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NUCLEAR ENGINEERING & SERVICES DEPARTMENT

Docket Nos. 50-277
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U.S. Nuclear Regulatory Commission
 Attn: Document Control Desk
 Washington, DC 20555

Subject: Peach Bottom Atomic Power Station, Units 2 and 3
 Limerick Generating Station, Units 1 and 2
 Request for Approval of a Change to the
 Quality Assurance Program Descriptions

Gentlemen:

In accordance with 10CFR50.54(a)(3)(ii), this letter requests approval of a change to the Quality Assurance (QA) Program Descriptions incorporated in the Updated Final Safety Analysis Reports (UFSARs) for Peach Bottom Atomic Power Station (PBAPS), Units 2 and 3, and Limerick Generating Station (LGS), Units 1 and 2. As described below, the proposed change would remove the commitment to perform scheduled periodic procedure reviews on the basis that other established programs and processes are equally effective in maintaining the affected procedures up to date by providing adequate procedure revision controls. Accordingly, while this proposed change does reduce the commitment in the NRC approved PBAPS and LGS QA Program Descriptions, we consider that the justification described below provides an acceptable alternative commitment in that, if the proposed change is approved, the PBAPS and LGS QA Programs will continue to meet the requirements of 10CFR50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants." Please note also that the request is the same as proposed by South Carolina Electric & Gas for the Virgil C. Summer Nuclear Station, and approved by NRC in its letter dated November 29, 1990.

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In accordance with our commitment to ANSI Standard N18.7/ANS-3.2-1976, "Administrative Controls and Quality Assurance for the Operational Phase of Nuclear Power Plants," for LGS Units 1 and 2, and to an earlier revision of the same standard for PBAPS Units 2 and 3 (i.e., ANSI N18.7-1972), the affected procedures are reviewed periodically, on either a two year or five year basis, as specified in the UFSARs or administrative procedures. We have concluded that this periodic procedure review is redundant to existing programs and processes that by their nature provide adequate procedure revision control elements. The following is a description of the programs and processes that assure procedures are maintained current.

- 1) The plant modification process requires an interface review by the groups which are potentially affected by a modification. This interface review requires that procedures potentially affected by a modification be identified and changes or revisions made prior to the closure of the modification package.
- 2) Approved changes to the plants' Technical Specifications require evaluation for impact on potentially affected procedures and result in new or changed procedures.
- 3) Various programs are in place which provide a mechanism for end users to identify, document, and initiate processing of procedure improvements as a revision to the affected procedure (e.g., the Common Nuclear Group Procedure covering the process for requesting changes to procedures).
- 4) Temporary procedure changes are generated during procedure use. A procedure discrepancy or a unique activity are two reasons why a temporary procedure change would be generated. A temporary procedure change used to correct a procedure discrepancy is turned into a permanent procedure revision.
- 5) The Nuclear Quality Assurance organization includes a random review of procedures as part of their activities. These reviews may result in recommendations and corrective action requests. As a result of such input, procedure changes and revisions may be performed.
- 6) Our "In-House Event Investigation Program" requires that an investigation be conducted of events associated with Licensee Event Reports (LERs), NRC cited violations, and other types of occurrences (e.g., events which are considered to be outside of normal, expected operation). These investigations include identification of causes and corrective actions. The corrective actions specified by the event investigations may include procedure revisions or the development of new procedures as appropriate.

- 7) The Operating Experience Assessment Program (OEAP) requires industry information issued by the NRC, the Institute of Nuclear Power Operation, and the reactor vendor as well other equipment vendors be reviewed for applicability to the plants. Actions taken as a result of these evaluations may include changes to appropriate procedures.
- 8) A revised Vendor Manual Program currently being implemented requires that vendor manual revisions and new vendor manuals be evaluated to identify procedure revisions.
- 9) A new process for tracking and trending the causes of procedure changes is currently being implemented. This program will aid in identifying any of the above described procedure change programs or process which may be ineffective.

Furthermore, performance of periodic procedure reviews during the course of each year results in the expenditure of a substantial number of man-hours that could be applied to other areas of procedural development. Specifically, in the case of LGS, approximately 28,390 man-hours are spent each year to complete periodic procedure reviews. This estimate is based on a review of 2163 of the total 7559 LGS procedures per year, and accounts for approximately 13 man-hours of review, approval, and documentation processing activities completed for each procedure reviewed.

Additionally, if this proposed change is approved, the Nuclear Quality Assurance organization will conduct a biennial audit of the procedural development program utilizing a representative sampling process. This biennial audit will provide a high degree of confidence that the programs and processes described above are effective in maintaining procedures current.

The proposed changes to the QA Program Descriptions and associated UFSAR sections for PBAPS and LGS are provided in Attachments 1 and 2 respectively. Since approval of this proposed change would permit us to redirect the man-hours that would be expended to perform the next cycle of periodic procedure reviews, we request the NRC's prompt attention to this matter.

If you have any questions or need additional information, please contact us.

