U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report Nos. 50-277/84-14 and 50-278/84-12

Docket Nos. 50-277 and 50-278

License Nos. DPR-44 and DPR-56

Licensee: Philadelphia Electric Company

Facility Name: Peach Bottom Atomic Power Station Units 2 and 3

Inspection At: Delta and Philadelphia, Pennsylvania

Inspection Conducted: May 7-11, 1984

Inspectors: P. K. Eapen — 6/26/84
P. K. Eapen, Ph.D., Lead Reactor Engineer — date

J. A. Brell — 6/26/84
J. A. Brell, Reactor Engineer — date

Approved by: A. T. Gody — 6/26/84
A. T. Gody, Chief, Management Programs Section — date

Inspection Summary: Inspection on May 7-11, 1984 (Combined Inspection Report Nos. 50-277/84-14 and 50-278/84-12)

Areas Inspected: Routine unannounced inspection by two region based inspectors, of the QA/QC program and The Piping Replacement Program. The inspection involved review of the QA program; QC inspection program; procurement, receipt, and storage programs; corrective-action program; and the design modification program. The inspection involved 52 inspector hours onsite, 16 inspector hours at the corporate office and 7 followup inspection hours at the region by two region-based inspectors.

Results: One violation was identified. (Inadequate corrective actions for audit and inspection findings - paragraph 4.4.)

DETAILS

1. Persons Contacted

1.1 Philadelphia Electric Company (PECO)

W. Anderson, Quality Assurance (QA) Engineering Supervisor
*J. Austin, Supervising Engineer
A. Donnell, Site Quality Control (QC) Supervisor
**R. Fleishman, Plant Superintendent
R. Jones, QC Engineer
*V. Lucia, QA Senior Engineer
K. Mandl, QA Senior Auditor
***C. Mengers, QA General Supervisor
*R. Moore, QA Superintendent
D. Smith, Assistant Plant Superintendent
*W. Texter, QC General Supervisor
A. Trapazzano, Auditor

1.2 U.S. Nuclear Regulatory Commission

**A. R. Blough, Senior Resident Inspector
**J. H. Williams, Resident Inspector

* Denotes those present at the exit meeting on May 9, 1984 at PECO corporate office.
**Denotes those present at the the exit meeting on May 11, 1984 at Peach Bottom
***Denotes those present at both of the above exits.

The inspectors also interviewed other personnel during the inspection.

2. Exit Interviews

Exit interviews were conducted on May 9 and 11, 1984 (see paragraph 1 for attendees) at which time the findings of the inspection were presented.

At no time during this inspection was written material provided to the licensee by the inspectors.

3. Licensee's Actions on Previous Inspection Findings

(Closed) Open Items (277/82-07-04 and 278/82-07-04): Incorporate minimum required document list in Engineering and Research Department procedure for design control. ERDP 3.4 (Revision 5), "Procedure for Design Control", section 7.1, established the required documentation for design activities. In addition Peach Bottom Atomic Power Station (PBAPS) Procedure A-14 (Revision 9) established the documentation required prior to the closure of a modification package. A sampling review of recent modification packages indicated that the packages contained all documents specified in section 7.1 of ERDP 3.4. The item is closed.

(Closed) Open Items (277/82-18-01 and 278/82-17-01): Establish and maintain supporting documents for submittals to NRC. Reviews of several supporting documents for recent submittals to NRC indicated that such documents are prepared using the independent review and approval requirements of ERDP 3.4. This is adequate to address the concerns of this open item. The item is closed.

4. Annual QA Program Review

The licensee submitted the Quality Assurance Program Description (QAPD) to the NRC on June 8, 1983 and it was approved by the NRC on August 10, 1983. The purpose of this inspection, as detailed in section 4.3 was to assess the effectiveness of the implementation of the program as described in the QAPD.

