QA 93-08

PSE&G

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Nuclear Department

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United States Nuclear Regulatory Commission
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Gentlemen:

UPDATED FINAL SAFETY ANALYSIS REPORT, REVISION 5
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

Pursuant to the requirements of 10CFR50.71(e), Public Service Electric and Gas Company (PSE&G) hereby submits Revision No. 5 to the Hope Creek Generating Station Updated Final Safety Analysis Report (UFSAR). In accordance with 10CFR50.4(b)(6), the signed original and ten (10) copies are being transmitted to the Document Control Desk, one copy is being sent directly to the Region I Administrator and one copy is being sent directly to the Hope Creek Resident Inspector.

Revision No. 5 to the Hope Creek UFSAR contains text, table and figure changes required to accurately reflect the current plant configuration. In addition, there are corrections of typographical errors and general editorial changes. A brief summary and explanation for each change is provided in Attachment 1 to facilitate your review.

Should you have any questions regarding this submittal, please do not hesitate to contact us.

Sincerely,

S. LaBruna
Vice President -
Nuclear Engineering

Attachment (1)

9A	Correction of typographical errors and a clarification regarding data contained in the Fire Hazard Analysis Tables.
11.5 12.3	Correction of the description of the Radiation Monitoring System due to resolution of DEFs.
11.5.2.2.3	Reflect normal operation for the low range sample pump 1C-P-372 of the radiation monitoring system for the filtration, recirculation, and ventilation system vent as continuously running.
13.1.2	Station organizational changes.
13.4 13.5 17.2.2 17.2.6	Incorporation of changes from Technical Specification Amendment 52 to clarify and improve the process flow, membership composition, and requirements relative to SORC.
17.2.1 17.2.2 17.2.6 17.2.11 17.2.15 17.2.18	Reflection of current organizational structure and programmatic changes as well as editorial enhancements related to Quality Assurance during the operations phase.
17.2.6	Revised method for revision control of procedures and instructions.

17.2.1 Organization

The Operational QA program, referred to hereafter as the QA program, assures that adequate administrative and management controls are established for the safe operation of the station.

Implementation is assured by ongoing review, monitoring and audit under the direction of the General Manager - Quality Assurance/Nuclear Safety Review, who reports to the Vice President and Chief Nuclear Officer.

Company organization is shown on Figures 13.1-1 through 13.1-10 and 17.2-1. Responsibilities for activities affecting safety are described in the following sections.

17.2.1.1 Nuclear Department

The Vice President and Chief Nuclear Officer (VPCNO) is responsible for managing and directing the nuclear activities of the company. Overall duties and responsibilities of the Nuclear Department are provided in Section 13.1. General managers reporting to the VPCNO are responsible for implementation of QA requirements by their staff. These QA requirements are contained in the Nuclear Administrative Procedures Manual and in individual department manuals.

The VPCNO regularly assesses the scope, status, adequacy, and compliance of the QA program to 10CFR50, Appendix B through:

1. Frequent contacts in staff meetings, QA audit reports, audits by independent auditors, NRC inspection reports, department status reports.

2. An annual assessment of the QA program is preplanned and documented. This assessment addresses the scope, status, and adequacy of the QA program. Corrective action is identified, and tracked.

17.2.1.1.1 Quality Assurance

The General Manager - Quality Assurance/Nuclear Safety Review (QA/NSR) is responsible for defining, formulating, implementing, and coordinating the QA program. He has been delegated the authority and has the independence to interpret quality requirements, identify quality problems and trends, and provide recommendations or solutions to quality problems. He is responsible for approval of the QA/NSR Department Manual used during the operations phase of the nuclear stations. He also is responsible for assuring compliance with established requirements for the QA program through document review, inspection, monitoring, and audit. QA provides a centralized coordinating function for QA/QC activities applied to the operation phase.

The General Manager - QA/NSR has the authority and responsibility to stop work through the issuance of a stop work order, when significant conditions adverse to quality require such action.