Very truly yours,



G. J. Beck, Manager
Licensing Section

Attachments

cc: T. T. Martin, Administrator, Region I, USNRC w/attachments
J. J. Lyash, USNRC Senior Resident Inspector, PBAPS w/attachments
T. J. Kenny, USNRC Senior Resident Inspector, LGS w/attachments

Attachment 1

Proposed Changes to the
Quality Assurance Program

Description for
Peach Bottom Atomic Power Station
Units 2 and 3

PBAPS

- 17.2.4.7 The Materials Section and Purchasing Department shall only process approved requisitions in accordance with PECO procurement procedures and policies.
- 17.2.4.7.1 The Purchasing Department shall not alter the technical information or quality assurance requirements on a requisition of any procurement classification identified as QS, QV, QD or NX item without, specifically requested prior, written approval of the requisitioning organization.
- 17.2.4.8 The procurement document for QS and QV items shall include a provision for the right-of-access to vendor facilities for inspection or audit purposes.
- 17.2.4.9 Procurement documents shall be maintained in accordance with Section 17.2.17.
- 17.2.5 Instructions, Procedures, and Drawings
- 17.2.5.1 Activities associated with the implementation of the Nuclear Quality Assurance Program shall be described and accomplished in accordance with appropriate instructions, procedures, and drawings. *Administrative procedures shall be written for safety related activities and approved by the appropriate management. QA shall review and approved administrative procedures.
- *INSERT A
- 17.2.5.1.1 PBAPS Administrative Procedures shall be written by the plant staff, reviewed by the PORC, approved by the Plant Manager or an appointed designee and the site Quality Manager - NQA, and distributed to predetermined personnel.
- 17.2.5.1.2 These Administrative Procedures shall contain provisions which clearly delineate the sequence of actions for the preparation, review, approval, and control of activity implementing procedures, instructions and drawings. Exhibit XI delineates the manner in which the criteria of 10CFR50, Appendix B, are implemented for each plant activity.

- e. ANSI N45.2.4, Section 6.2.1, Equipment Tests, Installed items requiring calibration are controlled through the preventive maintenance computer tracking system. Tags or labels are not affixed to the item to indicate calibration status.

4. Regulatory Guide 1.33 - November 1972, Quality Assurance Program Requirements (Operation).

PECo shall comply with Regulatory Guide 1.33, 11/72, which endorses ANSI N45.2 - 1971 and ANSI N18.7 - 1972 exclusive of other documents referenced.

*INSERT B

5. Regulatory Guide 1.37 - 3/16/73, QA Requirements for Cleaning of Fluid Systems and Associated Components of Water-cooled NPPs. Endorses ANSI N45.2.1 - 1973.

Decontamination and cleanup of radioactive contaminated systems and components are not included in the scope of this response.

PECo shall comply with Regulatory Guide 1.37 - 3/16/73 and ANSI N45.2.1 - 1973 for those activities occurring during the operational phase that are comparable in nature and extent to related activities occurring during the initial design and construction phase except for the following alternate:

- a. ANSI N45.2.1, Section 3.2, Water Quality Requirements - pH measurements are not required for conductivity values of less than or equal to 1 umho/cm. PECO utilizes pH limits of 5.2 to 8.6 at 25 C, uncorrected for CO₂ and may apply conductivity measurements in place of total dissolved solids.

6. Regulatory Guide 1.38 - 3/16/73, QA Requirements for Packaging, Shipping, Receiving, Storage and Handling of Items for Water-cooled NPPs. Endorses ANSI N45.2.2 - 1972.

PECo shall comply with Regulatory Guide 1.38, 3/16/73, and ANSI N45.2.2 - 1972 for those activities occurring during the operational phase that are comparable in nature and extent to related activities occurring during the initial design and construction phase except for the following alternates:

- a. ANSI N45.2.2, Paragraph 2.7, Classification of Items - PECO does not classify items into the four (4) levels described in this Standard. However, the specific guidance and recommendations which are appropriate to each class are applied to those items packaged, shipped,

Insert A

Programmatic controls are in place to assure that procedures are maintained current. These controls take the place of, and eliminate the need for scheduled periodic reviews and revisions.

Insert B

Add: except for the following alternate:

- a. programmatic controls and processes are used to assure that procedures are current. These controls take the place of scheduled periodic reviews.

Attachment 2

Proposed Changes to the
Quality Assurance Program Description
and
Associated Updated Final Safety Analysis
Chapter 13
Sections for Limerick Generating Station
Units 1 and 2

LGS UFSAR

17.2.4.10

Nuclear Engineering procurement documents for modifications shall be controlled in accordance with administrative procedures.

17.2.4.11

Procurement documents shall be maintained in accordance with Section 17.2.17.

17.2.5 INSTRUCTIONS, PROCEDURES, AND DRAWINGS

17.2.5.1

Activities affecting quality shall be prescribed and accomplished in accordance with documented instructions, procedures, specifications, and drawings which are prepared, reviewed, approved, and controlled in accordance with the PECO QA Program.

17.2.5.2

The procedures for preparing the documents discussed above shall include consideration of appropriate quantitative and qualitative acceptance criteria to verify that important activities have been satisfactorily accomplished.

The activity may be prescribed in job specifications, work instructions, shop drawings, job tickets, planning sheets, operating or procedure manuals, test procedures, or any other type of written form, provided that the activity is adequately described. Quantitative criteria, such as dimensions, tolerances, and operating limits, and qualitative criteria, such as comparative workmanship samples, shall be specified, as appropriate, for determining satisfactory work performance and quality compliances.