4.1 References/Requirements

-- 10 CFR 50, Appendix B

-- PBAPS Final Safety Analysis Report (FSAR), Appendix D

-- Regulatory Guide 1.38, March 16, 1973

-- PBAPS Quality Assurance Plan, Volume I, Design and Construction Phase

-- ANSI N18.7-1972, Administrative Controls for Nuclear Power Plants

-- ANSI N45.2.2-1972, Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants

-- ANSI N45.2.6-1978, Qualifications of Inspection, Examination and Testing Personnel for Nuclear Power Plants

-- ANSI N45.2.23-1978, Qualifications of Quality Assurance Program Audit Personnel for Nuclear Power Plants

4.2 Documents Reviewed

-- PBAPS- Quality Control Instuction (QCI)-011, Inspection and Monitoring of RPV Disassembly, Revision 0

-- Maintenance Procedure (M)-4.65, Installation of the Reactor Vessel Head, Revision 7

-- Detailed Monitoring Checklist (DMC)-MC3.6, Permits and Blocking, February 1984

-- Quality Control Inspection Report (QCIR)-TGH-84-0001, Housekeeping

-- QCIR-TGH-84-0005, A30 Housekeeping HPSW Pump Area

-- Non Compliance Report (NCR) AP 83-22-01

-- NCR AP83-22-02

-- NCR AP83-22-05

-- Surveillance Report (SP)-83-04 MEM, Annual Emergency Diesel Generators

-- SP-83-06 MEM, Recirculation/Residual Heat Removal Piping Repairs

-- SP-83-07 MEM, Recirculation Piping Weld Inspection and Residual Heat Removal Piping Weld Inspection and their associated Clad Overlay Repairs

-- QA Division Procedure (QADP)-5, Procedure for Performance of QA Division Audits, Revision 11

-- QADP-11, Procedure for QA Division Activities Report, Revision 10

-- QADP-13, QA Training Program QA Division Personnel, Revision 6

-- QADP-14, QA Division Personnel Qualification Program, Revision 9

-- QADP-101, Quality Control Inspection Program, Revision 0

-- Requirements and Guidelines (R&G) #19, Training for Electric Production Department Personnel, Draft 12/7/83

-- Joint Utility Management Audit (JUMA) of the QA Division of PECO, 1983

-- AP-83-02-SP, Procurement and Storage, February 3, 1983

-- Audit Report (AP)-83-22, Corrective Action

-- AP-83-35-TR, Training/Qualifications of Technicians, Craftsman and QC Personnel, December 21, 1983

-- AP-83-40-PR, Periodic Review of Procedures and Document Control, December 30, 1983

-- AP-84-01FH, Fuel Handling and Accountability

-- AP-84-04SP, Procurement and Storage

-- AP-84-13-PR, Periodic Review of Procedures and Document Control, March 21, 1984

-- AP-84-23, Corrective Action

-- Engineering and Research Department Procedure (ERDP)-7.1, Receipt, Inspection and Storage of Materials and Equipment, Revision 8

-- Construction Division (CD) 9.4 (Proposed), Procedure for Surveillance of Nondestructive Examination, Revision 0

-- Receipt Inspection Surveillance Report (RI&SF)-1121, 1175, 995, 851, 1017

-- Storage Area Surveillance Report (SASR)-3/30/82, 7/1/82, 9/24/82, 12/20/82, 3/26/83 and 6/23/83

-- QA Division Audit Log for 1983 and 1984

-- QA Division Surveillance Log for 1983 and 1984

4.3 Details

The licensee's QA/QC Program was reviewed to assure the following:

-- Personnel responsible for developing implementing procedures were familiar with the changes to the Quality Assurance (QA) Program.

-- Implementing procedures were in conformance with the changes described in the QAPD.

-- The licensee's corrective action program was in conformance with regulatory requirements, licensee commitments and industry standards.

-- The licensee's procurement control program was in conformance with regulatory requirements, licensee commitments and industry standards.

-- The licensee's program for receipt, storage and handling of safety related equipment was in conformance with regulatory requirements, licensee commitments and industry standards.

