

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-277/83-30 and 50-278/83-18

Docket No. 50-277 and 50-278

License No. DPR-44 and DPR-56

Category: C

Licensee: Philadelphia Electric Company
2301 Market Street
Philadelphia, PA

Facility Name: Peach Bottom Atomic Power Station and Corporate Office

Inspection At: Delta, PA and Philadelphia, PA

Inspection Conducted: October 31, to November 4, 1983

Inspectors: G. W. Meyer
G. W. Meyer, Reactor Engineer

12/30/83
date

E. T. Shaub
E. T. Shaub, Reactor Engineer

1/4/84
date

Approved by: D. L. Caphton
D. L. Caphton, Management
Program Section, DETP

1/5/84

Inspection Summary: Inspection on October 31-November 4, 1983 (Combined Reports 50-277/83-30 and 50-278/83-18)

Areas Inspected: Routine, unannounced inspection of licensee action on previous inspection findings; procurement; and audit program. The inspection involved 68 hours, including 52 hours onsite and 16 hours at the corporate office, by two regional reactor inspectors.

Results: No violations in three areas.

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Details

1. Persons Contacted:

Electric Production Department:

- J. Davenport, Maintenance Engineer
- G. Dawson, Instrument and Control Engineer
- *R. Fleischmann, II, Station Superintendent
- D. Kemper, Maintenance Supervisor
- K. Mandl, Supervisor, Corporate Auditing
- *C. Mengers, General Supervisor, Auditing
- R. Moore, Superintendent, Quality Assurance (QA)
- K. Poletti, Engineer, Maintenance Engineering
- B. Rathovich, Receipt Inspector, Station QA
- *S. Spitko, Site QA Engineer
- J. Stull, Subforeman, Maintenance
- *K. Wilson, Supervisor, Peach Bottom Auditing

Engineering and Research Department:

- R. Jones, Quality Control Engineer
- G. Hutt, Office Branch Head, QA
- W. McFarland, Construction Engineer
- P. Pavlides, Manager, QA
- R. Zong, Senior Metallurgical Engineer/Lead Level III Inspector

Purchasing and General Services Department:

- C. Brinkman, General Storekeeper

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- *A. Blough, Senior Resident Inspector

*Denotes those present at exit interview

2. Licensee Action on Previous Inspection Findings

(Closed) Inspector Follow Item (277/83-10-04;278/83-10-04). Oversight in recording test equipment usage when used on nuclear instrumentation calibrations. An inspector had found that measuring and test equipment usage was logged after use by copying the equipment serial numbers from the completed calibration data sheets. However calibration of nuclear instrumentation (Surveillance Test (ST) 3 series) was performed and documented in the test procedure and no calibration data sheet was completed. This resulted in the test equipment usage being documented but not logged. To correct this oversight, the licensee has revised ST 3 procedures to include a separate data sheet to accomplish the test equipment logging.

The inspector reviewed the added data sheets included in procedures 3.1.1, 3.2.1, 3.4.1 and 3.5.1-3.

This item is closed.

(Open) Unresolved Item (277/83-10-02;278/83-10-02) Revision of response time surveillance tests to better control the test method and the response time calculation. The inspector reviewed the response time tests in revised surveillance test (ST) procedures 14.3, 14.4, 14.11, and 14.13, to confirm that the testing method allowed flexibility in recorder speed and that the method for calculating response time was specified. Although the revised procedures accomplished the above, the inspector noted that the response time calculation used a measure of one cycle in the 60 cycle trace and then multiplied it by 60. At the minimum recorder speed of 200 millimeters/second, one cycle measured approximately one eighth inch. The inspector stated that measuring only one cycle would seem to introduce unnecessary error as opposed to the measured interval being some larger number of cycles. The licensee representative agreed to evaluate the use of a larger interval and to revise the response time calculation if appropriate.

This item remains open pending a licensee conclusion regarding use of a larger interval in response time calculations.

