

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-277/82-24
50-278/82-23

Docket No. 50-277
50-278

License No. DPR-44
DPR-56 Priority - Category C

License: Philadelphia Electric Company
2301 Market Street
Philadelphia, PA 19101

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

Inspection At: Delta, Pennsylvania

Inspection Conducted: December 13-16, 1982

Inspectors: Loren R. Plisco
L. R. Plisco, Reactor Inspector

January 7, 1983
date

Approved by: Clifford J. Anderson
C. J. Anderson, Chief, Plant Systems
Section, DETP

1/10/83
date

Inspection Summary:

Inspection on December 13-16, 1982 (Report No. 50-277/82-24 and 50-278/82-23)

Areas Inspected: Routine unannounced inspection of the Fire Protection/Prevention Program including: program administration and organization; administrative controls; control of combustibles; control of ignition sources; fire brigade training; fire fighting procedures; review of surveillance test and maintenance records associated with Technical Specification requirements; review of periodic inspections and Quality Assurance Audit reports; and facility tour and observation of work activities. The inspection involved 32 hours onsite and 4 hours of in-office review by one NRC region-based inspector. Results: Of the nine areas inspected, no violations were identified in 8 areas; one violation was identified in one area (Violation - failure to meet fire brigade training requirements).

DETAILS

1. Persons Contacted

Philadelphia Electric Company

- D. Ahmuty - Assistant Training Coordinator
- K. Getz - Surveillance Test Coordinator
- *D. Smith - Outage Manager
- *S. Spitko - Quality Assurance Engineer - Site
- T. Ullrich - Station Superintendent
- **J. von Rhine - Training Coordinator - Corporate Office
- *J. Wheeler - Training Coordinator - Site

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- *A. R. Blough, Senior Resident Inspector

*Denotes those present at exit interview

**Telephone conversation on December 15, 1982.

2. Action on Previous Inspection Findings

(Closed) Infraction (277/80-02-02, 278/80-02-02): Failure to post a continuous fire watch when a penetration fire barrier was not functional. The inspector reviewed the revised surveillance test ST 16.7, Visual Inspection of Fire Barriers, Revision 1, dated May 30, 1980. The procedure had been revised to include the cable penetration fire barriers involved and all mechanical penetrations. The inspector reviewed completed surveillances to verify that the penetrations were being inspected within the required periodicity and that appropriate corrective action was taken for deficiencies. The inspector also reviewed procedure CD 5.8, Procedure for Installation and Inspection of Raceway Airstops, Waterstops, and Firestops, Revision 2 dated December 1, 1982. This procedure had been revised to include a documented weekly inspection of all temporary seals. The inspector had no further questions. This item is closed.

(Closed) Inspector Followup Item (277/82-03-02): Revision of Construction Division procedure CD 5.8 to more clearly identify when separate fire watches are required. The inspector reviewed CD 5.8, Procedure for Installation and Inspection of Raceway Airstops, Waterstops and Firestops, Revision 2, dated December 1, 1982. The inspector verified that the procedure had been revised to identify when separate fire watches are required. The inspector had no further questions. This item is closed.

(Closed) Violation (277/82-03-01, 278/82-03-01): Failure to provide fire watches and proper fire extinguishers as required by Administrative Procedure A-12.1. The implementing procedure, CD 5.8, was revised to provide additional specific detail such that Shift Supervision will be

informed of fire barriers which are to be opened, their location and the need to post fire watches. The revised procedure, CD 5.8, Revision 2, dated December 1, 1982 was reviewed by the inspector. This item is closed.

(Closed) Unresolved Item (277/82-01-04): Fire stations partially obstructed or obscured from view by temporary material storage. The inspector conducted a thorough tour of the plant spaces and station yard and found no instances of obstructed or partially obscured fire stations. Housekeeping tours are being conducted monthly by the licensee in all safety related areas. This item is closed.

(Closed) Violation (277/82-09-03): Impeding accessibility to fire fighting equipment. The licensee upgraded housekeeping requirements to include daily inspections during outage periods. The inspections are completed monthly during non-outage periods. The inspector reviewed the housekeeping inspection records for the previous six months and verified that the inspections are being conducted and deficiencies corrected. The inspector conducted a thorough tour of plant spaces and the station yard and found no obstructed fire stations or evidence of housekeeping problems. This item is closed.

(Closed) Unresolved Item (277/81-05-01, 278/81-05-01): Fire door open between Turbine Building 116 foot elevation and the laundry. The Technical Specifications were revised in Amendment 85 to require all fire barrier penetrations required to ensure safe shutdown capability to be functional. The licensee completed a modification to add a self-closing fire door between the Turbine Building and the laundry. The inspector verified that the modification was complete and that the door was functional. This item is closed.