The PSE&G policies and organization structure assure that the General Manager - QA/NSR has sufficient organizational freedom and independence to carry out his responsibilities.

Responsibilities of the Manager-QA Programs and Audits include the following:

1. Preparation and maintenance of the QA/NSR organization manual, the QA Program description in the UFSAR and the Operational QA Program description in the Nuclear Administrative Procedures Manual.

2. Review and approval of PSE&G QA Program implementing procedures.

3. Development and implementation of the QA Audit Program.

4. Conducting QA Program orientation for Nuclear Department personnel, administering the training and certification program for QA personnel involved in inspection and auditing activities, maintaining the QA training plan, and maintaining QA training records.

5. Review of new regulatory requirements for QA program impact.

6. Development and implementation of a trend analysis program to identify quality problems.

7. Coordination of the commitment verification program on a selected basis.

Responsibilities of the Manager - QA Engineering and Procurement include:

1. Review of engineering documents such as equipment specifications, weld procedures, etc. for inclusion of QA requirements.

2. Review of specifications for inclusion of QA requirements.

3. Review of procurement documents for insertion of applicable QA requirements.

4. Conduct of supplier surveys, audits, and surveillances.

5. Performing supplier evaluation.

6. Performing material evaluation activities on items subject to the QA Program.

The Manager - Station Quality Assurance reports to the General Manager - QA/NSR, as shown on Figure 17.2-1. His responsibilities include implementation of the inspection

and monitoring program for activities conducted at the plant, surveillance of site contractor activities and approval of plant quality related implementing instruction.

Responsibilities of the Manager - Nuclear Safety Review are described in Section 13.1.

17.2.1.1.1.1 Quality Assurance Personnel Qualifications

The General Manager - QA/NSR and the QA managers reporting directly to him must each have a combination of 6 years of experience in the field of QA and operations. At least 1 of these 6 years of experience must be in the overall implementation of a nuclear power plant QA program. A minimum of 1 year and a maximum of 4 of the 6 years of experience may be fulfilled by related technical or academic training. Personnel performing inspections, examinations, and test activities (i.e., to verify conformance) are certified as Level I, Level II, or Level III, as appropriate to their responsibilities, also in accordance with Regulatory Guide 1.58. Personnel performing quality assurance audits are certified as auditors or lead auditors, as appropriate to their responsibilities in accordance with Regulatory Guide 1.146.

The General Manager - QA/NSR fulfills the above qualifications with the addition of the following:

1. Knowledge and experience in quality assurance.

2. High level of leadership with the ability to command the respect and cooperation of company personnel, suppliers, and construction forces.

3. Initiative and judgment to establish related policies to attain high achievements and economy of operations.

17.2.1.1.2 Operational Review

Three advisory groups, the Station Operations Review Committee (SORC), the Onsite Safety Review group (SRG), and the Offsite safety review group (OSR), are responsible for reviewing and evaluating items related to nuclear safety. The overall responsibilities of these groups are provided in Section 13.4. The Manager - Station Quality Assurance is invited to all SORC meetings and receives the minutes of the meetings. He attends the meetings periodically.

As part of its independent review functions, the OSR is responsible for selected preplanned, independent audits of plant operations in accordance with Technical Specification requirements. These audits are generally conducted by QA under OSR cognizance.

17.2.1.2 Research and Testing Laboratory

The Research and Testing Laboratory is a part of the PSE&G Research Corporation, which is an independent entity.

The Research and Testing Laboratory performs calibrations, analyses, and evaluations on systems, equipment, and materials, as requested by PSE&G departments, and maintains compliance with its quality assurance program.

17.2.1.3 Nuclear Fuels Department

The Manager Nuclear Fuel reports directly to the Vice-President - Nuclear Operations. The Nuclear Fuel Department is responsible for arranging for procurement of uranium ore, conversion and enrichment services and fuel assembly, fabrication services to satisfy Nuclear Department core designs, enrichment requirements, and delivery schedules.

