BVPS management based on NRC safety evaluation dated November 6, 1998 for EOI.
203	BVPS-2 UFSAR 17.2.1.2 Table 1.8-1, RG 1.33	Alternative to biennial review of procedures	DB/PY	The BVPS QAPD describes random review of quality assurance program implementing procedures by the Quality Services organization. This program element is a condition for extending the usual biennial review to a maximum of six years. This alternative was previously approved by the NRC as a reduction in commitments for BVPS. FENOC QAPM Table 1, B.2.f describes an additional alternative to performing biennial reviews. This alternative would allow process controls to be implemented that ensure that the document is revised to reflect changes in its source document. Adoption of this alternative would allow for common processes at all FENOC plants and would ensure that implementing procedures continue to address higher tier QA program requirements through change process controls rather than "after the fact" reviews.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 5, "BVPS Quality Assurance Program Description".

BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
204	BVPS-2 UFSAR 17.2.1.3	Relocated Onsite Safety Committee (OSC) details.		Details of OSC functions and composition are to be relocated to BVPS-2 UFSAR Section 13.4. These details would then be subject to change controls of 10 CFR 50.59 rather than 50.54. The overall commitment to operating organization review functions is a method acceptable to the NRC staff as described in RG 1.33. The BVPS commitment to RG 1.33 is described in the proposed FENOC QAPM.
205	BVPS-2 UFSAR 17.2.1.4	Relocated Company Nuclear Review Board (CNRB) details.		Details of CNRB functions and composition are to be relocated to BVPS-2 UFSAR Section 13.4. These details would then be subject to change controls of 10 CFR 50.59 rather than 50.54. The overall commitment to independent review functions is a method acceptable to the NRC staff as described in RG 1.33. The BVPS commitment to RG 1.33 is described in the proposed FENOC QAPM.
206	BVPS-2 UFSAR 17.2.1.4	Removed undefined CNRB audit from list.		The "management prerogative" audit was removed from a list of audits required to be performed at a specific frequency, because it is not possible to assign a frequency to such an audit and because its scope is undefined.
207	BVPS-2 UFSAR 17.2.2 Table 17.2-1	Removed table of qualification requirements for Quality Assessment staff.		This information would be removed due to its plant-specific nature. The FENOC QAPM provides general information regarding qualifications of QA staff through commitments to appropriate Regulatory Guides such as 1.58 and 1.146. Therefore, descriptions of qualification commitments will continue to be maintained at a level needed to show conformance with NRC criteria by adoption of the FENOC QAPM.
208	BVPS-2 UFSAR 17.2.2	Provisions for endorsement, approval and control of the QA program differ from FENOC QAPM.		Because the FENOC QAPM is the responsibility of a higher level corporate organization rather than a site base organization, endorsement, controls and approvals will be subject to FENOC processes upon adoption. FENOC QAPM B.14 specifies document control measures that are applicable to the QAPM.
209	BVPS-2 UFSAR 17.2.2 Table 17.2-2	Removed table containing a cross-reference between the 18 criteria of Appendix B and corresponding BVPS QA program sections.		The subject table provides a level of detail that is not necessary. By evaluating the existing BVPS QAPD against the FENOC QAPM, it has been determined that the Appendix B criteria are addressed by the FENOC QAPM.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 5, "BVPS Quality Assurance Program Description".

BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
210	BVPS-2 UFSAR 17.2.2	FENOC QAPM does not make references to application of the QA program to activities that are not subject to 10 CFR 50 Appendix B.		The 10CFR50, Appendix B quality assurance program description need not address application to areas beyond its regulatory scope. If the QAPM is selected as the means for satisfying QA program requirements of other regulations, the QAPM will be invoked through an appropriate administrative document to the extent necessary to satisfy the governing requirement.
211	BVPS-2 UFSAR 17.2.2	NDE organizational detail not described by FENOC QAPM.		The BVPS Program description contains a statement that the QC and NDE functions are independent of station operations and maintenance activities. Although independence is not required for the NDE function, it was included in the statement to reflect the actual BVPS organization structure at the time the description was written. This organization detail would not be specifically discussed in the FENOC QAPM due to its more generic organizational description.
212	BVPS-2 UFSAR 17.2.4	Removed the phrase "other than the person responsible" with respect to who can review procurement documents.		Procurement documents do not require an independent review as delineated in ANSI N45.2.13-1976, step 3.3.c. Procurement document review needs to be performed by knowledgeable personnel who have access to the pertinent information stated on the procurement document. Technical reviews that require independent verifications are still performed under requirements established by ANSI N45.2.11. RG 1.123 and RG 1.64 details are addressed in FENOC QAPM Table 1.
213	BVPS-2 UFSAR 17.2.5	Reduced the level of detail concerning procedures and instructions concerning the requirements of RG 1.33.		This level of detail should be removed since it duplicates information in quality assurance regulatory guides and quality assurance standards already contained in the FENOC QAPM. The requirements of this section are addressed in the FENOC QAPM through commitment to Regulatory Guide 1.33 and ANSI N18.7.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 5, "BVPS Quality Assurance Program Description".

BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
214	BVPS-2 UFSAR 17.2.5	Transfer of procedure change review/ approval process to License Requirements Manual (LRM).		The BVPS process for reviewing and approving procedure changes was relocated to the BVPS QAPD from technical specifications. Subsequently, BVPS obtained NRC approval for a reduction in commitments by an SER dated January 12, 2000. ANSI N18.7 as endorsed by RG 1.33 only contains specific requirements for approval of temporary procedure changes, but not for permanent changes. The proposed change would add an option of describing this process in a license requirements manual (subject to 10CFR50.59) because this is the normal location for maintaining commitments that were once contained in the technical specifications. No commitment has changed.
215	BVPS-2 UFSAR 17.2.5	Added plant specific reference to License Requirements Manual.		Since FENOC plants currently review temporary changes by different methods and because descriptions of these processes reside in different licensing documents, the existing position identifies the documents that describe the review process. The proposed change would add an option of describing this process in a license requirements manual (subject to 10CFR50.59) because this is the normal location for maintaining commitments that were once contained in the technical specifications. No commitment has changed.
216	BVPS-2 UFSAR 17.2.9	Removed details concerning the review and approval of outside service organization special process procedures.		Details concerning the review and approval of outside service organization special process procedures are addressed by the Independent Qualified Reviewer(IQR) Program. Since FENOC plants currently review procedures by different methods and because descriptions of these processes reside in different licensing documents, existing BVPS procedure describes the review process. The concept of an IQR Program is consistent with the review and approval requirements stated in ANSI N18.7. RG 1.33 details are addressed in FENOC QAPM Table 1.
217	BVPS-2 UFSAR 17.2.10	Requirement to implement an ASME ISI program is not described in FENOC QAPM.		The BVPS QAPD contains a commitment to implement an ASME ISI program. This requirement need not be maintained in the FENOC QAPM because the ISI program is separately approved by the NRC for each plant and because BVPS technical specifications invoke the approved program.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
218	BVPS-2 UFSAR 17.2.11	Removal of BVPS QAPD commitment for test procedures to identify any special processes to be used during testing.		The BVPS QAPD contains a commitment for test procedures to identify any special processes to be used during testing. The origin and purpose of this commitment is unknown. There is no corresponding requirement in QA standards or regulatory guides to which BVPS has committed. 10 CFR 50 Appendix B does not contain this requirement. It is believed that a requirement for test procedures to describe special equipment or calibrations as described in RG 1.33 Section 5.3.10 may have been incorrectly translated into the BVPS QAPD. The BVPS commitment to RG 1.33 is described in the proposed FENOC QAPM.
219	BVPS-2 UFSAR 17.2.12	FENOC QAPM requirements for documentation of calibration status differ from BVPS QAPD.		The BVPS QAPD could be strictly interpreted as requiring that the last calibration date and future calibration dates for measuring and test instruments (M&TE) must be specifically stated in calibration records. The FENOC QAPM requires that records of calibration status must be maintained and that instruments must be traceable to associated documentation. Through its commitment to RG 1.33, it also requires that calibration status must be described in M&TE records. The details found in the BVPS QAPD are excessive and do not enhance the quality of M&TE records beyond that specified by RG 1.33.
220	BVPS-2 UFSAR 17.2.16	Authority to request program or procedure revisions is not specifically discussed in FENOC QAPM.		The BVPS QAPD discusses authority of the Quality Assessment manager to request program or procedure changes when repeated nonconformances indicate the need to do so. The FENOC QAPM is not so specific as to directly discuss this topic. QAPM addresses the broader responsibility of all individuals to report conditions adverse to quality. It also discusses identification and reporting of trends. Therefore, the BVPS QAPD description is addressed by the FENOC QAPM in a more general fashion.
221	BVPS-2 UFSAR 17.2.17	Plant-specific BVPS QAPD description of responsibility for transmitting QA records for safekeeping is not included in the FENOC QAPM.		The BVPS QAPD describes the responsibility of onsite organizations to transmit QA records to the Beaver Valley Records Center. This is a process detail that is plant-specific in nature. The FENOC QAPM is a program level description that commits to maintain provisions for administration and receipt of records.
222	BVPS-2 UFSAR 17.2.17	BVPS QAPD contains options for using optical disk technology for storing QA records.		Optical Disk storage is not currently used by any FENOC plant, including BVPS. Therefore, discussion of this option in the FENOC QAPM is not necessary.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
223	BVPS-2 UFSAR 17.2.17	Relocating former Tech. Specs. records reference to the License Requirements Manual.		The FENOC QAPM does not list specific record types, retention times for records, or content of inspection and test records since this information is duplicated in quality assurance regulatory guides and quality assurance standards already contained in the FENOC QAPM. Although the current level of detail has been reduced, the FENOC QAPM continues to meet the requirements of 10CFR50, Appendix B. The requirements of this section are addressed in the FENOC QAPM through commitment to Regulatory Guide 1.88 and ANSI N45.2.9.
224	BVPS-2 UFSAR 17.2.18, Table 1.8-1, RG 1.33	Added provisions for revising audit frequencies in accordance with a performance based auditing scheduling program.	EOI	Audits will be conducted at a frequency in accordance with either Section C.2.a.1. (performance based) or Section C.2.a.2. (specified frequency) of the FENOC QAPM. The new "performance based" alternative provides for more efficient use of resources and focuses attention on areas with greater improvement potential. 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. This alternative has not previously been approved for any FENOC plant. 10CFR50, Appendix B is satisfied by ensuring that audits are conducted as required by the applicable Code of Federal regulations, technical specifications, safety analysis reports, and commitments by various correspondence with the NRC. The Entergy Operations, Inc. (EOI) QAPM approved by SER dated November 6, 1998 permits this alternative.
225	BVPS-2 UFSAR 17.2.18	Relocating details concerning the CNRB auditing function to UFSAR.		Details of CNRB auditing function are to be relocated to BVPS-2 UFSAR Section 13.4. These details would then be subject to change controls of 10 CFR 50.59 rather than 50.54. The information describing the CNRB auditing function that is being removed is general in nature and contains no commitments that are not described in more detail elsewhere in the FENOC QAPM. RG 1.144 details are addressed in FENOC QAPM Table 1. FENOC QAPM C.2 details auditing criteria that are applicable to the QAPM.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
226	BVPS-2 UFSAR Table 1.8-1, RG 1.33	New alternative to RG 1.33 regarding independent review of LARs.	New	QAPM Table 1, B.1.a would introduce a new alternative that would permit license amendment requests (LARs) to be reviewed by a multi-disciplined committee of onsite operating organization members (e.g. PORC) chartered to advise the plant manager. This would replace the review currently performed by an "offsite" independent review body (CNRB). Because each plant maintains sufficient technical expertise onsite and because the PORC is composed of a variety of members with differing expertise, review of LARs by the PORC is sufficient to ensure the necessary quality, prior to NRC submittal. This alternative has not previously been approved for any FENOC plant. 10CFR50, Appendix B is satisfied by ensuring that LARs are reviewed for adequacy prior to being released.
227	BVPS-2 UFSAR Table 1.8-1, RG 1.33	Alternative to use of a temporary modification log.	DB/PY	FENOC QAPM Table 1, B.2.d describes an alternative to maintaining a log of temporary modifications. When an approved procedure specifically addresses installation and removal of a temporary modification, a log would not be required to be used. The purpose of a log is to ensure that temporary modifications are identified and eventually dispositioned. Specific procedural requirements governing installation and removal accomplish the same purpose. 10 CFR 50, Appendix B provides no specific requirements for temporary modifications.
228	BVPS-2 UFSAR Table 1.8-1, RG 1.33	Alternative to pre-planned maintenance and modifications during emergency situations.	DB/PY	FENOC QAPM Table 1, B.2.e describes an alternative to pre-planned maintenance and modifications that may be applied during emergency situations. This alternative is intended to recognize that situations may occur that would justify actions allowed by 10CRF50.54(x).