(Closed) Item of Noncompliance (277/81-18-03, 278/81-19-01): Failure to maintain a fire station clear and fire doors closed. The licensee installed several self-closing fire doors in series with the existing watertight doors. On several audits the licensee had reinspected the fire doors and fire stations and found no discrepancies. The inspector verified that the self-closing doors had been installed and noted that the fire doors are being kept closed as required. This item is closed.

(Closed) Unresolved Item (277/77-28-01): Review of construction quality assurance records for safety-related cable penetration seals. In a previous inspection, the inspector had not been able to verify if quality assurance surveillance was performed when safety-related-cable penetrations were sealed because the records were located in the home office in Philadelphia. The record review was never completed due to other inspection requirements with higher priority. A review of these records at this time is not considered necessary. This item is closed.

(Closed) Unresolved Item (277/80-02-01, 278/80-02-01): Revise procedure to provide guidance as to the extent of area that should be considered

around operations utilizing open flames. The licensee reviewed and revised administrative procedure A-12, Ignition Source Control Procedure. The previous inspector had recommended that the criteria detailed in the National Fire Protection Association Code 51B "Standard for Fire Protection in Use of Cutting and Welding Processes" be used as guidance. The licensee determined that the NFPA code 51B Criteria of a 35 foot radius was too restrictive for the congested areas of the plant and chose to use a 20 foot radius. The inspector reviewed the revised procedure A-12, Revision 4, dated October 24, 1982 and verified that the specified radius around the work area was evaluated by the work supervision and the area was controlled to prevent combustibles in the area. This item is closed.

3. Fire Protection/Prevention Program Administration and Organization:

The inspector reviewed the following licensee procedures:

- Fire Protection Plan, Revision 3, dated April 29, 1982,
- Administrative Procedure A-50, Training Program, Appendix D, Revision 8 dated June 28, 1982.

The following items were identified:

- a. 10 CFR 50 Appendix R, Section II.A requires that the fire protection program shall be under the direction of an individual who has been delegated authority commensurate with the responsibilities of the position and who has available staff personnel knowledgeable in both fire protection and nuclear safety. As a result of this inspection, the inspector determined that control of the fire protection program at PBAPS is fragmented. There is little evidence of coordination in the program as it now exists. The PBAPS Fire Protection Plan identifies the Station Superintendent as being responsible for the implementation of the program. As evidenced by other findings identified in this report, little coordination of the program or review of the program effectiveness is being conducted, other than the required annual Quality Assurance Audits. The licensee is currently evaluating a proposal submitted by the training coordinator, to establish a Fire Protection Coordinator, who would be responsible for all aspects of the program.

This item is considered unresolved pending NRC review of the licensee's evaluation (277/82-24-01; 278/82-23-01).

- b. The PBAPS Fire Protection Plan was revised to reflect the fire brigade training requirements of 10 CFR 50 Appendix R on April 29, 1982. The current training procedure, A-50, Revision 8 dated June 28, 1982 does not reflect the same training requirements of the Fire Protection Plan nor 10 CFR 50 Appendix R and requires revision.

This item is unresolved pending NRC review of the licensee's revised procedure (277/82-24-02; 278/82-23-02).

4. Administrative Controls

The inspector reviewed the following licensee documents and procedures:

- Technical Specification Sections 3.14 and 4.14,
- PBAPS Fire Protection Plan, Revision 3, dated April 29, 1982,
- Administrative Procedure A-30, Plant Housekeeping Controls, Revision 4, dated June 10, 1981.

The inspector verified that the licensee has developed administrative controls which include:

- (1) Requirements for periodic audits,
- (2) Fire brigade organization and qualification,
- (3) Requirements for periodic housekeeping inspections,
- (4) Requirements for indoctrination of all contractor personnel and offsite licensee personnel who work onsite in appropriate administrative procedures relative to fire protection, and
- (5) Identification of actions to be taken by individuals discovering a fire.

No violations were identified.

5. Control of Combustibles

The inspector reviewed the following licensee procedures:

- Administrative Procedure A-12.2, Control of Combustibles, Revision 0, dated June 10, 1981,
- Administrative Procedure A-26, Procedure for Corrective Maintenance, Revision 23, dated June 24, 1982,
- Administrative Procedure A-30, Plant Housekeeping Controls, Revision 4, dated June 10, 1981.