17.2.1.4 Distribution Systems Department

The Vice President - Distribution Systems reports to the Senior Vice President Electric. This organization is responsible for distributing electrical energy to the consumers. It is responsible for setting and testing protective relays for the external vital power supplies at the station.

17.2.1.5 Purchasing Department

The General Manager - Purchasing reports to the Vice President - Information Service and Corporate Services under the Senior Vice President - Corporate Performance.

Initiation of requests for procurement of materials, equipment, structures, and services required to support operations at the station is the responsibility of the Nuclear Department. Procurement of same is the responsibility of the General Manager - Purchasing. Both activities are bound by Nuclear Department procedures and corporate purchasing policies established by the Purchasing Department.

17.2.1.6 Nuclear Human Resources

The General Manager - Nuclear Human Resources reports to the Vice President and Chief Nuclear Officer and is responsible for the implementation of screening, testing and evaluation requirements described in 10CFR26, "Fitness-for-Duty Program".

17.2.2 Quality Assurance Program

The QA program is designed to comply with the requirements of 10CFR50, Appendix B, and with fire protection program requirements of Appendix A of Branch Technical Position No. 9.5-1. This program is applied to items and activities that can affect the health and

Concrete and Structural Steel during the Construction Phase of Nuclear Power Plants

17. Regulatory Guide 1.116, Quality Assurance Requirements for Installation, Inspection, and Testing of Mechanical Equipment and System

18. Regulatory Guide 1.123, Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants

19. Regulatory Guide 1.137, Fuel-Oil Systems for Standby Diesel Generators

20. Regulatory Guide 1.143, Design Guidance for Radioactive Waste Management Systems, Structures, and Components Installed in Light Water Cooled Nuclear Power Plants.

21. Regulatory Guide 1.144, Auditing Quality Assurance Programs for Nuclear Power Plants

22. Regulatory Guide 1.146, Qualification of Quality Assurance Program Audit Personnel for Nuclear Power Plants

23. BTP 9.5-1, Appendix A, Guidelines for Fire Protection for Nuclear Plants Docketed Prior to July 1, 1976.

Commitments to Regulatory Guides, with respect to revision level, exceptions, etc, are contained in Section 1.8.

The code QA requirements are used for the procurement of systems, components and structures covered by the ASME Boiler and Pressure Vessel Code Section III (classes 1, 2, and 3). The standard QA program controls apply to Q-Listed code items following receipt at the station. In addition, applicable requirements of Regulatory Guide 1.38 are applied to ASME Code procurements where necessary to assure safe shipment.

Substantive changes to the QA program described herein will be submitted to the NRC within 30 days of implementation. Nonsubstantive changes will be identified in the annual UFSAR updates.

PSE&G organizations performing safety related activities prepare and maintain implementing procedures and instructions. These procedures and instructions, and subsequent revisions thereto, are subject to QA review and concurrence to the extent necessary to verify compliance with the QA Program and the applicable quality related Regulatory Guides and standards identified above.

The station General Manager has instituted and will maintain an administrative procedures (AP) manual for the station.

Regulatory Guide 1.33 requires that plant activities affecting quality-related items and services be conducted in accordance with written administrative controls prepared by management. The procedures and instructions by which plant activities are performed are prepared by the responsible organization as required by Nuclear Administrative Procedures Manual, reviewed by the organization responsible for the activity, reviewed as required by QA and SORC

approved by the department manager. Nuclear Administrative Procedures (NAPs) and Station APs and all subsequent revisions thereto are reviewed by QA and SORC and are approved by the Station General Manager. Procedures cannot be implemented unless the review/approval process is accomplished. The Nuclear Administrative Procedures Manual provide a means to accommodate on-the-spot changes to subtier implementing procedures. The routine practice for revising a procedure is to repeat the original review and approval sequence.

Implementation of the QA program is verified by means of independent inspections, monitoring, and audits conducted by QA.

QA reviews and analyzes problems affecting quality that occur during the operational phase. Items subject to review include:

1. Documented nonconformances occurring at the supplier's facility and those identified during receiving, storage, installation, test, and operation, e.g., Deficiency Reports, Nonconformance Reports, Work Orders, Licensee Event Reports, etc.