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
229	BVPS-2 UFSAR Table 1.8-1, RG 1.37	Clarification of regulatory guide position regarding quality of flush water.	DB/PY	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. FENOC QAPM Table 1, C.1.b describes FENOC's interpretation of this position. FENOC interprets that dissolved oxygen, nitrogen and chemical additives need not meet normal operating specifications. The RG phrase "equivalent to the quality" is interpreted as meaning "equivalent with respect to properties that can affect the quality of the flushed system". Properties such as oxygen or nitrogen content would have a negligible effect on quality of the flushed system and would leave no residual contamination. Operating system additives are used to cope with actual operating needs and serve no quality purpose during flushing. Therefore, by applying the FENOC position, flush water would be equivalent in quality to operating system water. This is a clarification only and changes no commitment.
230	BVPS-2 UFSAR Table 1.8-1, RG 1.37	Removed alternative to particle size criterion.		The existing BVPS QAPD describes an alternative to the Regulatory Guide criterion for Class B cleanness particle size. This alternative is no longer needed and is not reflected in the FENOC QAPM.
231	BVPS-2 UFSAR Table 1.8-1, R.G. 1.37	Clarifications regarding limits on use of chemical compounds that could contribute to cracking.	DB/PY	This clarification identifies materials that could contribute to intergranular cracking or SCC of austenitic stainless steel, and places limitations on their use. This clarification was approved on 12/8/99 in a SER issued to PNPP.
231a	BVPS-2 UFSAR Table 1.8-1, R.G. 1.37	Alternative personnel qualification standard for cleanliness inspections.	DB/PY	The proposed alternative would allow personnel who perform cleanliness inspections to be qualified in accordance with ANSI N18.1 as an alternative to ANSI N45.2.6. This clarification was approved on 12/8/99 in a SER issued to PNPP.
232	BVPS-2 UFSAR Table 1.8-1, R.G. 1.37	Clarification of requirements for opening clean systems.	DB/PY	The clarification reiterates requirements already contained within Section 6 of ANSI N45.2.1. No commitment has changed as a result of this clarification.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
233	BVPS-2 UFSAR Table 1.8-1, RG 1.38	Commitment to a newer version of ANSI N45.2.2.	DB/PY	The FENOC QAPM commits to follow RG 1.38, Revision 2. The Regulatory Guide endorses ANSI N45.2.2-1972. However, instead of the 1972 version of the ANSI standard, FENOC has positioned itself against the 1978 version. BVPS has compared the two versions and found that the newer version incorporates modifications described in the Regulatory Guide. It also contained other changes not considered to be reductions in commitments. Therefore, application of the newer revision would also ensure the same level of quality as the previous version.
234	BVPS-2 UFSAR Table 1.8-1, R.G. 1.38	Alternative to packing and shipping requirements for commercial grade items.	DB/PY	Sections 3 and 4 of ANSI N45.2.2 specify a four level classification system for packaging and shipping of items. In lieu of this, commercial grade items shall be packaged and shipped in accordance with standard commercial practices. This reduction in commitment is requested because commercial grade items may be purchased "off-the-shelf." Therefore, the purchaser may have no advanced control over handling of such items prior to acquisition. This change would satisfy 10 CFR 50, Appendix B because commercial grade items are subject to a dedication process that ensures adequate quality prior to use of such items in safety related applications. This alternative originated from and is consistent with statements made in the quality assurance program description for DBNPS prior to adoption of the QAPM.
235	BVPS-2 UFSAR Table 1.8-1, R.G. 1.38	Alternative to preliminary inspection of received items prior to loading.	DB/PY	Section 5.2.1 of ANSI N45.2.2 recommends preliminary inspection of items for shipping damage prior to unloading by the licensee. The proposed change would permit inspection for shipping damage during unloading and unpacking. This reduction is requested because inspection prior to unloading from a carrier is not always practical or possible. The change would satisfy Appendix B requirements because the objective of Criterion XV (i.e. to prevent inadvertent use or installation) would be achieved so long as the inspection occurs prior to release of the item. This alternative originated from and is consistent with statements in the quality assurance program descriptions for DBNPS and PNPP prior to adoption of the QAPM.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
236	BVPS-2 UFSAR Table 1.8-1, R.G. 1.38	Provides clarification of Section 5.5 of ANSI N45.2.2. to address "repair" disposition.	DB/PY	The "repair" disposition (as defined by ANSI N45.2.10-1973) may also be used. Nonconforming items will be restored to a condition such that the capability of the item to function reliably and safely is unimpaired. In-plant testing procedures concerning repaired items will ensure that 10 CFR 50, Appendix B requirements are satisfied because the objective of Criterion XI (i.e. to ensure satisfactory component performance) will be met even if the item does not conform to the original requirements.