3. Procurement

3.1 References/Requirements

- ANSI N45.2.13-1976, Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plant
- ANSI N45.2-1977, Quality Assurance Program Requirements
- Updated Final Safety Analysis Report (UFSAR)
- Regulatory Guide 1.123, Quality Assurance Requirements for Control of Procurement of Items and Services for Nuclear Power Plants, Revision 1

3.2 Program Review

The written procurement control program was reviewed to determine whether administrative controls were established for:

- The identification of items purchased; identification of tests and/or special instructions, technical requirements and documentation to certify the item; assurance that the contractor/supplier has implemented a QA program consistent with 10 CFR 50, Appendix B, and where deemed appropriate by the licensee, access to the supplier's plant or records for purposes of audit.

- Initiation of procurement documents; review and approval of specifications differing from the original design documents; review and approval of procurements, including changes thereto; and, the designation of quality classification of procured items.
- Assignment of the evaluation and approval of bidders/suppliers, including review/update of the listing of approved suppliers; providing for rights of access to supplier's facilities and records; and, maintenance of records of suppliers qualifications and audit.
- The inspection and storage of safety-related materials; including packaging, preventive maintenance and shelf-life as applicable.

The following licensee administrative controls/procedures were reviewed.

- Administrative procedure (A)-27, Procedure for Material Control System, Revision 10, January 10, 1979
- A-27.5 Procedures for Procurement and Control of Catalog Items, Revision 0, January 27, 1983
- Engineering and Research Department (ERDP) 4.4, Procedure for Procurement of Equipment, Material Service or Combination Thereof, Revision 3, January 23, 1981
- ERDP-4.5, Procedure for Procurement of Nuclear Safety Related Items and Services by the Preliminary Requisition Method, Revision 4, April 25, 1983
- EPDP-7.1, Procedure for Receipt, Inspection and Storage of Materials and Equipment, Revision 7, March 31, 1983

3.3 Implementation

- 3.3.1 The inspection selectively sampled completed purchase orders and reviewed the packages for technical content, receipt inspection, QA requirements (including safety classification) and documentation as required by the established procedures and the requirements of paragraph 3.1. The purchase orders selected for review included procurement of spare parts, new parts and materials to support modifications, and services for both electrical and mechanical systems and are listed below:

BW352681	BW352796	BW367632
BW352380	BW353122	BW367726
BW311792	BW353424	BW353421
BW343091	BW342066	BW244871
BW343311	BW353593	PB236183
BW353681	BW353685	PB223213
EE320042	BW354108	PB349963

BW354241
BW367470

BW35136

BW367629

The inspector reviewed the receipt inspections documentation for the purchase order listed above.

In addition, the inspector discussed and reviewed the licensee shelf-life and preventive maintenance for materials and equipment in storage with the Stores Department Supervisor.

- 3.3.2 The inspector discussed item classification and the receipt inspection processes with station Quality Assurance personnel, to evaluate the method of classification and the mechanism for changing classification. The inspector reviewed the documentation for upgrading all 480 breaker parts from "non-Q" to "Q" and the engineering evaluation for downgrading HPCI system components.
- 3.3.3 The inspector toured all storage areas including satellite and outside storage areas to evaluate:
- adequacy of material storage, including packaging, protective coverings;
 - control of personnel access;
 - marking and tagging of safety-related items; and
 - preventive maintenance of stored equipment.

In conjunction with the tour the inspector reviewed three storage area quarterly surveillances performed by Engineering and Research Department (E&RD) Quality Control in September, June and March 1983 and the last six monthly tours performed by the Stores Department.