The review and approval of station procedures is described in Section 13.5. In addition, PORC, whose members are knowledgeable in quality requirements and administrative controls, reviews the test and maintenance procedures that are developed in the modification process.

17.2.5.3

The Nuclear Quality Assurance Department shall review and approve the following and the revisions thereto:

- a. The Nuclear Quality Assurance Plan
- b. Nuclear Quality Assurance Procedures

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17. ANSI N18.7-1976/ANS 3.2, Section 5.2.13.1, Procurement and Document Control, (second sentence) - QA Program requirements or alternate approved methods will be used to ensure quality. Examples of alternates for suppliers without QA programs include: material analysis, sample testing, in-process inspection and monitoring, and design review by PECo.
18. ANSI N18.7-1976/ANS 3.2, Section 5.2.15, Review, Approval and Control of Procedures - The frequency of review of plant procedures is discussed in UFSAR Section 13.5.*
- *INSERT A
19. ANSI N18.7-1976/ANS 3.2, Section 5.2.17, Inspections - The results of inspections are not always subject to a further evaluation. For example, evaluation beyond that given by inspection-level personnel is not normally required for go/no-go and pass/fail type inspections.
20. ANSI N18.7-1976/ANS 3.2, Section 5.3, Preparation of Instructions and Procedures (last sentence) - The clarification regarding emergency maintenance in Item 12, above, applies.
21. ANSI N18.7-1976/ANS 3.2, Section 5.3.10, Test and Inspection Procedures, (first paragraph) - The clarification regarding test result evaluations in Item 19, above, applies.
22. ANSI N18.7-1976/ANS 3.2, Section 5.3.11, Test and Inspection Procedures, (second paragraph, last sentence) - These procedural aspects will be included when appropriate. For example, "as-found condition" is not applicable to all test and inspection procedures.
- d. Regulatory Guide 1.37, March 1973, "Quality Assurance Requirements for Cleaning of Fluid Systems and Associated Components of Water-Cooled Nuclear Power Plants." Endorses ANSI N45.2.1-1973.

Decontamination and cleanup of radioactively contaminated systems and components are not included in the scope of this response.

Proposed

17.2.II-6

13.5 PLANT PROCEDURES

Safety-related activities performed by the plant staff shall be governed by written and approved procedures of a type appropriate to the circumstances and activity, and shall be carried out in accordance with those procedures. Where appropriate for determining that important activities have been satisfactorily accomplished, quantitative or qualitative acceptance criteria shall be included. PECO utilizes the operating experience gained at PBAPS Units 2 & 3 (BWR units similar to LGS) in the development of the procedures.

As fully described below, PECO has implemented ANSI N18.7 (1976)/ANS 3.2, Section 5 as modified by NRC Regulatory Guide 1.33 (Rev 2), paragraphs C.1 and C.5.b through C.5.j, as these documents apply to operating staff activities, in the preparation, content, and control of procedures. *

*INSERT B

Sections 13.5.1.1 through 13.5.1.25 describe administrative procedures. Many of these sections describe how various procedure types (such as maintenance procedures or preventive maintenance procedures) are developed and controlled, whereas other sections describe an administrative process (such as purchasing). Unless stated otherwise in the sections which describe how various procedure types are developed and controlled, the periodic review of the procedures will be on a 2 year basis. Those that will be reviewed with a 5 year frequency are provided with rationale to support this position.

Each of the rationales rests at least in part upon the position that the mere passage of time is not sufficient reason to review a procedure for adequacy. The ANSI Standard that recommends the 2 year frequency does not provide a basis for the selection of 2 years. Something must occur during the passage of time that would make the review or revision of a procedure an appropriate action to take. It should be noted that controlled reviews of equipment or system modifications result in the review of applicable procedures for the potential effect of the modification. In addition, standard practices regarding review and response to documents such as NRC Bulletins, Circulars and Notices, INPO documents and industry documents that are screened by the Operating Experience Assessment Program and forwarded for action by the plant staff are in place and cause procedures to be reviewed and revised as appropriate in relation to the review of these individual documents.

Proposed

Insert A

Add: "except for the following alternative:

- a) programmatic controls and processes are used to assure that procedures are current. These controls take the place of scheduled periodic reviews."

Insert B

"Programmatic controls are in place to assure that procedures are maintained current. These controls take the place of, and eliminate the need for, scheduled periodic reviews and revisions."

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It is planned that most administrative and operating procedures will be in effect at least six months prior to fuel loading of Unit 1. The procedures will be implemented with sufficient lead time to ensure that operating personnel can become familiar with them. PECO recognizes the benefits of using the preoperational testing phase to demonstrate the adequacy of operating procedures and, where practicable, this will be accomplished.