2. Documented corrective actions taken on significant noncompliances and on audit findings.

3. NRC inspection findings, notifications, bulletins, etc.

The General Manager - QA/NSR, or his designee, has the authority to stop work through the issuance of a Stop Work Order where continuance of an activity would seriously compromise quality or constitute a persistent and deliberate failure to correct a serious deficiency. Designees include the Manager - Station Quality Assurance for activities conducted at the station and the Manager - QA Engineering and Procurement for supplier activities.

QA reports significant problems affecting the quality assurance program to respective management along with:

1. Measures taken to improve QA program controls

2. Appropriate recommendations to achieve compliance with applicable requirements.

Management policy and administrative procedures provide all personnel with awareness and direction for reporting of defects and noncompliance pursuant to 10CFR21.

The QA program requires that safety-related activities including activities affecting the fire protection of safety-related areas, be accomplished under suitably controlled conditions. The program takes into consideration the need for procedures, special controls, cleanliness, special processes, test equipment, tools, and skills to obtain the required quality and the verification of quality by inspection, test, examination, monitoring, and independent review and audit. These activities include, but are not limited to, designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, reworking, repairing, refueling, and modifying.

Personnel who have the responsibility to implement the QA program also have the responsibility and authority to escalate unresolved quality problems to the level of management necessary to effect resolution. Escalation is applied by QA personnel to increasingly higher levels of management, up to the VPCNO, as required.

Personnel performing Q,F, and R-designated activities are trained or indoctrinated as necessary to assure that suitable proficiency is achieved and maintained. Personnel outside the QA organization who perform inspections and tests are trained and qualified in QA concepts and practices.

Orientation is provided for new employees entering QA from other organizations within PSE&G and from outside the company. An outline of the course content and program objective is contained in the QA training and certification program. The training and certification program is designed to familiarize the employee with:

1. Codes, regulations, specifications, etc, applicable to nuclear and other power generation equipment

2. QA procedures, instructions, specifications, documentation, records, etc

3. Auditing objectives and techniques

4. Operational Quality Assurance Program

5. Other organizations within PSE&G with which QA interfaces

QA administers formal QA training sessions for personnel outside the QA organization who perform safety related activities. The content of these training programs, dates of the sessions, and names of the attendees and their individual performance evaluations are documented and retained.

Personnel requiring certification are evaluated to establish their qualifications for their respective level and discipline. Recertification is based upon demonstrated continued proficiency or requalification, if necessary. Personnel requiring certification in accordance with Regulatory Guide 1.58 are limited to personnel who perform inspection, test and non-destructive examination (NDE) activities, personnel who perform post design modification testing, and Nuclear Inspection Services personnel who perform NDE and tests required by the Inservice Inspection Program. Those above personnel who perform visual examination (VT1, 2, 3 and 4) and NDE in accordance with the Inservice Inspection Program are trained, qualified and certified in accordance with a program which additionally meets the prescribed supplementary requirements of ASME Section XI. These personnel receive a periodic training needs assessment to identify additional supportive training needs, as well as, to evaluate individual post-training performance. The assessment period is three years or less. Personnel who are qualified and requalified for their respective level and discipline in accordance with Regulatory Guide 1.8 and ANSI/ANS - 3.1 and direct or supervise the conduct of individual preoperational, startup, and operational inspections and tests, including Technical Specification Surveillances and periodic inspection and test of fire protection equipment, do not require certification per Regulatory Guide 1.58 and ANSI N45.2.6 1978. When a single inspection or test requires implementation by a team or group, personnel not meeting the requirements of Regulatory Guide 1.58 and ANSI N45.2.6 1978 may be used in data-taking assignments or in plant or equipment operation provided they are supervised or overseen by an individual participating in the inspection, examination, or test and the individual is qualified and requalified for their respective level and discipline in accordance with either Regulatory Guide 1.8 and ANSI/ANS - 3.1 or the individual is certified in accordance with Regulatory Guide 1.58 and ANSI N45.2.6 1978 as appropriate. In addition, Regulatory Guide 1.58 and ANSI N45.2.6 1978 do not apply to NRC - Licensed Operators and Senior Operators for the performance of duties specified in 10CFR55 "Operator Licenses".

made by cognizant department heads and as a minimum, complies with applicable requirements of Regulatory Guide 1.33.

