U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-387/82-01
50-388/82-01

Docket No. 50-387
50-388

License No. CPPR-101
CPPR-102

Priority -- Category B
A

Licensee: Pennsylvania Power and Light Company
2 North Ninth Street
Allentown, Pennsylvania 18101

Facility Name: Susquehanna Steam Electric Station, Units 1 and 2

Inspection at: Berwick, Pennsylvania

Inspection conducted: January 19-22, 1982

Inspectors: L. Narrow, Reactor Inspector — 2/2/82 date signed

_____ date signed

_____ date signed

Approved by: Ebe O. McCabe, Chief, Reactor Projects Section 2B, DRPI — 2/2/82 date signed

Inspection Summary:
Inspection on January 19-22, 1982 (Report Nos. 50-387/82-01, 50-388/82-01)
(Unit 1) Areas Inspected: Routine, unannounced inspection by a region-based inspector (15 hours) of the status of outstanding items.
Results: No items of noncompliance were identified.

(Unit 2) Areas Inspected: Routine, unannounced inspection by a region-based inspector (10 hours) of the status of outstanding items.
Results: No items of noncompliance were identified.

Region I Form 12
(Rev. April 77)

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DETAILS

1. Persons Contacted

Pennsylvania Power and Light Company

*R. A. Beckley, Resident Nuclear QA Engineer
*J. R. Buczynski, Lead Construction Surveillance Engineer
P. Capatosto, QA Engineer
*S. Denson, Project Construction Manager
*R. H. Featenby, Assistant Project Director
R. , QA Analyst
J. Lindberg, QA Engineer
R. E. Matthews, QA Engineer
T. Newman, QA Engineer
M. Provost, QA Engineer

Bechtel Power Corporation

*G. Bell, Project QA Engineer
D. Farrell, Lead Engineer, Storage and Maintenance
G. Gelinas, QC
J. Khandhar, QA Engineer
R. Kuhl, QC Inspector
H. F. Lilligh, QA
*W. Mourer, Field Construction Manager
*J. O'Sullivan, Assistant Project Field Engineer

*Present at exit meeting.

Other licensee and contractor personnel were also interviewed.

2. Facility Tour

Work in progress, completed work, and plant status in several areas were observed during a general inspection of both units. Work items were examined for obvious defects or noncompliance with NRC requirements or licensee commitments. Craft and supervisory personnel encountered in work areas were interviewed. No unacceptable conditions were identified.

3. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (387/79-14-03): Failure to specify supplementary essential variables in welding procedures. This item was reviewed during inspection 387/81-17 and remained open pending GE audit of welding procedures. The check list for control of special processes of GE audit of April 5, 1979 includes review of welding procedures. The welding procedures in question had been revised and the revisions had been reviewed by an NRC inspector during the previous inspection.

(Closed) Noncompliance (387/80-06-01): Measurement of slope of instrument tubing. The inspector examined NCR's No. 5617 and 6555. All lines had been reinspected and reworked as necessary. The inspector also examined Bechtel memo dated August 12, 1980 concerning the method of verifying slope of tubing and records of training for such inspection.

(Closed) Noncompliance (387/80-25-01, 388/80-16-01): Inadequate inspection procedures and inspections of grouting equipment base plates. The inspector examined the documentation listed below and discussed corrective actions taken with the licensee.

Corrective actions included recheck of all box type equipment bases for grout voids, mapping the indicated voids, review of proposed method of grouting with General Electric Company and the equipment vendors, and grouting of the voids. In addition to inspection of the work by Bechtel QC, the licensees Construction Surveillance Group had performed surveillance inspections to verify implementation of the grouting.

Documents examined included:

- Field Procedure FP-C-4 which had been revised to include grouting of base plates;
- QCI C-1.10 which includes requirements for grouting inspection;
- NCR No. 6836 which documents inspections and grouting of voids; and
- Special Surveillance Instruction SSI-81-15 for surveillance inspection of the grouting and records of the inspections.

(Closed) Noncompliance (387/81-08-12, 388/81-04-09): Routing of sample return line for Hydrogen Analyzer (HA). Clarification of the requirement that the return line not be run vertically more than 30 feet had been obtained from the manufacturer. This requirement was intended to prevent trapping of condensation on the line and had been revised to state, "The sample return line to the containment should not be run vertically upward more than a total of 30 feet."