The following paragraphs describe the types of procedures to be employed by station operating personnel in the conduct of safety-related activities. These procedures are normally prepared by the station operating staff. However, organizations providing technical support and consultants may assist in procedure development. The procedures and revisions thereto are reviewed by Station Qualified Reviewers (SQRs) who are approved and designated as such by the PORC Chairman to perform such reviews for specific classes of procedures. The SQRs determine in writing if a cross-disciplinary review is required by the appropriate personnel prior to approval. Procedures or revisions thereto are approved by responsible Superintendents who are designated as such for specific classes of procedures by administrative procedures. PORC reviews administrative procedures and those procedures or revisions thereto requiring a 10 CFR 50.59 safety evaluation be performed. The Plant Manager or his designated alternate approves administrative procedures, emergency plan implementing procedures, security plan implementing procedures, and any procedure or revision thereto requiring a 10 CFR 50.59 safety evaluation be performed.

13.5.1 ADMINISTRATIVE PROCEDURES

Administrative procedures generally include those that establish station management policy, those that control activities that involve interfaces among disciplines or groups supporting plant operations, and those that establish criteria for procedures and activities implemented by the plant staff and support organizations. Administrative procedures shall be prepared in sufficient detail so that tasks are performed in a consistent, efficient manner and to ensure that the necessary reviews and approvals are performed.

The following paragraphs describe the administrative procedures expected to be employed. The numbers of procedures and their specific content may be altered as the procedures are developed and experience is gained in their implementation.

13.5.1.1 Procedure for Preparation and Control of Administrative Procedures

This procedure shall provide the measures to control and coordinate the preparation, review, approval, and issuance of administrative procedures. This procedure shall require that administrative procedures be distributed to appropriate personnel in accordance with current distribution lists to ensure that outdated or

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inappropriate procedures are not used. The format and content of administrative procedures shall be defined as:

- a. Descriptive title, revision number, and date.
- b. Statement of applicability or purpose.
- c. References, including technical specifications or procedures as applicable.
- d. Prerequisites when there are independent actions or procedures that must be completed prior to using the procedure.
- e. Procedure section. The procedure shall provide the steps needed to perform the task in the degree of detail necessary to ensure correct, efficient performance without direct supervision or undue reliance on memory. This section may also provide criteria statements to be implemented by other procedures.

Administrative procedures are written to provide direction for the efficient administration of plant business and reflect the station management philosophy and to implement corporate policies regarding these functions. ~~Because they are used routinely, their continuing applicability is demonstrated through use. These procedures would be unaffected by specific equipment modifications, but may be affected by documents such as NRC Bulletins, Circulars and Notices, changes in company policy, or INPO documents. Because these documents are reviewed on an ongoing basis and factored into administrative procedures where appropriate on a case-by-case basis, a 2 year review would not be necessary. However, recognizing potential for an accumulation of such documents having some effect on administrative requirements for a nuclear power plant, this procedure shall require that administrative procedures be reviewed at a specified frequency of no less than 5 years (a procedure revision constitutes a review) and following unusual incidents that reflect adversely on the adequacy of these procedures.~~

13.5.1.2 Procedure for Plant Operations Review Committee

This procedure shall define the requirements of membership, meeting frequency, quorum, responsibilities, authority, and records for the PORC in implementation of technical specification provisions. The PORC shall review significant conditions adverse to plant safety to ensure that the cause of the condition is identified, that corrective action is taken and documented, and that appropriate subjects are referred to the Nuclear Review Board.

13.5.1.3 Procedure for Plant and Shift Operations

This procedure shall define the responsibilities and authority of plant operating personnel, including:

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- f. Procedure section. The procedure shall provide the steps needed to perform the task in the degree of detail necessary to ensure safety and correct performance without undue reliance on memory or direct supervision and in consideration of the skills normally possessed by trained craft personnel. Precautions and reference documents important to specific steps in the procedure shall be identified or included at those steps. This section shall also provide instructions for performing and documenting the results of required inspections and tests and provides the necessary acceptance criteria. When appropriate, checkoff lists shall be included in or appended to preventive maintenance procedures.
- g. Return-to-normal. This section shall contain instructions as to the mode or condition in which the equipment is to be placed after completion of the preventive maintenance action.

Maintenance and preventive maintenance procedures are proven to be correct through their use. Because they are written for specific equipment, they are not subject to intersystem changes that may affect other procedure types, such as general plant procedures.

Maintenance and preventive maintenance procedures are reviewed when equipment modifications are made through the controlled modification program at the station. In addition, when indicated by the review of NRC Bulletins, Circulars and Notices, INPO documents and industry documents, the procedures are revised if necessary on a case-by-case basis.

To ensure ~~systematic review and feedback, this~~ procedures shall require that preventive maintenance procedures be reviewed ~~at a specified frequency of no less than 5 years (a procedure revision constitutes a review) and~~ following unusual incidents that reflect adversely on the adequacy of these procedures.

13.5.1.9 Procedure for Administration of the Surveillance Testing Program

This procedure shall establishes the administrative requirements and responsibilities for the surveillance testing program so that such testing is preplanned and performed in accordance with written procedures and drawings appropriate to the circumstances, and in accordance with the technical specification requirements. Included in this program shall be the safety-related instruments and control devices and special equipment as defined in the technical specifications. The aspects of surveillance testing that shall be addressed in this procedure include:

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- g. Return-to-normal. This section shall contain instructions as to the mode or condition in which the equipment is to be placed after completion of the surveillance test.