Procedures include, as appropriate, scope, statement of applicability, references, prerequisites, precautions, limitations, and checkoff lists of inspection requirements, in addition to the detailed steps required to accomplish the activity. Instructions, procedures, and drawings also contain acceptance criteria where appropriate.

The station General Manager is responsible for assuring that station procedures are prepared, approved, and implemented in compliance with the Nuclear Administrative Procedures Manual. Documents affecting nuclear safety are reviewed by the SORC for technical content, by QA for QA requirements, and are approved by the responsible station department manager or his designee.

The General Manager - Engineering and Plant Betterment is responsible for issuing specifications, drawings, blueprints, and instruction and technical manuals associated with Q, F, and R-designated structures, systems, and components. Approved and implemented modifications and design changes are incorporated to these reference documents for the life of the station. Master lists of current editions or revisions of these documents are periodically issued by the General Manager - Engineering and Plant Betterment to the station General Manager to periodically assure that only current and approved referenced documents are used at the station.

QA reviews and approves selected station procedures that implement the QA program, including testing, calibration, maintenance, modification, rework, and repair. Changes to these documents are also reviewed and approved. In addition, QA is responsible for review and approval of selected specifications, test procedures, and results of testing.

17.2.6 Document Control

Instructions, procedures, drawings, and changes thereto are reviewed for the inclusion of appropriate QA requirements approved by appropriate levels of management of the PSE&G organizations producing such documents, and distributed on a timely basis to using locations. Measures are provided for the timely removal of obsolete or superseded documents from the using location. Supplier documents are controlled according to contractual agreements with suppliers.

The following is a generic listing of key documents for the operational phase, showing minimum organization responsibility for review and/or approval, including changes thereto:

1. Design specification - Engineering and Plant Betterment, Station Technical Department, QA.

2. Design modification, manufacturing, construction, and installation drawings - Engineering and Plant Betterment, Station Technical Department Nuclear Services, station operations

3. Procurement documents - initiating nuclear department organization, Purchasing Department, Site Services, QA

4. Nuclear Administrative Procedures Manual - Nuclear Department organizations responsible for implementation, QA

5. Nuclear department second tier manuals, including station administrative procedures - cognizant department head, QA

6. Maintenance, modification, and calibration procedures for Q, F, and R designated station work activities - Station operations

7. Operating procedures - station operations

8. UFSAR - Nuclear Services and other Nuclear Department organizations responsible for implementing applicable sections. In addition, QA reviews all UFSAR sections and subsequent changes for compliance with applicable QA program requirements

9. Maintenance, inspection, and testing instruction - Nuclear Department implementing organizations

10. Post modification test procedures - Engineering and Plant Betterment, Station Technical Department

11. Design Change Requests - Engineering and Plant Betterment, Station Technical Department, QA

QA involvement in the work activity includes review of work procedures prior to approval for designation of inspection hold points (see Section 17.2.10), review of completed safety-related Work Orders on a sampling basis, and periodic QA surveillance.

The establishment and maintenance of a document control system for all instructions, procedures, specifications, and drawings received from the Nuclear Department, or prepared at the station for use in operating, maintaining, refueling, or modifying items and services covered by the QA program, is the responsibility of the Manager - Methods and Systems. The Nuclear Administrative Procedures Manual describes the control of specific documents. Control of station practices is included in the administrative procedures and in department directives authorized by the responsible station department managers. Measures are established to assure that the administrative procedures and department directives are up to date, properly authorized, changed only after the required review and approvals are obtained, and distributed to appropriate personnel. Design change procedures provide for the timely update of affected drawings, following design change implementation, to reflect as-built configuration. A computerized data base controlled by the Engineering and Plant Betterment Department is used to control drawings and specifications.