3.4 Findings

- 3.4.1 During the tour of the storage facilities the inspector identified some discrepancies in the storage and marking of materials and equipment: 1) several covers were missing on pipe stock, 2) and unlabeled equipment was being stored in the Q storage area. The licensee representative accompanying the inspector took immediate corrective action and resolved the discrepancies.
- 3.4.2 Currently, the storage/warehousing responsibilities are divided between the E&RD and Store Division. The licensee is planning to consolidate the storage/warehousing by, 1) deleting all satellite storage locations, and 2) having the Stores Division take over the E&RD storage responsibility. The consolidation of material storage

and the responsibilities should provide better control for the shelf-life and preventive maintenance programs of stored materials and equipment.

No violations were identified.

4. Audits

4.1 Reference

The requirements governing the performance of quality assurance audits of safety-related areas are specified in the following documents:

- 10 CFR 50, Appendix B, Quality Assurance Criteria for Nuclear Power Plants
- Technical Specifications, Section 6, Administrative Controls
- Regulatory Guide 1.33/ANSI 18.7 - 1972; Quality Assurance Program Requirements
- Regulatory Guide 1.144/ANSI N45.2.12; Auditing of Quality Assurance Program
- Regulatory Guide 1.146/ANSI N45.2.23, Lead Auditor Qualifications

4.2 Program Review

The above documents specify that audits achieve the following:

- The content of audit reports clearly defines the scope of the audit and the results.
- Audits are conducted by trained personnel not having direct responsibility in the area being audited.
- Frequency of audits is in conformance with Technical Specifications and the QA Program.
- Appropriate follow-up actions (including reaudit, if necessary) are being taken, are in progress or are being initiated.
- The audited organization's response to the audit findings is in writing, is timely, and adequately addresses the findings and recommendations.

The inspector reviewed the following procedures to verify that the licensee maintains an administration system to meet the above requirements.

Electric Production-Department

- QADP-5, Procedure for Performance of QA Division Audits, Revision 7
- QADP-6, Quality Assurance Division Audit Plan - Operations, Revision 7
- QADP-8, Procedure for Preparation and Use of Audit Check Lists, Revision 5
- QADP-9, Procedure for Control of Apparent Deficiencies, Revision 9
- QADP-12, Procedure for Performance of QA Division Surveillances, Revision 8
- QADP-14, QA Division Personnel Qualification Program, Revision 9
- QADP-19, Procedure for Identification and Closure of Open QA Items, Revision 5

Engineering & Research Department

- QAI 18-4, Procedure for Formulation of Audit Plans, Revision 1
- QAI 18-5, Procedure for QA Supplier Evaluation, Revision 2
- QAI 18-6, Procedure for Performing Quality Assurance Audits, Revision 3
- QAI 18-10, Procedure for Preparation of Audit Reports, Revision 2

4.3 Implementation

The inspector reviewed the following areas to verify compliance with the audit program requirements.

Electric Production Department

- Quality Assurance Division organization chart
- 1983 Audit Schedule, August 29, 1983
- 1982 Audit Log (included 44 audits)
- 1983 Audit Log (included 33 audits through October 4, 1983)
- Six audit reports (AP 82-40 PR, AP 82-43 TR, AP 83-04 HPC, AP 83-05 ST, AA 83-14 ISI, and AP 83-22 PR)
- Joint Utility Management Audit of Philadelphia Electric Co., November 19, 1982

- 1982 Annual Review of Peach Bottom Atomic Power Station Quality Assurance Program, April 6, 1983
- Audit Program Status, July 7, 1983 (Report to offsite committee)
- Audit checklists and audit plans for audits AP 83-05 ST and AP 83-20 MOD
- Audit Instructions (guidance for checklists) for program, training, and site operations audits.
- 1983 Surveillance Log
- Peach Bottom Open Item List
- Peach Bottom Open Noncompliance Report (NCR) Listing, September 23, 1983
- Lead Auditor qualifications for six auditors
- 1983 Audit Plan Summaries for twelve audit areas
- Two Surveillance Reports (SP 83-02 HPC and SP 83-06 MEM)
- Three Activities Report from Superintendent, QA Division (83-17, 83-18, and 83-19)

Engineering and Research Department

- Organization chart, September 28, 1983
- Major Activities Schedule, November 1, 1983
- Peach Bottom Unit 3 Fifth Refueling Outage Audit Plan
- Peach Bottom Units 2 & 3 Internal/External Audits for 1983
- Audit reports and checklists for external audits OP-277 and OP-256
- Audit reports and checklists for internal audits OP-193, OP-230, and OP-233
- Supplier History Files for General Electric, Apparatus & Engineering Services; BISCO; and Chicago Bridge and Iron Co.