This procedure shall require recording the test date, corrective actions taken (if any), identification of those performing the test, and identification of those evaluating the test results to ensure that requirements have been met.

Surveillance tests and routine tests are performed on a periodic basis; this step-by-step use of the procedure demonstrates the adequacy of the procedures. In addition, when changes in the plant Technical Specifications are received, the appropriate procedures are identified and revised. Plant modifications, NRC Bulletins, and Information Notices also initiate procedure review and revision, if needed.

To ensure ~~systematic review and feedback~~, this procedure shall require that surveillance test procedures be reviewed ~~at a specified frequency of no less than 5 years (a procedure revision constitutes a review) and~~ following unusual incidents that reflect adversely on the adequacy of these procedures.

The surveillance test program shall include procedures for monitoring performance of plant systems to ensure that engineered safety features and emergency equipment are in the required state of readiness and that operating systems are performing properly.

The limits for significant parameters shall be identified as well as the nature and frequency of monitoring.

13.5.1.10 Procedure for Administration of Plant Records

This procedure shall establish the provisions and responsibilities for retention of plant records. Preparation of records is discussed in procedures that cover the specific activities. The responsibility for maintaining and storing records at specified location(s) shall be assigned. This procedure shall ensure that retention times are established so that applicable statutory requirements are satisfied. The significance of the event covered by the record-type and the contribution of the record to the ability to reconstruct significant events shall also be considered in establishing retention periods.

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13.5.1.12 Procedure for Administration of the Plant Security Program

This procedure shall establish the administrative requirements and responsibilities for the plant security program that is developed to implement the industrial security plan and to supplement features and physical barriers designed to control access to the plant and, as appropriate, to vital areas within the plant. This procedure shall require that security procedures be distributed to appropriate personnel in accordance with current distribution lists, which reflect the confidentiality of security provisions, to ensure that outdated or inappropriate procedures are not used.

This procedure shall define the format and content of security procedures as follows:

- a. Descriptive title, revision number, and date.
- b. Statement of applicability or purpose of the procedure.
- c. Prerequisites, when needed, including those independent actions or procedures that must be completed prior to use of the security procedure.
- d. References, when needed.
- e. Precautions to alert the individual performing the task to those important measures that should be used to protect equipment and personnel, including the public, or to avoid abnormal or emergency conditions.
- f. Procedure section. The procedure shall provide the steps needed to perform the task in the degree of detail necessary to ensure safety and correct performance without undue reliance on memory or direct supervision. Precautions and reference documents important to specific steps in the procedure shall be identified or included at those steps. Acceptance criteria, where appropriate, shall be specified. When appropriate, checkoff lists shall be included in or appended to the procedure.

To ensure ~~systematic review and feedback, this procedure~~ shall require that security procedures be reviewed ~~at a specified frequency of no less than 2 years (a procedure revision constitutes a review)~~ and following unusual incidents that reflect adversely on the adequacy of these procedures.

13.5.1.13 Procedure for Preparation of Maintenance Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation and control of maintenance procedures that are developed to maintain safety-related equipment. Actual coordination and planning for maintenance actions shall be accomplished through the procedure for controlling in-plant work. The following aspects of maintenance work shall be addressed in this procedure:

- a. The need to perform maintenance activities in a manner to ensure quality as specified in the original or approved modification design.
- b. Specification and performance of appropriate inspections and tests to attain a suitable level of confidence that the maintenance has been properly performed.
- c. Activities that ensure the quality of maintenance shall be performed in accordance with documented drawings or instructions that are appropriate to the circumstances, that conform to the design requirements, and which provide for documentation of activities where appropriate. Skills normally possessed by trained craft personnel may not require detailed step-by-step delineations in a written procedure.
- d. The status of inspections and tests performed on items shall be indicated by the use of stamps, tags, labels, routing cards, procedural sign-offs, or other methods that provide traceability between the record and the item(s). Also, where necessary to preclude inadvertent bypassing of inspections and tests, items that have satisfactorily passed required inspections and tests shall be identified.
- e. Special control requirements for emergency maintenance that must proceed immediately to correct a degraded safety condition and for which a procedure does not exist.

This procedure shall require that the following aspects of housekeeping and cleanliness control be considered in development of maintenance procedures:

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Maintenance and preventive maintenance procedures are reviewed when equipment modifications are made through the controlled modification program at the station. In addition, when indicated by the review of NRC IE Bulletins, Circulars and Notices, INPO documents and industry documents, the procedures are revised if necessary on a case-by-case basis.

To ensure ~~systematic review and feedback~~, this procedure shall require that maintenance procedures be reviewed ~~at a specified frequency of no less than 5 years (a procedure revision constitutes a review)~~ and following unusual incidents that reflect adversely on the adequacy of these procedures. This procedure shall also require that maintenance procedures be distributed to appropriate personnel in accordance with current distribution lists to ensure that outdated or inappropriate procedures are not used.

13.5.1.14 Procedure for Preparation of Transient Response Implementation Plan Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of Transient Response Implementation Plan procedures.