The inspector verified that the licensee has developed administrative controls which require:

- (1) Special authorization for the use of combustible, flammable or explosive hazardous material in safety-related areas,
- (2) Prohibition on the storage of combustible, flammable or explosive hazardous material in safety-related areas,

- (3) The removal of all wastes, debris, rags, oil spills or other combustible materials resulting from the work activity following completion of the activity or at the end of each work shift, whichever is sooner,
- (4) All wood used in safety related areas to be treated with flame retardant,
- (5) Periodic inspection for accumulation of combustibles,
- (6) Transient combustibles are restricted and controlled in safety related areas, and
- (7) Housekeeping is properly maintained in areas containing safety related equipment and components.

No violations were identified.

6. Control of Ignition Sources

The inspector reviewed the following licensee procedures:

- Administrative Procedure A-12, Ignition Source Control Procedure, Revision 4, dated October 24, 1982,
- Administrative Procedure A-12.1, Procedure for Controlling Technical Specification Firewatch and Firewatch Patrols, Revision 4, dated October 24, 1982.

The inspector verified that the licensee has developed administrative procedures which included:

- (1) Requirements for special authorization (work permit) for activities involving welding, cutting, grinding, open flame or other ignition sources and that they are properly safeguarded in areas containing safety-related equipment and components,
- (2) Prohibition on smoking in safety-related areas, except where "smoking permitted" areas have been specifically designated by plant management, and
- (3) Specifications for firewatches and posting requirements.

No violations were identified.

7. Fire Brigade Training

The inspector reviewed the following licensee procedures:

- Administrative Procedure A-50, Training Procedure, Revision 8, dated June 28, 1982,

- PBAPS Fire Protection Plan, Revision 3, dated April 29, 1982,
- Surveillance Test ST/EP-5, Fire Drill, Revision 8, dated August 18, 1982,
- Surveillance Test ST 16.19, Fire Brigade Periodic Meeting, Revision 0, dated March 29, 1982.

The inspector verified that the licensee has developed administrative procedures which include:

- (1) Requirement for announced and unannounced drills,
- (2) Requirements for fire brigade training and retraining, and
- (3) Requirements for periodic meetings for brigade members.

The following items were identified:

- a. Upon a random review of the fire brigade training records, the inspector noted that members of the fire brigade were deficient in training requirements in accordance with 10 CFR 50 Appendix R and the PBAPS Fire Protection Plan.

10 CFR 50 Appendix R Section III-I states that the fire brigade training program shall include the following:

- Regular planned meetings held at least every three months for all brigade members.
- Periodic refresher training to repeat the classroom instruction for all brigade members over a two year period.
- Practice sessions in actual fire extinguishment at least once per year for each brigade member.

PBAPS Fire Protection Plan Revision 3, dated April 29, 1982 establishes the responsibilities for the fire brigade training and includes the following:

- "Regular planned meetings at least every three months for all brigade members..."
- "Periodic refresher training sessions... at least every two years."
- Practice sessions in actual fire extinguishment "provided at least once per year for each fire brigade member".

Contrary to the above, as of December 16, 1982:

- Two members of the fire brigade had not attended regular planned meetings for periods of up to five months, although regular planned meetings were being conducted monthly in accordance with surveillance test ST 16.19, Fire Brigade Periodic Meeting. No review was taking place to ensure that the minimum training requirements were being met.
- One member of the fire brigade had not attended periodic refresher training sessions since August, 1980. Further, neither a periodic refresher training program nor lesson plans had been established by the training section although required by the Fire Protection Plan.
- Four members of the fire brigade had not participated in practice sessions in actual fire extinguishment at least once per year.

This item is considered a violation (277/82-24-03, 278/82-23-03).

- b. 10 CFR 50 Appendix R Section I states that individual records of training provided to each fire brigade member, including drill critiques, shall be maintained for at least 3 years to ensure that each member receives training in all parts of the training program.

PBAPS Fire Protection Plan states that individual records of training provided to each fire brigade member at the Gas Methods and Training Division (West Conshohocken) shall be submitted to the Peach Bottom Training Coordinator. It also gives the responsibility for the training section of the Electric Protection Department to "maintain individual records of training provided to each fire brigade member." The records reviewed by the inspector were incomplete. Attendance sheets from West Conshohocken were not available. Computer printouts were not up-to-date.

This item is considered unresolved pending NRC review of further fire brigade training documentation (277/82-24-04, 278/82-23-04).

8. Fire Fighting Procedures

The inspector reviewed the following licensee procedures:

- F-5A Prefire Strategy Plan Unit No. 2 Rx Bldg., EL. 91'6" C Core Spray Pump Room, Revision 0, dated June 9, 1981,
- F-10 Prefire Strategy Plan Unit 3 Rx Bldg, 3B RHR, Pump and Heat Exchanger Room El 91.6' and El 116', Revision 0, dated June 9, 1981,
- EP-206 Fire and Damage Team Activation, Revision 5, dated June 4, 1982,
- EP-206A Fire Fighting Group, Revision 3, dated June 4, 1982.