4.4 Findings

- 4.4.1 The inspector did not identify any violations.

4.4.2 The inspector concluded that auditing by the Electric Production QA of contracted services is inconsistent. The inspector reviewed the QA coverage of General Electric - A&SE (weld overlay work) and Vikem Industries, Inc. (radiological waste processing) and found the QA Division identified unacceptable contractor work during audits and corrected the problems via management meetings and stop work orders. However, the QA coverage of NPS Energy Services during their control rod drive mechanism changeout work was poor. The only QA coverage of NPS Energy Services was that their compliance with ALARA procedures was reviewed as part of an ALARA audit at the site. The inspector concluded that a more thorough review of NPS Energy Services should have been performed based on the following:

- This was the first work performed by NPS Energy Services for the licensee.
- The removal, refurbishment, and replacement of the control rod drive mechanisms is very significant work with respect to reactor safety.
- During the only QA review of NPS Energy Services, i.e., the ALARA audit, NPS Energy Services was found not to be in compliance with the ALARA procedures and work was stopped.
- Quality control review of NPS Energy Services work was performed by inspectors contracted from NPS Energy Services.
- There were numerous delays and interruptions of the work, including the inadvertent overfilling of the reactor cavity with water.

Further, during a cursory review of purchase order paperwork, the inspector noted that although purchase order PB 332061 required "All personnel must be minimum of Level II as defined in ANSI 45.2.6", one of the three inspectors was qualified to Level I only.

This item (277/83-30-01; 278/83-18-01) is unresolved pending licensee action and subsequent NRC:RI review.

4.4.3 The inspector concluded that the Electric Production (EP) QA Division was not providing timely information to management concerning the status of open audit Noncompliance Reports (NCRs). Specifically, each audit report and the biweekly QA Activities Report detail any NCRs which are opened or closed, but there is no management information concerning how many NCRs are open, how long the NCRs have been open, how many open NCRs are assigned to the different plant organizations, or whether any NCRs have exceeded the projected completion dates. The only source for this information is an extensive computer printout, which contains little summary information useful to management. The licensee representative stated that means to provide better status information on open audit NCRs would be evaluated and implemented, if appropriate.

This item (277/83-30-02; 278/83-18-02) is open pending licensee action and subsequent NRC:RI review.

- 4.4.4 The EP QA Division includes recommendations in its audit reports for items which should be improved but for which there is no requirement. The inspector concluded that this was a good practice but noted that there was no consistent format for recommendations in reports. The inspector noted that Audit Report AP 83-05 ST contained a recommendation which was not mentioned in the summary and which was incorporated at the end of the acceptable findings section where it could easily go unnoticed. A licensee representative agreed to evaluate the best way to present recommendations in audit reports and to consistently present them that way.

This item (277/83-30-03; 278/83-18-03) is open pending licensee action and subsequent NRC:RI review.

5. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable, deviations, or violations. An unresolved item is discussed in paragraph 4.4.2.

6. Management Meetings

Licensee management was informed of the scope and purpose of the inspection at the entrance interview conducted on October 31, 1983. The findings of the inspection were periodically discussed with licensee representatives during the course of the inspection. An exit interview was conducted on November 4, 1983 (see paragraph 1 for attendees), at which time the findings of the inspection were presented. At no time during the inspection was any written material concerning inspection results provided to the licensee.