Transient Response Implementation Plan procedures are symptom oriented decision tree flow charts for operator actions based on recognition of critical symptoms and definition of actions to maintain key plant parameters within predetermined ranges. The Transient Response Implementation Plan procedures have been developed from the BWROG EPGs.

To ensure ~~systematic review and feedback~~, this procedure shall require that IP procedures be reviewed ~~at a specified frequency of no less than 2 years (a procedure revision constitutes a review)~~ and following unusual incidents that reflect adversely on the adequacy of these procedures.

Transient Response Implementation Plan procedures shall be distributed to appropriate personnel in accordance with current distribution lists to ensure that outdated or inappropriate procedures are not used.

13.5.1.15 Procedure for Preparation of Emergency Plan Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of emergency plan procedures that implement the emergency plan. This procedure shall establish the format and content of emergency plan procedures as follows:

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- a. Descriptive title, revision number, and date.
- b. Statement of applicability or purpose.
- c. References, including technical specifications, emergency plan, drawings, and procedures as applicable.
- d. Prerequisites. When applicable, this section shall define or explain the conditions that should exist prior to performing the procedure or certain procedural steps.
- e. Symptoms. When applicable to the scope of the procedure, this section shall contain symptoms and observations, including a description of alarm signals, that aid operating personnel and others in determining procedures and actions to be implemented.
- f. Protective action levels. Criteria for performing specific actions shall be provided when applicable to the scope of the procedure.
- g. Procedure, including immediate actions and subsequent actions. The procedure shall specify the steps to be taken including, as appropriate: assignment of specific responsibilities and authorities for performance of specific tasks to individuals and support groups; methods for coordinating the activities of offsite agencies; precautions applicable to specific steps; protective measures outlined for the identified emergency; instructions for medical treatment and handling of contaminated personnel; special equipment requirements; identification of emergency communication methods among participating organizations; and instructions for returning the plant to normal conditions or to provide safe, stabilized conditions following the emergency.

This procedure shall also establish appropriate requirements and responsibilities for preparation of operating instructions for special equipment. Inspection and maintenance of special equipment and testing of procedures, communications, and alarms to ensure that they function properly shall be within the scope of surveillance tests or preventive maintenance as appropriate. To ensure ~~systematic review and feedback, this procedure shall require~~ that emergency procedures be reviewed ~~at a frequency of no less than 2 years (a procedure revision constitutes a review)~~ and following unusual incidents that reflect adversely on the adequacy of these procedures.

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Emergency plan procedures shall be distributed to appropriate personnel in accordance with current distribution lists to ensure that outdated or inappropriate procedures are not used.

13.5.1.16 Procedure for Preparation of General Plant Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of general plant procedures that are written to provide integrated instructions for major plant evolutions such as plant startup or shutdown. This procedure shall establish the criteria for general plant procedures, such as:

- a. Preparation of startup procedures including reactor startup from cold and hot conditions, generator synchronization, and recovery from reactor trips. These procedures shall implement the authority and responsibilities of reactor operators as defined in other administrative procedures.
- b. Preparation of shutdown procedures including controlled shutdown and reactor trips to the establishment and maintenance of hot or cold shutdown conditions.
- c. Preparation of procedures covering steady-state and load changing conditions and operations such as use of control rods, coolant flow control, and adjusting operating parameters.

This procedure shall establish the format and content of general plant procedures as follows:

- a. Descriptive title, revision number, and date.
- b. Statement of applicability or purpose.
- c. References, including technical specifications, drawings, or procedures as applicable.
- d. Prerequisites, including those independent actions or procedures that must be completed and plant conditions that must exist prior to use of the procedure. Prerequisites applicable to only certain sections of the procedure shall be so identified. Startup procedures shall require documentation of completion of prerequisites such as confirmation that necessary instruments are operable and properly set; that necessary

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valves are properly aligned; that necessary procedures, tests, and calibrations have been completed; and that required approvals have been obtained. Checkoff lists can be used for the purpose of defining and documenting completion of prerequisites.

- e. Precautions, where necessary to alert the individual performing the task to those important measures that should be used to protect equipment and personnel, including the public, or to avoid an abnormal or emergency situation.
- f. Procedure section. The procedure shall provide the sequence and steps needed to perform the task in the degree of detail necessary to ensure safety and correct performance without undue reliance on memory or direct supervision. Cautionary notes applicable to specific steps shall be identified and included. System procedures or other detailed instructions not contained in the general plant procedure shall be referenced at the applicable steps. Where appropriate, check off lists shall be included in or appended to the procedure for the purpose of assisting the operator and/or confirming completion of major steps in the proper sequence. Limitations on parameters being controlled and appropriate corrective measures to return the parameter to the proper value shall be specified where appropriate.

To ensure ~~systematic review and feedback, this~~ procedures shall require that general plant procedures be reviewed ~~at a specified frequency of no less than 2 years (a procedure revision constitutes a review) and~~ following unusual incidents that reflect adversely on the adequacy of these procedures. When determined necessary by the PORC, tests shall be performed to confirm that significant changes to general plant procedures produce the expected results. General plant procedures shall be distributed to appropriate personnel in accordance with current distribution lists to ensure that outdated or inappropriate procedures are not used.