The inspector verified that the licensee has developed procedures which include:

- (1) Actions to be taken by the fire brigade,
- (2) Coordination of fire fighting activities with offsite fire departments,
- (3) Actions to be taken by plant superintendent and security guards after notification of fire,
- (4) Instructions for plant operators and general plant personnel during a fire, and
- (5) Strategies for fighting fires in all safety-related areas.

No violations were identified.

9. Review of Surveillance Test and Maintenance Records Associated with Technical Specifications Requirements

The inspector randomly selected and reviewed the following records to verify that the associated required Fire Protection Program Surveillances had been performed, acceptance criteria had been met and the tests had been completed within the required periodicity:

- ST 16.2.2, Diesel Driven Fire Pump Battery Check, Revision 3, dated October 10, 1980,
- ST 16.1.1, Fire System Hose Station Visual Inspection, Revision 7, dated August 15, 1980,
- ST 16.2.1, Fire System Weekly Check, Revision 5, dated October 10, 1980,
- ST 6.17, Diesel Driven Fire Pump Operability Test, Revision 5, dated September 17, 1980,
- ST 6.17.1, Diesel Driven Fire Pump Flow Rate Test, Revision 2, dated March 21, 1980,
- ST 6.16.1, Motor Driven Fire Pump Flow Rate Test, Revision 2, dated March 21, 1980,
- ST 8.1.2-1, Diesel Fuel Sample, Fire System, Revision 1, dated September 27, 1978,
- ST 6.16, Motor Driven Fire Pump Operability Test, Revision 3, dated April 14, 1980,

- ST 16.13, Hydrostatic Testing of Fire Hoses, Revision 2, dated March 29, 1982,
- ST 16.3, Fire Hose Reel Valve Operability and Blockage Check, Revision 2, September 15, 1982,
- ST 16.16, Fire Door Inspection, Revision 4, dated September 15, 1982,
- ST 15.49, Unit 2 HPCI Room Heat Detectors Functional Test, Revision 1, September 30, 1980,
- ST 16.8A, EI Diesel Generator Cardox System Simulated Activation and Air Flow Test, Revision 1, dated March 13, 1982.

The inspector noted that both ST 6.16.1 Motor Driven Fire Pump Flow Rate Test and ST 6.17.1 Diesel Driven Fire Pump Flow Rate Test specified use of special equipment, a 0-150 psig gage, in order to meet the requirements of Technical Specification 4.14.A.1C (105 psig discharge pressure at 2700 GPM). PBQAP, Vol III Section 2, paragraph 12.1 states that measures shall be established and documented to assure that gages used in activities affecting quality are of the proper range, type and accuracy to verify conformance to established requirements. The ST procedures do not have provisions for documentation of test equipment, identification numbers, or the expiration date of the calibration. The licensee has committed to revise the procedure to include this information.

This item is considered unresolved pending NRC review of the revised procedure (277/82-24-05, 278/82-23-05).

10. Review of Periodic Inspections and Quality Assurance Audits

a. Fire Inspections

The inspector reviewed the loss prevention reports dated November 12-14, 1980 and July 19-21, 1982, prepared by the licensee's insurer, American Nuclear Insurer (ANI). The licensee stated that the recommendations contained in the report are being evaluated and corrective action will be taken as necessary. The recommendations did not involve safety related equipment.

No violations were identified.

b. Quality Assurance Audits

The inspector reviewed two quality assurance audits conducted on the Fire Protection Program dated December 29, 1981 and October 10, 1980. The inspector verified that quality assurance audits on the fire protection program are being conducted as required by Technical Specifications and that corrective action is timely and complete.

No violations were identified.

11. Facility Tour

The inspector examined fire protection water systems, including fire pumps, fire water piping and distribution systems, indicator valves, hydrants and contents of hose houses. The inspector toured accessible vital and nonvital plant areas and examined fire detection and alarm systems automatic and manual fixed suppression systems, interior hose stations, fire barrier penetration seals, and fire doors. The inspector observed general plant housekeeping conditions and randomly checked tags of portable extinguishers for evidence of periodic inspections. No deterioration of equipment was noted. The inspection tags attached to extinguishers indicated that monthly inspections were performed.

No violations were identified.

12. Unresolved Items

Unresolved items are matters about which more information is required to ascertain whether they are acceptable or whether they are violations or deviations. Unresolved items are discussed in sections 3, 7 and 9.

13. Exit Interview

The inspector met with licensee management representatives (see Section 1 for attendees) at the conclusion of the inspection on December 16, 1982. The inspector summarized the scope and findings of the inspection at that time.