U. S. NUCLEAR REGULATORY COMMISSION

Region I

Report No. 50-388/82-09

Docket No. 50-388

License No. CPPR-102 Priority -- Category A

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

Facility Name: Susquehanna Steam Electric Station, Unit 2

Inspection At: Berwick, Pennsylvania

Inspection Conducted: July 27 - 30, 1982

Inspector: A. A. Varela, Reactor Inspector — 8-18-82 date signed

Approved by: J. P. Durr, Chief, Materials and Processes Section — 8/19/82 date signed

Inspection Summary: Inspection on July 27 - 30, 1982 (Report No. 50-388/82-09)

Area Inspected: Routine, unannounced inspection by a regional based inspector of Reactor Pressure vessel storage, protection, installation, and post-installation cleanliness preservation. The inspector visited the installed unit to observe and verify its preservation and protection. The inspection involved 28 inspector-hours on site by one regional based inspector.

Results: No violations were identified.

DETAILS

1. Persons Contacted

Pennsylvania Power and Light Company (PP&L)

R. Beckley, Resident Nuclear QA Engineer
* S. L. Denson, Project Construction Manager
R. Featenby, Assistant Project Director
* R. Matthews, Senior Analyst
A. R. Sabol, Manager, Nuclear Quality Assurance
* R. A. Schwarz, Supervising Engineer, Construction

Bechtel Corporation (BC)

* G. A. Bell, Project QA Engineer
* J. Dahnert, Assistant Project Field QC Engineer
* J. O'Sullivan, Assistant Project Field Engineer

General Electric Company Nuclear Energy Division (GE)

A. Lileck, QA Engineer
* R. Opanhoske, Quality Assurance Representative

The inspector also interviewed other PP&L employees, as well as employees of BC and GE.

*Attendees at exit interview.

2. Reactor Pressure Vessel Installation Review of Records

An inspection was made to review quality related records relative to reactor pressure vessel (RPV) installation to ascertain whether these records reflect work accomplishment consistent with NRC requirements and licensee commitments. The review comprised pertinent records relative to RPV storage, protection, handling, installation and post-installation cleanliness preservation. The uniqueness of the RPV fabrication by Chicago Bridge Iron Company (CB&I) at the site was distinguished by shell ring field erection (offstand) from shop fabricated ring sections and final assembly in place at the site. The site fabrication and assembly of the RPV shell was accomplished during the period from March 1975 to July 1977 when the hydrostatic test was completed. After the post-hydro nondestructive examination in September 1977, the RPV was released to BC by Chicago Bridge and Iron, subcontractor to GE (NEBO) on the RPV fabrication. In August 1979, the vessel was turned over to GE (I&SE) prior to initiation of work on the RPV internals. Between September 1977 and the above date, BC was responsible for maintenance and storage of the RPV.

The inspector reviewed these codes, specifications/procedures-instructions to establish the criteria to ascertain whether the records reflect work accomplishment consistent with NRC requirements and licensee commitments.

- ASME III 1968 edition through September 1970 and GE specification #21A9-340AD for Class I Pressure Vessel requirements.

- GE #22A2693 and 22A4273 Instructions for Reactor Assembly Installation.

- GE #22A4202, Reactor Welding, Cleaning, Examination, and Storage.

- GE #22A3829, As-Built Record Requirements for Reactor Assembly.

- GE #22A2724, Equipment Storage Requirements.

The inspector reviewed these records relative to RPV fabrication/assembly, storage, protection, handling, installation and post-installation cleanliness preservation. Samples were reviewed by the inspector and evaluated for criteria identified above. These records are identified as follows:

- QC Inspection Records by GE and CB&I Fabrication and Assembly, eight volumes:

  Exhibit A. - Manufacturer's Data Report and Vessel certs.

  Exhibit B. - Received and As-Built Location Drawings.

  Exhibit C. - (2 volumes) Certified Test Reports.

  Exhibit D. - (2 volumes) NDE Reports.

  Exhibit E. - CB&I Heat Treatment, Thermal History Records.

  Exhibit F. - GE Checklist Book, "Quality History", accumulated during RPV fabrication.

- QC Inspection Records by BC - Dynamic Load Testing of Safety-Related Equipment (Procedure FP-17) for Mechanical Component Installation, including initial and annual inspection of 4600 Ringer Series II Gantry Crane.

- QC Inspection Records by BC/File #1707 and 220.1.1634 on Installed RPV Maintenance Requirements (MRR #GER-328), inspections records from 9/77 to 9/79.

- QA Inspection Records by PP&L of above, File CL-18.

Based on the inspector's review of random samples taken from each of the above records, no violations were identified.

Observation of Installed RPV

The inspector visited the installed RPV to observe conditions relative to cleanliness and protection of the vessel. His visit to Elev. 818 to view the head disclosed adequate non-metallic cover to protect it from such on-going activities as the welding and grinding for the seal plate. At Elev. 704, the inspector observed and verified the adequacy CRD housing seal and protection. No violations were identified.

3. Exit Interview

The inspector met with licensee and contractor representatives (denoted in paragraph 1) at the conclusion of the inspection on July 30, 1982, at the Berwick site. The inspector summarized the findings of the inspection. The licensee acknowledged the inspector's comments.