13.5.1.17 Procedure for Preparation of System Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of system procedures for safety-related systems. The procedure shall require system procedures to address normally expected operations such as energizing, filling, venting, draining, starting up, shutting down, and changing modes of operation as applicable to the system. It is not the intent of these procedures to cover actions, operations, or system conditions that would be unique to a special operation, such as maintenance, and would be covered in a special procedure written at the time the operation is needed.

Proposed

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This procedure shall establish the format and content of system procedures as follows:

- a. Descriptive title, revision number, and date.
- b. Statement of applicability or purpose.
- c. References including technical specifications, drawings, procedures, equipment manuals, and vendor documents as applicable.
- d. Prerequisites, including those independent actions or procedures that must be completed and plant conditions that must exist prior to use of the procedure. Prerequisites applicable to only certain sections of the procedure shall be so identified.
- e. Procedure section. This section shall provide the steps to perform the various operations in the degree of detail necessary to ensure safety and correct performance without undue reliance on memory or direct supervision, and in consideration of the skills possessed by trained operators. Cautionary notes applicable to specific steps shall be identified or included. Limitations on parameters being controlled and appropriate corrective measures to return the parameter to the proper value shall be specified where appropriate. Where appropriate, check off lists shall be included in or appended to the procedure.

To ensure ~~systematic review and feedback, this procedure~~ shall require that system procedures be reviewed ~~at a specified frequency of no less than 2 years (a procedure revision constitutes a review)~~ and following unusual incidents that reflect adversely on the adequacy of these procedures. When determined necessary by the PORC, tests shall be performed to confirm that significant changes to system procedures produce the expected results. System procedures shall be distributed to appropriate personnel in accordance with current distribution lists to ensure that outdated or inappropriate procedures shall be not used.

13.5.1.18 Procedure for Preparation of Operational Transient Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of operational transient procedures for the restoration of normal operating conditions following a perturbation. This procedure shall establish the format and content of operational transient procedures as follows:

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- a. Descriptive title, revision number, and date.
- b. Entry conditions.
- c. Immediate operator actions. This section shall specify immediate actions for operation of controls to restore normal operating conditions.
- d. Follow-up actions.
- e. Verification of automatic actions. The automatic actions that are expected to occur as a result of the condition shall be identified.

To ensure ~~systematic review and feedback, this~~ procedures shall require that operational transient procedures be reviewed ~~at a specified frequency of no less than 2 years (a procedure revision constitutes a review)~~ and following unusual incidents that reflect adversely on the adequacy of these procedures. Operational transient procedures shall be distributed to appropriate personnel in accordance with current distribution lists to ensure that outdated or inappropriate procedures are not used.

13.5.1.19 Procedure for Preparation of Alarm Response Cards

This procedure shall establish the administrative requirements and responsibilities for the preparation of individual alarm response cards. The procedure shall provide for preparation of individual alarm response cards to which operators refer. Alarm response cards shall be maintained in the control room and shall contain the following information:

- a. Identification of the alarm
- b. Alarm setpoint
- c. Identification of the signal source instrument
- d. Automatic actions that are expected to occur
- e. Operator response (immediate and long-term)

To ensure ~~systematic review and feedback, this~~ procedures shall require that safety-related alarm response cards be reviewed ~~at a specified frequency of no less than 2 years (a revision constitutes a review)~~ and following unusual incidents that reflect adversely on the adequacy of the alarm response card.

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Unique numbers have been assigned to each control room alarm based on a sequential number for each annunciator window within a specific panel. Alarm response information is retrieved by identifying the alarm number and referring to the corresponding alarm card or procedure number.

13.5.1.20 Procedure for Preparation of Fuel Handling Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of fuel handling procedures that shall specify actions for core alterations, accountability for fuel, partial or complete refueling operations, receipt and shipment of fuel, and such specific procedures for each refueling outage as necessary to accomplish the required actions in a safe, efficient manner. This procedure shall establish the format and content of fuel handling procedures as follows:

- a. Descriptive title, revision number, and date.
- b. Statement of applicability or purpose.
- c. References, including technical specifications, drawings, or procedures as applicable.
- d. Prerequisites, including those independent actions or procedures that must be completed and plant conditions that must exist prior to use of the procedure. Prerequisites applicable to only certain sections of the procedure shall be so identified.
- e. Precautions, where necessary, to alert the individual(s) performing the task to those important measures that should be used to protect equipment and personnel, including the public, or to avoid an abnormal or emergency situation.
- f. Limitations and actions. Limitations on appropriate parameters and corrective action to return the parameter to the proper value or other appropriate action shall be specified.

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- g. Procedure section. The procedure shall provide the needed steps and requirements to perform the refueling task in the degree of detail necessary to ensure safety and correct performance without undue reliance on memory or direct supervision. Cautionary notes and references applicable to specific steps shall be identified and included. Where appropriate, check off lists shall be included in or appended to the procedure for the purpose of assisting the operator and/or confirming completion of appropriate steps.

This procedure shall require documentation of final fuel and component serial numbers and locations to be developed and maintained.

To ensure ~~systematic review and feedback, this~~ procedures shall require that fuel handling procedures be reviewed ~~at a specified frequency of no less than 2 years (a procedure revision constitutes a review)~~ and following unusual incidents that reflect adversely on the adequacy of these procedures. Fuel handling procedures shall be distributed to appropriate personnel in accordance with current distribution lists to ensure that outdated or inappropriate procedures are not used.