Revision control of procedures and instructions is accomplished through the control of indices. Controls of software affecting nuclear safety are identified in the Nuclear Administrative Procedures Manual. These controls are based on applicable guidelines provided by the NRC and include software review and approval as well as access controls to prevent unauthorized software changes.

17.2.7 Control of Purchased Material, Equipment, and Services

QA maintains an up-to-date listing of approved suppliers of material, equipment, and services covered by the QA program. This list identifies suppliers and contractors who have demonstrated the ability to supply acceptable material, equipment, or services. The list includes manufacturers of commercial grade items. All QA program procurements are made from approved suppliers.

The responsible engineer and QA personnel select and evaluate prospective bidders and suppliers. The responsible engineer determines the technical competence of the supplier, while QA evaluates the prospective supplier's QA program for the capability of meeting applicable requirements of 10CFR50, Appendix B, and for extending applicable program requirements to subtier suppliers.

Qualified QA personnel evaluate the prospective supplier's QA capability using one or more techniques, including but not necessarily limited to:

1. Evaluation of supplier's or contractor's procedures or manuals and changes thereto

2. ASME code stamp approval

3. Nuclear Utility Procurement Issues Council (NUPIC) or Nuclear Fuel Users Forum (NFUF) Audits.

4. Satisfactory past history of provi ng similar items

17.2.11 Test Control

Q, F, and R-designated equipment and components that must be tested periodically to assure satisfactory performance, or have been replaced, modified, or repaired, are tested by qualified personnel in accordance with written procedures that provide acceptance criteria based on requirements contained in applicable design and procurement documents.

Provisions are implemented that assure that nonconformances are corrected or resolved prior to the initiation of the preoperational test program on the item.

Retest requirements are provided by engineering specifications or the responsible engineer, or both as were the original test requirements. The E&PB Department is responsible for preparation of test procedures incorporating the engineering parameters.

Test procedures prescribe, as applicable:

1. Prerequisites, including completeness of test item(s)

2. Instructions for performing the test

3. Instrumentation and equipment for conduct of the test adequate to the test objective

4. Suitable environmental conditions and adequate test methods

5. Critical test sequence

6. Acceptance criteria.

Test results, including verification of above items, are documented and reviewed for acceptability by the qualified department representative. System tests performed following modifications to Q, F, and R-designated systems require review of test procedures and test results by the SORC.

In addition, the Nuclear Administrative Procedures Manual provides for the use of temporary changes which are controlled in accordance with Technical Specifications. Detail instructions for implementation of temporary changes are provided.

QA monitors the conduct of selected post modification tests to assure compliance with the test procedure. Test results are reviewed for the following:

1. Presentation of proper documentation

2. Assurance that tests meet objectives

3. Identification and reporting of unacceptable results and initiation of corrective measures.

17.2.12 Control of Measuring and Test Equipment

Test equipment, instrumentation, and controls used to monitor and measure activities affecting quality and personnel safety are identified, controlled, and calibrated at specific intervals by cognizant Nuclear Department personnel. Written procedures for meeting these requirements include provisions for:

1. Specifying calibration frequency

2. Recording and maintaining calibration records

17.2.14 Inspection, Test, and Operating Status

Nuclear Department procedures are required to specify the periodic tests and inspections required for equipment covered by the QA program, and to include the necessary management controls to assure that such required tests and/or inspections are completed in accordance with specified requirements.

Equipment awaiting repairs, under repair, or repaired, and received materials are marked to indicate the status of inspection and test requirements and/or acceptability for use. Procedures provide for tagging valves and switches to prevent inadvertent operation. These procedures control the application and removal of tags and are designed to prevent operation of valves and/or switches that could result in personnel hazard or equipment damage.

Valve and equipment status boards or logs are maintained to indicate status.