The inspector examined Dwgs. HCB 122, 124, 109, 108, and 123, and Dwgs. SP HCB 108-1, 2, and 3. The HA lines shown met the manufacturers instructions since the only return line exceeding 30 feet was run in a downward direction. The inspector noted that vertical return down lines were heat traced to prevent condensation.

(Closed) Noncompliance (387/81-12-01, 388/81-06-01): Failure to meet 1-inch separation requirements for conduit/raceway.

The inspector examined NCR's No. 7706 and 7954 which showed that the necessary rework had been completed in order to provide the required separation. The inspector discussed this problem with the licensee, particularly with respect to additional discrepancies of this nature. The licensee stated that this type of problem generally resulted from performance of "non-Q" work in the area after inspection of the "Q" listed work was completed. In order to identify such conditions, QCI E-3.0 for final inspection prior to room turnover from construction to operations, included a requirement for inspection of conduit/raceway separation.

The inspector observed the rework condition of selected conduits and noted that the required minimum 1-inch separation had been provided. In one case, conduit EM-055, which had been designated as a "spare", had later been redesignated as IMG028 into junction box JB4200 and did not have the required separation from EIK 335. However, these conditions had been identified by the licensee on NCR No. 8669. The inspector had no further questions concerning this item.

(Closed) Unresolved Item (387/81-12-02, 388/81-06-02): Ground cable installed within 1-inch separation area between conduit/raceway. The licensee has determined that the separation was required to prevent spread of flames and, therefore, the presence of the ground cable does not have any adverse effect on separation.

(Closed) Unresolved Item (387/81-17-01, 388/81-09-01): Construction Surveillance Group inspection reports. The licensee has issued a memo dated September 3, 1981, "Completion of Construction Surveillance Reports (CSR)," issued construction surveillance instruction PL-E-6.0, Revision 2, and conducted a training session on completion of CSR's.

(Closed) Inspector Follow Item (388/78-20-02): Closeout of NCR No. 3237. This NCR has been resolved. In addition, the qualification of Westinghouse penetrations was reviewed and revised for Unit 1 during inspection 387/81-26.

(Closed) Inspector Follow Item (387/78-99-12): Plate to wall tolerance. The inspector observed installation of selected hanger brackets and noted plate to wall tolerances. No items of noncompliance were identified.

(Closed) Noncompliance (388/81-01-03): Failure to follow procedures for inspection of specialisted terminations. The inspector examined NCR No. 6992, which identified rework and closed out the item concerning the cable termination which had not been inspected, and NCR No. 7137, which closed out the item concerning the other identified terminations. The licensee also reinspected all other accessible Burndy Cable Connectors which showed discrepancies in documentation of the previos inspection. This reinspection was witnessed by PP&L NOA and is documented on QA Audit dated 3/31-4/8/81. Discrepant conditions identified during the audit were added to and resolved with NCR 7137. However, no unacceptable cable terminations were identified. The inspector also observed terminations which had been prepared for training of inspectors prior to reinspection of the terminations and examined training records. The inspector had no further questions concerning this item.

(Open) Unresolved Item (387/79-41-03): Protection of mechanical snubbers. The inspector examined NCR 4989, Deficiency Report No. 0103, Quality Action Request (QAR) F-713, Bechtel letter QAL-904,and PP&L letter PLB-11562. These documents and disucssions with licensee personnel showed that the shock absorbers identified by the NRC inspector had been inspected for external damage and covered for protection; a number of other snubbers had been found unprotected; requirements for protection of snubbers had been established; and storage conditions of snubbers had been included in the daily walk through surveillance inspection by the storage and maintenance group. The corrective actions had been verified by PP&L NQA.

The inspector made a spot check of snubbers to observe their storage conditions. Of approximately 50 snubbers observed in Units 1 and 2, three were found to be unprotected (No. GBB-115-H-15, HBB-118-H-18, and HBB-118-H-22). In addition, 2 snubbers which were surplus,were onsite and unprotected (DBC-101-H-16 and DCA-111-H-28). This item remains unresolved pending improvement in storage and surveillance inspection by the licensee and further inspection of these conditions by an NRC inspector.