237	BVPS-2 UFSAR Table 1.8-1, R.G. 1.38	Alternative to ANSI N45.2.2, Section 6.5. addressing short term staging of material/equipment.		This reduction in commitments would permit the recommendations of Sections 6.2, 6.4.1, and 6.4.3 to be bypassed for released equipment that is awaiting installation. The purpose of Appendix B, Criterion XIII (to prevent damage or deterioration) would be satisfied because applicable requirements of Sections 6.1, 6.3 and 6.4.2 of ANSI N45.2.2 are adequate to prevent damage or deterioration while material is being staged for installation. Functions described in Sections 6.2, 6.4.1, and 6.4.3 (storage area controls, storage area inspections, etc.) pertain mainly to large scale and/or long term storage facilities and would not be practical to apply to staging areas. This exception originated from and is consistent with statements in the quality assurance program description for DBNPS prior to adoption of the QAPM.
238	BVPS-2 UFSAR Table 1.8-1, R.G. 1.38	Clarification regarding quality of water used for flushing.		FENOC's position on Regulatory Guide 1.37 and ANSI N45.2.1 also apply to this Section. By applying the FENOC position, flush water would be equivalent in quality to operating system water. This is a clarification only and changes no commitment.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
239	BVPS-2 UFSAR Table 1.8-1, R.G. 1.38	Alternative to Section A.3.4.2 of ANSI N45.2.2. addressing storage protection.	DB/PY	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 leak-proof barrier. In these cases, a positive pressure purge flow may be used as an alternative to a leak-proof barrier. Since Criterion XIII requires the use of special protective environments when necessary, but is not so specific as to limit a licensee to the use of static gas blankets, this criterion would be satisfied by the proposed alternative which would adequately prevent damage or deterioration. This alternative originated from and is consistent with statements in the quality assurance program descriptions for DBNPS and PNPP prior to adoption of the QAPM.
240	BVPS-2 UFSAR Table 1.8-1, RG 1.39	RG 1.39 - Housekeeping zones may not be utilized.	EOI	The proposed change allows FENOC the flexibility to choose work and storage area controls that are consistent with requirements for an operating plant. These requirements will take into account radiation control considerations, security considerations, and personnel and equipment safety considerations. This alternative has not previously been approved for any FENOC plant. 10CFR50, Appendix B is satisfied by ensuring that activities affecting quality are accomplished under suitably controlled conditions. The proposed position is consistent with the EOI QAPM approved by SER dated November 6, 1998.
241	BVPS-2 UFSAR Table 1.8-1, RG 1.58	Clarification of scope of personnel applicable RG 1.58.	DB/PY	FENOC QAPM Table 1, F.1 describes individuals subject to the qualification requirements of RG 1.58. This clarification distinguishes between individuals performing quality verification functions (i.e. subject to RG 1.58 requirements) and those who do not (i.e. subject to other qualification requirements). This distinction is believed to be consistent with the Regulatory Guide.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
242	BVPS-2 UFSAR Table 1.8-1, RG 1.58	RG 1.58 - Alternative to SNT-TC-1A qualification requirements.	New	Regulatory Position C.2 indicates that ASNT-TC-1A-1975 is to be used for qualification of NDT personnel who apply various NDT methods. It also indicates that personnel performing non-destructive examinations required by Section III and Section IX of the ASME code should be qualified to ASNT-TC-1A-1975 as well as additional provisions of the code. It is proposed that instead of using the 1975 version of ASNT-TC-1A, qualification of personnel subject to this standard would satisfy the version of ASNT-TC-1A specified in the applicable code year edition(s) as specified in 10 CFR 50.55a. This would be applied regardless of whether examinations are of a type required by the code. The proposed position provides a consistent standard for qualifying all personnel subject to ASNT-TC-1A and provides automatic consistency with changing ASME code qualification requirements required by regulation. It continues to satisfy 10 CFR 50 Appendix B, Criterion IX because this criterion is not specific regarding the means for qualifying NDT personnel. This alternative is not currently used at any FENOC plant.
243	BVPS-2 UFSAR Table 1.8-1, RG 1.64	Historical information is not reflected in FENOC QAPM.		BVPS-2 plant specific descriptions of compliance to Regulatory Guide 1.64 during construction phase need not be reflected in the FENOC QAPM due to their plant-specific and historic nature.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
244	BVPS-2 UFSAR Table 1.8-1, RG 1.64	Alternative allowing use of a supervisor for design verifications.	DB/PY	Section C.2(1) of the guide addresses the use of a supervisor in design verification. If, in exceptional circumstances, the supervisor is the only technically qualified individual available, the proposed change would allow the design verification or checking to be conducted by the supervisor if (1) the other requirements of Section C.2 of this Guide are being met, (2) the justification is individually documented and approved by the next level of supervision, and (3) Quality assurance audits include review of frequency and effectiveness of the use of the immediate supervisors, thereby verifying that this provision is used only in exceptional circumstances. 10 CFR 50 Appendix B, Criterion III requires that the verifying or checking process be performed by individuals or groups other than those who performed the original design. The change would satisfy Appendix B requirements because the other requirements of Section C.2 ensure that the supervisor has no direct involvement in the design such as by having specified a particular design approach, having ruled out certain design considerations, or having established design inputs. Thus the supervisor would not have performed the original design. This alternative is currently implemented in the FENOC QAPM, Revision 0.