-- The licensee established measures for tracking audits required by Technical Specification.

-- The licensee has a trending program for inspection and audit findings.

-- The QA/QC training program met licensed requirements and national standards.

-- The QC organization was effective in monitoring on-site activities.

4.4 Findings

4.4.1 The licensee had not incorporated the changes identified in the QAPD into the PBAPS Quality Assurance Plan, Volume III. However, these, as well as more recent FSAR changes, were reflected in a draft QA Plan revision scheduled for implementation in June 1984. This is an unresolved item (277/84-14-01 and 278/84-12-01).

4.4.2 The following items were identified in the Mechanical Outdoor Storage Area (MOSA):

1. Access to the area was not controlled and limited to designated personnel. There were two open access points into the controlled access areas with no controls. The only barrier at a third portal was a locked chain hanging about one foot off the ground.

2. Nine "Q" listed pipes were uncapped and uncovered. Rust was evident in about half of them. One of the pipes had water lying in it.

3. Q listed items and non-Q items were stored in the same area.

4. The controlled access area was not clearly defined. The perimeter consisted of a combination of chain link fence, broken snow fence, and a metal guard rail. There was only a single sign to indicate that the area was a controlled access area and it was on the ground leaning against the chain described in 1 above.

5. Markings on one Q-listed I beam were rusted over and therefore indistinct.

In addition the site "Q" Hold Area was located inside the warehouse at the receiving dock. The area was clearly defined by a chain link floor to ceiling fence on three sides and the warehouse wall on the fourth side. A sliding gate with a key lock was used until recently to control access into the "Q" hold area, access control procedures were recently changed and the gate remained open. Access is now controlled at the entrance to the receiving dock. Warehouse personnel working in the dock area were to monitor and control the activities inside the "Q" hold area. However, the inspector identified PECO construction workers working in the area without supervision from the warehouse personnel.

The above findings are contrary to the storage requirements of 10 CFR Part 50, Appendix B, Criterion XIII and ANSI N45.2.2-1972 (endorsed in the licensee's QA Plan).

Similar concerns were identified in the licensee's storage area surveillance reports issued in 1982. The identified concerns included lack of access control, lack of segregation between 'Q' and 'non-Q' items, improper marking and/or identification of stored material and absence of covers, caps and other closures for stored material. The corrective actions taken were not effective. As a result, the concerns in the storage program continued to exist.

4.4.3 Engineering Review Request Forms (ERRFs) were used by the Engineering and Research Department to process field initiated changes to specifications and designs. Engineering and Research Department Procedure 3.8 (Revision 7) established the requirements for ERRFs. The administration and control for the ERRFs were not adequate. As a result, 250 ERRFs remained open at the time of this inspection. These open ERRFs included one issued in 1976, one issued in 1981, thirty issued in 1982, 145 issued in 1983 and 73 issued in 1984.

The inspector stated that the open ERRFs indicated a lack of control and management attention in the administration of the licensee's ERRF program and was contrary to the requirements of 10 CFR 50 Appendix B, Criterion III for field change control and Technical Specification for design modification control.

Engineering and Research QA Department audit No. OP200 identified this concern in July 1982. However, the corrective actions taken in this regard were not effective. Procedure ERDP 3.8 does not specify a time requirement for the closure of the ERRFs. Site construction personnel initiated a recent effort to close the open ERRFs. However, disposition of the ERRFs by the corporate engineering and design organizations was not prompt.

The licensee's system for tracking corrective actions for inspection and audit findings was inadequate. Several audit findings remained open for two or more years. Positive measures to assure completion of corrective actions were not established. The audited organizations were not required to establish and maintain records of completion of the required corrective action. Additionally, the verification of corrective actions was not conducted promptly.

Items 4.4.2 and 4.4.3 indicated that the licensee's corrective action program was neither prompt nor effective. This is contrary to 10 CFR Part 50, Appendix B, Criterion XVI, which requires prompt corrective actions for identified nonconformances to preclude repetition. This is a violation. (277/84-14-02 and 278/84-12-02).