(Open) Unresolved Item (387/81-01-03): Requirement for electrical separation criteria external to panels and/or equipment. Bechtel QA has requested separation criteria from San Francisco by QAR-F-772. This item remains unresolved pending establishment of these criteria, inspection by QA and review of the results by an NRC inspector.

(Closed) Unresolved Item (387/80-18-01, 388/80-12-01): Licensee actions and response to NRC Bulletins and Circulars. During a number of inspections in late 1980 and throughout 1981, the inspector reviewed the licensees activities and corrective actions in response to Bulletins and Circulars. The inspector determined that the Bulletins and Circulars were forwarded to appropriate personnel for information and action, that responses to Bulletins were properly submitted to NRC, that reviews and evaluations were supported by records, that a record of nonconforming items was maintained in order to avoid future orders of such items and that corrective actions were taken as required.

4. Previously Inspected Findings

The following items have been reviewed and resolved during an inspection of Unit 1 (Inspection 387/81-29).

(Closed) Noncompliance (81-04-01): Incorrect use of QA Procedure.

(Closed) Noncompliance (81-04-02): QA Procedures issued without comment/review.

(Closed) Noncompliance (81-04-15): Lack of requirements in purchase contract for auditor qualification by contractors.

5. QA Records for Main Steam Isolation Valves (MSIVs)

The inspector discussed several questions concerning repair welding and post weld heat treatment of the castings for the MSIVs with the licensee. The castings were furnished by Quaker Alloy Casting Company (QAC) to the valve manufacturer Atwood Morrill Company (AMC) for supply to the site by General Electric Company. Certain problems had been identified with similar valves from the same supplier at another site.

The licensee had been informed of these problems and had identified them on NCR No. 8563. An investigation is now in progress to determine whether the valves at SSES are similarly affected. The inspector was informed that these valves were fabricated to ASME B&PV Code, Section III, Summer 1971, and he was furnished the following information concerning the identified problems.

a. PWHT heating and cooling rates. During heat treatment the heating rate exceeded code requirements. However, during the final heat treatment following rework the heating was performed at an acceptable rate but data is not available to determine the rate of cooling. Investigation is still in progress.

b. NDE to be performed after final heat treatment. Records show that this requirement was met.

c. Performance of Surface NDE after repair excavation and prior to repair welding. Records show that this requirement was met.

d. Welding to be performed after normalizing and tempering. Records show that this requirement was met.

e. Qualification of Quaker Alloy Procedure. Procedure was qualified for 1240-1260^{o}F. The maximum temperature reached during heat treatment was approximately 1350^{o}F. Maximum temperature during final heat treatment was approximately 1150^{o}F. This investigation is still in progress.

This item is unresolved pending completion of the licensee's investigation and review of the records by an NRC inspector. (387/82-01-01, 388/82-01-01)

6. Licensee Action on NRC Bulletins and Circulars

The following Bulletins are closed for Unit 2 based on review during the Unit 1 inspections shown.

BU-80-03 Loss of charcoal from Standard Type II, 2-inch Tray Absorber Cells. Inspected 387/81-02.

BU-80-09 Hydromotor Actuator Deficiencies. Inspected 387/81-27.

BU-81-03 Flow Blockage of Cooling Water to Safety Systems Components by Corbicula SP and Mytilus SP. Inspected 387/81-13.

The following Circulars are closed for Unit 2 based on review during the Unit 1 inspections shown.

CI-77-05 Possible Liquid Entrapment in Valve Bonnets. Inspected 387/81-17.

CI-80-04 Securing of Threaded Locking Devices on Safety Related Equipment. Inspected 387/81-27.

CI-81-09 Plant Internal Communications System. Inspected 387/81-27.

7. Review of Nonroutine Events

(Closed) Part 21 Report (387/80-SC-02): American Warming and Ventilation Hydromotor Actuators. This item was also reported by the licensee in accordance with 10 CFR 50.55(e) (387/80-00-04 and 388/80-00-04) and was resolved during inspection 387/81-27.

8. Unresolved Items

Unresolved items are matters about which more information is required to ascertain whether they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during the inspection is discussed in Section 4.

9. Exit Interview

The inspector met with licensee representatives (see Details Paragraph 1) at the end of the inspection on January 22, 1982. The inspector summarized the purpose and scope of the inspection and identified the inspection findings.