17.2.15 Nonconforming Materials, Parts, or Components

Organizations involved in material receipt, installation, test, design modification and other operating activities are responsible for identifying, and documenting nonconformances. Nonconforming materials, where practical, are segregated to prevent installation or use until proper approvals are obtained. Materials, parts, or components that have failed in service are identified and, where practical, segregated. Procedures control the application and removal of tags.

Documentation of the nonconformance includes a description of the nonconformance, review by SNSS/NSS for Limiting Condition for Operation (LCO) applicability when appropriate and the disposition and inspection or retest requirements, as appropriate. The responsible Engineer dispositions each nonconformance report. Dispositions for repair or "use-as-is" are required to be reviewed and approved by QA prior to implementation. Rework or repair of nonconforming material, parts,

or components is inspected or retested or both in accordance with specified test and inspection requirements established by the responsible engineering representative, based on applicable requirements. QA shall verify the satisfactory completion of the disposition of nonconformances.

QA and other organizations in the Nuclear Department review nonconformance reports for quality problems, including adverse quality trends, and initiate reports to higher management, identifying significant quality problems with recommendations for appropriate action.

17.2.16 Corrective Action

Organizations involved in activities covered by the QA program are required to implement corrective action for deficiencies identified within their scope of activity. Noncompliances identified by QA are documented and controlled by issuance of an action request. QA reviews responses to action requests for adequacy and monitors these action requests through periodic summary and status reports to management.

Responses to action requests are based on the four elements of corrective action, which are:

1. Identification of cause of deficiency

2. Action to correct deficiency and results achieved to date

3. Action taken or to be taken to prevent recurrence

4. Date when full compliance was or will be achieved.

For significant conditions adverse to quality not identified by QA, such as LERs and NRC/INPO/CMAP findings, QA is involved in the review of such conditions and provides oversight to assure timely

follow-up and close out through monitoring, auditing, and commitment verification.

Items 3 and 4 are optional for noncompliances that do not have a significant effect on the QA program.

Proper implementation of corrective action is verified through monitoring or audit, as appropriate.

The station general manager is responsible for assuring that conditions adverse to quality are promptly identified and corrected for all activities involving station operation, maintenance, testing, refueling, and modification.

Administrative procedures that govern station activities covered by the QA program provide for the timely discovery and correction of nonconformances. This includes receipt of defective material, failure or malfunction of equipment, deficiencies or deviations of equipment from design performance, and deviations from procedures. In cases of significant conditions adverse to quality, the cause of the condition is determined, and measures are established to preclude recurrence. Such events, together with corrective action taken, are documented and reported as described in Section 17.2.15. Corrective action is initiated by the responsible department head.

QA closely monitors station conditions requiring corrective action.

Repetitive deficiencies, procedure or process violations at the station that are not classified as operational incidents or reportable occurrences, or nonconformances under the QA program, are documented by QA via the issuance of an action request. This request provides a formal administrative vehicle to alert management of conditions adverse to quality that require corrective action.

17.2.17 Quality Assurance Records

Records necessary to demonstrate that activities important to quality have been performed in accordance with applicable requirements are identified and maintained in accordance with Regulatory Guide 1.88, as noted in Section 17.2.2. Documents shall be considered valid records only if stamped or initialed or signed and dated by authorized personnel or otherwise authenticated. Record types, as a minimum, comply with applicable technical specification requirements and include operating logs, maintenance and modification procedures and related inspection results and reportable occurrences.

Design and other QA records are replicated via microform and stored in record facilities at the generating station and at offsite locations.

The Nuclear Department is responsible for the permanent storage of station records. The retention period for records; permanent storage location; and methods of control, identification, and retrieval are specified by administrative procedure. Individual station department heads are responsible for submitting applicable department records to the designated location for retention.

17.2.18 Audits

Audits of PSE&G and supplier organizations that implement the QA program are performed by QA to verify compliance with the applicable portions of the program through personnel interview and review of applicable documents and records, as required. An annual audit schedule is prepared, identifying audits to be performed and their frequency.

Audits are conducted by audit teams comprised of a certified lead auditor and certified auditors, and technical specialists (when deemed necessary).