245	BVPS-2 UFSAR Table 1.8-1, RG 1.64	Alternative to design verification requirements involving groups.	DB/PY	Section 6.1 of ANSI N45.2.11-1974 requires that any competent individuals or groups other than those that performed the original design perform the design verification. Appendix B, Criterion III contains a similar statement. This requirement may be implemented at BVPS by allowing an individual who contributes to a given design to 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. This complies with Appendix B because the individual's design contribution would be verified by others. This alternative is currently implemented in the FENOC QAPM, Revision 0.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
246	BVPS-2 UFSAR Table 1.8-1, RG 1.74	Removal of BVPS terms and definitions alternative to RG 1.74.		The BVPS QAPD describes an alternate set of terms and definitions rather than commit to RG 1.74. Upon adopting the FENOC QAPM, this alternative would be replaced by a commitment to the guide.
247	BVPS-2 UFSAR Table 1.8-1, RG 1.88	Alternative to storage requirement for special processed records.	PY	ANSI N45.2.9 contains a requirement to store special processed records in accordance with manufacturer's recommendations. By adopting the FENOC alternative, BVPS would store such records in accordance with ANSI PH 1.43-1979. This change would allow consistent application of storage requirements in accordance with a standard developed by industry experts. Therefore, the quality of stored special processed records is ensured.
248	BVPS-2 UFSAR Table 1.8-1, RG 1.116	Alternative to cleaning and flushing requirements for mechanical equipment and systems.	DB/PY	Among other requirements, ANSI N45.2.8 contains cleaning and flushing requirements for mechanical equipment and systems. Regulatory Guide 1.37 & ANSI N45.2.1 are specifically intended to address the topic of cleaning fluid systems. By adopting the FENOC QAPM, BVPS would also be adopting an alternative to the ANSI N45.2.8 that would allow RG 1.37/ANSI N45.2.1 to override where the standards differ. This alternative would allow consistent application of cleaning requirements in accordance with a standard that is NRC endorsed.
249	BVPS-2 UFSAR Table 1.8-1, RG 1.123	Historical information is not reflected in FENOC QAPM.		BVPS-2 plant specific descriptions of compliance to Regulatory Guide 1.123 during construction phase need not be reflected in the FENOC QAPM due to their plant-specific and historic nature.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
250	BVPS-2 UFSAR Table 1.8-1, RG 1.123	Addresses selection of procurement sources for commercial grade and non-safety related items.	DB/PY	Section 4 in ANSI N45.2.13 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. This clarification in QAPM Table 1, L.2.a., provides for more efficient use of resources and focuses attention specific to the item being procured to meet the specified requirements. Criterion VII of 10 CFR 50, Appendix B would be satisfied by the proposed alternative in QAPM Table 1, L.2.a. This alternative originated from and is consistent with statements in the quality assurance program descriptions for DBNPS and PNPP prior to adoption of the QAPM.
251	BVPS-2 UFSAR Table 1.8-1, RG 1.123	Alternative requirements for the control of nonconformances by vendors.	DB/PY	Section 8.2 in ANSI N45.2.13 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. This clarification in QAPM Table 1, L.2.b., provides for more efficient use of resources and focuses attention specific to the nonconforming item to meet the specified design requirements. Criteria III and XVI of 10 CFR 50, Appendix B would be satisfied by the proposed alternative in QAPM Table 1, L.2.b.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
252	BVPS-2 UFSAR Table 1.8-1, RG 1.123	Clarifies individual who may sign a certificate of conformance.	DB/PY EOI	Section 10.2.d in ANSI N45.2.13 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. This clarification describes the method by which this section of ANSI N 45.2.13 is fulfilled. Criteria VII of 10 CFR 50, Appendix B would be satisfied by the proposed alternative in QAPM Table 1, L.2.c. since documentary evidence supporting conformance would be attested to by an authorized and responsible employee of the supplier. This alternative is consistent with statements in the quality assurance program description approved for Entergy.
253	BVPS-2 UFSAR Table 1.8-1, RG 1.144	Discusses use of the corrective action program for follow-up and corrective actions.	DB/PY EOI	Section 4.5.1 in ANSI N45.2.12 discusses follow-up and corrective actions. FENOC may utilize the provisions of the corrective action program outlined 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. This alternative conserves resources by allowing for minimal documentation for the correction and verification of findings during the course of the audit. Criteria XVI and XVIII of 10 CFR 50, Appendix B would be satisfied by the proposed alternative in QAPM Table 1, M.2.a. since audits will continue to assure that conditions adverse to quality are promptly identified, corrected and followed-up as deemed necessary. This alternative is consistent with statements in the quality assurance program description approved for Entergy.