13.5.1.21 Procedure for Preparation of Health Physics Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of health physics procedures that implement the radiation protection program. This procedure shall require preparation of health physics procedures in the following areas:

- a. Monitoring external and internal exposures of appropriate employees utilizing accepted techniques.
- b. Routine radiation surveys of work areas.
- c. Environmental monitoring within the scope of the operating staff responsibility.
- d. Radiation monitoring of maintenance and special work activities.
- e. Maintenance of records demonstrating the adequacy of measures taken to control radiation exposures of employees and other appropriate personnel.
- f. Control, receipt, and shipment of radioactive material.

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This procedure shall establish the format and content of health physics procedures as follows:

- a. Descriptive title, revision number, and date.
- b. Statement of applicability or purpose.
- c. References, including technical specifications, drawings, procedures, and operating manuals as applicable.
- d. Apparatus, such as instruments or special equipment, as applicable.
- e. Precautions, where necessary, to alert the individual performing the task to those important measures that should be used to protect equipment and personnel, including the public, or to avoid an abnormal or emergency situation. Routine precautions that a trained technician is expected to take need not be listed.
- f. Procedure section. The procedure shall provide the needed steps to perform the task in the degree of detail necessary to ensure safety and correct performance without undue reliance on memory or direct supervision. Precautions and references important to specific steps in the procedure shall be identified and included at those steps. When appropriate, check off lists shall be included in or appended to health physics procedures.

Health Physics procedures will normally be prepared by members of the LGS Services organization, knowledgeable in Health Physics; however, organizations providing technical support and consultants may assist in procedure development. These procedures will be developed in consultation with the Director of the Radiation Protection Section and his staff and will be approved by the PORC.

The Health Physics procedures are primarily administrative and analytic. They represent the most efficient way to administer the Health Physics program. Many are based on either the type of equipment in use in the plant or, in the case of shipping radioactive materials, they are based on regulations. When the regulations change, the Health Physics procedures would be revised if needed. If new equipment for analysis is obtained, new procedures would be written for that new equipment.

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To ensure ~~systematic review and feedback~~, this procedure shall require that health physics procedures be reviewed ~~at a specified frequency of no less than 5 years (a procedure revision constitutes a review)~~ and following unusual incidents that reflect adversely on the adequacy of these procedures. Health physics procedures shall be distributed to appropriate personnel in accordance with current distribution lists to ensure that outdated or inappropriate procedures are not used.

13.5.1.22 Procedure for Preparation of Chemistry Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of chemistry procedures that include chemical and radiochemical control activities. This procedure shall establish the format, content, distribution, and periodic review requirements for chemistry procedures as described for health physics procedures.

13.5.1.23 Procedure for Temporary Changes to Approved Procedures

This procedure shall establish the administrative requirements and responsibilities for making temporary changes to approved procedures. The procedure shall provide that temporary changes, clearly not changing the intent of the approved procedure, shall be documented and approved by two members of the plant staff knowledgeable in the area(s) affected by the procedure. At least one of these individuals shall be a shift superintendent or shift supervisor (a senior reactor operator on the unit affected). Temporary changes shall be incorporated in the next procedure revision if appropriate.

13.5.1.24 Procedure for Preparation of Off-Normal Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of off-normal procedures that are written to specify operator actions following an operator observation of an off-normal (nontransient) condition which requires immediate action to prevent degeneration of the existing condition. This procedure shall establish the format and content of off-normal procedures as follows:

- a. Descriptive title, revision number, and date.
- b. Symptoms. This section shall include symptoms to aid in identifying or confirming the off-normal condition. Alarm conditions, parameter changes, and other observations shall be considered.

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- c. Operator actions. This section shall specify actions to be taken to identify, confirm, or correct the cause of the off-normal condition.

To ensure ~~systematic review and feedback, this~~ procedures shall require that off-normal procedures be reviewed ~~at a specified frequency of no less than 2 years (a procedure revision constitutes a review) and~~ following unusual incidents that reflect adversely on the adequacy of these procedures. Off-normal procedures shall be distributed to appropriate personnel in accordance with current distribution lists to ensure that outdated or inappropriate procedures are not used.

13.5.1.25 Procedure for Preparation of Event Procedures and Special Event Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of event procedures and special event procedures that are written to specify operator actions following an operator observation of an event of an emergency or unusual nature. This procedure shall establish the format and content of off-normal procedures as follows:

- a. Descriptive title, revision number, and date.
- b. Purpose.
- c. Symptoms. Symptoms shall be included to aid in the identification of the plant condition.
- d. Immediate operator action. This section shall specify action to be taken as a result of the identified condition.
- e. Follow-up action.

13.5.1.26 Procedure for Preparation of Radwaste Procedures

This procedure shall establish the administrative requirements and responsibilities for the preparation of radwaste procedures. This procedure shall require administration of the station radwaste program in the following areas:

- a. Control handling, packaging, storage, and shipment of radioactive material.
- b. Inspection, installation, and use of equipment used to process and package radwaste.

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