5. Piping Replacement Program

The licensee established a piping replacement program to address intergranular stress corrosion cracking in Recirculation, Residual Heat Removal and Reactor Water Clean Up System Piping and components. Modification Package 1278 was issued to cover this activity. This inspection is one of a series of NRC inspections scheduled for this project. It supplements NRC Inspection No. 50-277/84-13.

5.1 References/Requirements

1. 10 CFR 50 Appendix B
2. 10 CFR 50.59
3. IE Bulletins 82-03, 83-01, and 83-02
4. PBAPS Quality Assurance Plan Volumes I and III

5.2 Project Specific Documents and Activities Reviewed

-- Modification No. 1278
-- Project Interface Manual
-- CB&I Special Instructions for the Project
-- Peach Bottom Recirculation Line Can-Decon procedures
-- Traveler Set No. 11, Isolation and Decon of loop A
-- CB&I Procedure TIP-1 (Revision 6) Training and Indoctrination of Personnel
-- CB&I Training and Qualification Records
-- CB&I Nuclear Quality Assurance Manual for ASME Section III Products (Issue No. 10)
-- Mock Up for Nozzles N1 and N2
-- Construction Job Memorandum dated May 9, 1984 for Electrical Interference Removal
-- CB&I ALARA Procedures 001, 0650 and 120

5.3 QA/QC Envolvement with Recirculation Pipe Modification Program

The Engineering and Research Division (E&RD) QC group had a limited role in the Recirculation Pipe Modification Program. This role included:

1. Receipt inspection of all material/equipment when they arrive on site. (When these inspections are completed the equipment will be turned over to Chicago Bridge and Ironworks (CB&I) for storage and testing.)

2. Review and approve the results of all non-destructive evaluations (NDE) performed by CB&I on material used in this program.

3. Perform surveys of CB&I NDEs.

4. Approve and verify the qualifications of all CB&I NDE personnel.

The E&RD QA group is responsible for auditing those programs associated with the modification, installation, procedural compliance and design interface programs.

The Electric Production Department QA group has audit responsibilities for programs that interface with normal operations. These include such programs as ALARA, decontamination, housekeeping, base line inservice inspection, plant restoration/operational verification and plant startup. Similarily the QC group will monitor such interface program areas as fire protection, housekeeping, ALARA, decontamination, radiation protection, base line inservice inspection, and preoperational testing. Daily surveys of the drywell area are scheduled in order to monitor these programs.

5.4 Details

Selected activities of the piping replacement program were reviewed to assure the following.

-- The program and its implementing procedure were developed in accordance with the requirements of the Station QA Plan.

-- The program was responsive to the concerns of IE bulletins 82-03, 83-01, and 83-02.

-- The design change activities were conducted in accordance with the requirements of the Station QA Plan.

-- Project interfaces were identified and controlled.

-- The licensee's management provided adequate overview for the project.

-- QC inspections and surveillances were scheduled and conducted.

-- QA audits and reviews were established for the project.

-- Engineering, QA/QC and craft personnel were trained.

5.5 Findings

The inspector reviewed ongoing ALARA activities, the project support provided by engineering personnel, and noted that the licensee was responsive to previous NRC concerns regarding ALARA and QC activities for this project. The licensee has established and staffed the QC organization in response to a previous NRC concern. The QC activities being developed for the project were adequate. Similarly, in response to another NRC concern the licensee's ALARA personnel started to monitor the contractor's activities effectively. The licensee's project engineers were knowledgeable of the day to day activities of the contractor and they interfaced well with the corporate, site and contractor personnel.

No violations were identified.

6. Unresolved Items

An unresolved item is a matter about which more information is required in order to ascertain whether it is an acceptable item, a deviation or a violation. One unresolved item was identified in this inspection in paragraphs 4.4.1.