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BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
254	BVPS-2 UFSAR Table 1.8-1, RG 1.144	Discusses when pre-audit and post-audit conferences are not conducted.	EOI	Section 4.3.1 and 4.3.3 in ANSI N45.2.12 discuss pre-audit and post-audit conferences. Pre-audit and post-audit conferences are only held when deemed necessary by quality assurance or when requested by the audited organization. This clarification in QAPM Table 1, M.2.c., provides for more efficient use of resources by focusing on necessity of holding pre-audit and post-audit conferences only when requested by the audited organization. Criteria XVIII of 10 CFR 50, Appendix B would be satisfied by the proposed alternative in QAPM Table 1, M.2.c. since audits will continue to verify compliance and effectiveness of the audited program. This alternative originated from and is consistent with statements in the quality assurance program description approved for Entergy.
255	BVPS-2 UFSAR Table 1.8-1, RG 1.144	Permits 30 working days for audit reporting.	EOI	Section 4.4 in ANSI N45.2.12 discusses audit reporting. Audit reports 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. This clarification in QAPM Table 1, M.2.d., provides for more efficient use of resources by clarifying dates for issuance of the audit report, and what date can be used for the post-audit conference. Criteria XVIII of 10 CFR 50, Appendix B would be satisfied by the proposed alternative in QAPM Table 1, M.2.d. since audits will continue to verify compliance and effectiveness of the audited program. This alternative originated from and is consistent with statements in the quality assurance program description approved for Entergy. This is not a reduction in commitment based on the provision of 10CFR50.54(a)(3)(ii).
256	BVPS-2 UFSAR Table 1.8-1, RG 1.146	Remove exception concerning the qualifications and limitations of one audit team leader.		This exception was made to allow for the use of audit personnel that did not fully meet qualification requirements. This exception is no longer needed since all audit personnel meet RG 1.146 requirements.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 5, "BVPS Quality Assurance Program Description".

BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
257	BVPS-2 UFSAR Table 1.8-1, RG 1.146	Discusses awarding 2 credits for RO/SRO licensee.	EOI	Section 2.3.1.3 in ANSI N45.2.23 discusses other credentials of professional competence. Holders of NRC issued Reactor Operator/Senior Reactor Operator Licenses comply with the requirements of this section and may be awarded two credits under "other credentials of professional competence." This clarification in QAPM Table 1, N.2.a., provides for more efficient use of resources by specifying other credentials of professional competence. Criteria II of 10 CFR 50, Appendix B would be satisfied by the proposed alternative in QAPM Table 1, N.2.a. since the competency level of audit personnel with regards to their qualification as lead auditors has been clarified in regards to those holders of NRC issued Reactor Operator/Senior Reactor Operator Licenses. This alternative originated from and is consistent with statements in the quality assurance program description approved for Entergy. This is not a reduction in commitment based on the provision of 10CFR50.54(a)(3)(ii).

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 5, "BVPS Quality Assurance Program Description".

BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
258	BVPS-2 UFSAR Table 1.8-1, RG 1.146	Discusses alternative audit participation pre-requisite for prospective lead auditors.	EOI	Section 2.3.4 in ANSI N45.2.23 discusses audit participation. 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 nuclear 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. This clarification in QAPM Table 1, N.2.a., provides for more efficient use of resources by demonstrating skill levels for lead auditors. Criteria II of 10 CFR 50, Appendix B would be satisfied by the proposed alternative in QAPM Table 1, N.2.b. except that a requirement to have documentation and procedures for this process is not specifically included. However, these items are covered generically for all QAPM subjects by Section A.1.d. of the QAPM, and specifically by section 2.3 of ANSI N45.2.23. This alternative originated from and is consistent with statements in the quality assurance program description approved for Entergy. This is not a reduction in commitment based on the provision of 10CFR50.54(a)(3)(ii).
259	BVPS-2 UFSAR Table 1.8-1, RG 1.94	Historical information is not reflected in FENOC QAPM.		BVPS-2 plant specific descriptions of compliance to Regulatory Guide 1.64 during construction phase need not be reflected in the FENOC QAPM due to their plant-specific and historic nature.
260	BVPS-2 UFSAR Table 1.8-1, RG 1.94	Alternative to requirement for maintaining current information in installation, inspection and test procedures.	DB/PY	ANSI N45.2.5 Section 2.2 requires that installation, inspection and test procedures be kept current with the latest information. Upon adoption by BVPS, this alternative that is implemented at other FENOC plants would permit affected procedures to be updated on a "prior to use" basis. This relief recognizes that activities subject to the Regulatory Guide are infrequent during the operations phase and that continuous updating of procedures would not be an efficient use of resources. The alternative is consistent with Appendix B Criteria V and VI that specify the need for appropriate procedures and controls for procedures, but are not so specific as to require that procedures be maintained when no specific application of them is planned.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 5, "BVPS Quality Assurance Program Description".

BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
261	BVPS-2 UFSAR Table 1.8-1, RG 1.94	Structural Concrete & Steel - Alternative to impact & torque wrenches calibration requirements and bolt projection criteria.	BV-2 (Constr. Phase)	ANSI N45.2.5-1975 requires that torque wrenches used for inspection be calibrated at least twice daily. It also specifies a visual inspection criterion for bolt length requiring at least three threads to project beyond the nut. An alternative requiring calibration at least once daily per shift and bolt projection criterion of one thread is proposed for all FENOC plants. The alternative calibration frequency would avoid the need for a second check on days when only one shift is working. Wrenches would be checked each working shift, thus ensuring accuracy. A bolt projection criterion of one thread is sufficient to confirm that bolt length is adequate by ensuring that the nut is fully engaged. Proposed alternatives were contained in the Beaver Valley Power Station-2 design and construction quality assurance program description. The existing as-built condition of Beaver Valley Power Station-2 reflects this position.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 5, "BVPS Quality Assurance Program Description".

BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
100	BVPS-1 UFSAR 1.3.4.1, RG 1.33	Changed commitment to RG 1.33		By adopting the FENOC QAPM, the BVPS-1 commitment to RG 1.33 would be changed from the 1972 revision to RG 1.33, Revision 2 (1978). This is a change to a more recent NRC approved document.
101	BVPS-1 UFSAR 1.3.4.1, RG 1.33	Adoption of FENOC alternatives to RG 1.33		Refer to Sidebars 200, 224, 226, 227 and 228.
102	BVPS-1 UFSAR 1.3.4.1, RG 1.33	Adoption of FENOC alternative to RG 1.33 biennial review of procedures		Refer to Sidebar 203.
103	BVPS-1 UFSAR 1.3.4.1, RG 1.37	Adoption of FENOC alternatives to RG 1.37		Refer to Sidebars 229, 231, 231a, and 232.
104	BVPS-1 UFSAR 1.3.4.1, RG 1.37, RG 1.38, RG 1.39, ANSI N45.2.5 and ANSI N45.2.8	Historical information is not reflected in FENOC QAPM		Statements in the BVPS-1 UFSAR indicating that procedures for implementation of RG 1.37, 1.38, and 1.39 and for ANSI N45.2.5 and N45.2.8 were implemented at the start of operations phase need not be reflected in the FENOC QAPM due to their plant-specific and historic nature.
105	BVPS-1 UFSAR 1.3.4.1, RG 1.38	Changed commitment to RG 1.38		By adopting the FENOC QAPM, the BVPS-1 commitment to RG 1.38 would be changed from the 1973 revision to RG 1.38, Revision 2 (1977). This is a change to a more recent NRC approved document.
106	BVPS-1 UFSAR 1.3.4.1, RG 1.38	Adoption of FENOC alternatives to RG 1.38		Refer to Sidebars 233, 234, 235,236, 237, 238 and 239.
107	BVPS-1 UFSAR 1.3.4.1, RG 1.39	Changed commitment to RG 1.39		By adopting the FENOC QAPM, the BVPS-1 commitment to RG 1.39 would be changed from the 1973 revision to RG 1.38, Revision 2 (1977). This is a change to a more recent NRC approved document.
108	BVPS-1 UFSAR 1.3.4.1, RG 1.39	Adoption of FENOC alternative to RG 1.39		Refer to Sidebar 240.
109	BVPS-1 UFSAR 1.3.4.1, RG 1.54	Removal of RG 1.54 from QA program description.		RG 1.54 pertains to quality assurance requirements for protective coatings. Since it is mainly intended for major construction activities, applicability during the operations phase is limited. It is not listed in SRP 17.3 as a Regulatory Guide issued in response to 10CFR50, Appendix B and is not listed in the Beaver Valley Power Station-2 SER as a quality assurance program acceptance criterion. Therefore the FENOC QAPM does not include a discussion of this guide. The EOI QAPM approved by SER dated November 6, 1998 does not describe a position regarding this guide. Existing plant specific positions will be maintained in the respective USAR and controlled per 10CFR50.59.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 5, "BVPS Quality Assurance Program Description".

BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
110	BVPS-1 UFSAR 1.3.4.1, RG 1.58	Adoption of FENOC alternatives to RG 1.58		Refer to Sidebars 241 and 242.
111	BVPS-1 UFSAR 1.3.4.1, RG 1.64	Changed commitment to RG 1.64		By adopting the FENOC QAPM, the BVPS-1 commitment to RG 1.64 would be changed from the earlier revision to RG 1.64, Revision 2 (1976). This is a change to a more recent NRC approved document.
112	BVPS-1 UFSAR 1.3.4.1, RG 1.64	Adoption of FENOC alternatives to RG 1.64		Refer to Sidebars 244 and 245.
113	BVPS-1 UFSAR 1.3.4.1, RG 1.68	Historical information is not reflected in FENOC QAPM		A statement in the BVPS-1 UFSAR regarding implementation of RG 1.68 need not be reflected in the FENOC QAPM due to its plant-specific and historic nature.
114	BVPS-1 UFSAR 1.3.4.1, RG 1.70.11	Historical information is not reflected in FENOC QAPM		A statement in the BVPS-1 UFSAR regarding implementation of RG 1.70.11 need not be reflected in the FENOC QAPM due to its historical and plant-specific nature.
115	BVPS-1 UFSAR 1.3.4.1, RG 1.88	Adoption of FENOC alternative to RG 1.88		Refer to Sidebar 247.
116	BVPS-1 UFSAR 1.3.4.1, RG 1.144	Adoption of FENOC alternatives to RG 1.144		Refer to Sidebars 253, and 254 and 255.
117	BVPS-1 UFSAR 1.3.4.1, RG 1.155	Removal of RG 1.155 from QA program description.		The 10CFR50, Appendix B quality assurance program description need not address application to areas beyond its regulatory scope. If the QAPM is selected as the means for satisfying QA program requirements of other regulations, the QAPM will be invoked through an appropriate administrative document to the extent necessary to satisfy the governing requirement.
118	BVPS-1 UFSAR 1.3.4.1, RG 1.163	Removal of RG 1.163 from QA program description.		RG 1.163 pertains to containment leak testing and provides a means of satisfying Appendix J to 10 CFR Part 50 It is not listed in SRP 17.3 as a Regulatory Guide issued in response to 10CFR50, Appendix B. The EOI QAPM approved by SER dated November 6, 1998 does not describe a position regarding this guide nor do the QA program descriptions for BVPS-2, DBNPS or PNPP. The existing BVPS-1 position was erroneously characterized as a quality assurance Regulatory Guide in the UFSAR. Following adoption of the FENOC QAPM, the position will continue to be maintained in the UFSAR, but will be controlled per 10CFR50.59.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 5, "BVPS Quality Assurance Program Description".

BVPS QA Program Description
Comparison to Proposed FENOC QAPM

Side Bar*	BVPS QAPD Reference*	Change Description	Origin	Basis
119	BVPS-1 UFSAR 1.3.4.1, ANSI N45.2.5	Changed commitment to ANSI N45.2.5		By adopting the FENOC QAPM, the BVPS-1 commitment to ANSI N45.2.5 would be changed to RG 1.94, Revision 1 (1976). This is a change to a more recent NRC approved document.
120	BVPS-1 UFSAR 1.3.4.1, ANSI N45.2.5	Adoption of FENOC alternatives to RG 1.94		Refer to Sidebars 260 and 261.
121	BVPS-1 UFSAR 1.3.4.1, ANSI N45.2.8	Changed commitment to ANSI N45.2.8		By adopting the FENOC QAPM, the BVPS-1 commitment to ANSI N45.2.8 would be changed to RG 1.116, Revision 0 (1977). This is a change to a more recent NRC approved document.
122	BVPS-1 UFSAR 1.3.4.1, ANSI N45.2.8	Adoption of FENOC alternatives to RG 1.116		Refer to Sidebar 248.
123	BVPS-1 UFSAR 1.3.4.1, ANSI N45.2.13	Changed commitment to ANSI N45.2.13		By adopting the FENOC QAPM, the BVPS-1 commitment to ANSI N45.2.13 would be changed to RG 1.123, Revision 1 (1977). This is a change to a more recent NRC approved document.
124	BVPS-1 UFSAR 1.3.4.1, ANSI N45.2.13	Adoption of FENOC alternatives to RG 1.123		Refer to Sidebars 250, 251 and 252.

* Item numbers in "Sidebar" column correspond to sidebars in Attachment 5, "BVPS Quality Assurance Program Description".

ENCLOSURE

DBNPS Commitment List

COMMITMENT LIST

THE FOLLOWING LIST IDENTIFIES THOSE ACTIONS COMMITTED TO BY THE DAVIS-BESSE NUCLEAR POWER STATION (DBNPS) IN THIS DOCUMENT. ANY OTHER ACTIONS DISCUSSED IN THIS SUBMITTAL REPRESENT INTENDED OR PLANNED ACTIONS BY THE DBNPS. THEY ARE DESCRIBED ONLY FOR INFORMATION AND ARE NOT REGULATORY COMMITMENTS. PLEASE NOTIFY THE MANAGER-REGULATORY AFFAIRS (419-321-8450) AT THE DBNPS OF ANY QUESTIONS REGARDING THIS DOCUMENT OR ANY ASSOCIATED REGULATORY COMMITMENTS.

COMMITMENT	DUE DATE
None	**N/A**