

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-293/84-18

Docket No. 50-293

License No. DPR-35 Priority -- Category C

Licensee: Boston Edison Company
800 Boylston Street
Boston, Massachusetts

Facility Name: Pilgrim Nuclear Power Station, Unit 1

Inspection At: Plymouth, Massachusetts

Inspection Conducted: June 11-15, 1984

Inspector: L. Narrow
L. Narrow, Lead Reactor Engineer

7/20/84
date

Approved by: J. P. Durr
J. P. Durr, Chief, Materials and
Processes Section, EPB

7/20/84
date

Inspection Summary:

Inspection on June 11-15, 1984, (Report No. 50-293/84-18)

Areas Inspected: Routine unannounced inspection by one region based inspector of the programs for surveillance inspection and functional tests of snubbers; in-service inspection of snubbers, hangers and supports; review of records of pipe support modifications of torus external piping; and inspection of modified pipe supports. The inspection involved 33 hours of direct inspection time on-site and 2 hours of off-site inspection time.

Results: No violations were identified.

DETAILS

1.0 Persons Contacted

Boston Edison Company

- *M.N. Brosse, Chief Maintenance Engineer
- *J.F. Crowder, Compliance Engineer
- J. Dwyer, Quality Control Supervisor
- *F.N. Famulari, Quality Control Group Leader
- J. Godfrey, Quality Control Inspector
- G. Joy, Nuclear Maintenance Mechanic
- *E. Graham, Compliance Group Leader
- *P.E. Mastrangelo, Acting Station Manager
- C.J. Mathis, Nuclear Operations Manager
- *D. Mills, Senior Construction Engineer
- *R.J. Orkin, Quality Assurance Engineer
- J. Peters, Senior Construction Engineer
- *R.M. Schifone, Compliance Engineer
- *R. Sherry, Assistant Chief Maintenance Engineer
- M. Williams, ISI Engineer

Bechtel Power Corporation (Bechtel)

- L. Blakeslee, Project Field Quality Control Engineer
- D. Sandeter, Lead Welding Quality Control Engineer
- P. Savage, Quality Control Engineer

*Attendees at the exit meeting

2.0 Snubber Surveillance Inspection

The inspector discussed surveillance inspections of snubbers, as required by the technical specifications, with licensee representatives and reviewed the inspection and test procedures and records. Inspections had been performed by teams consisting of maintenance personnel and ISI inspectors qualified for visual inspection in accordance with ASME Section XI. The inspection records had been initiated and dated individually for each snubber by maintenance personnel and each record sheet had been signed by the ISI inspectors. Inspection records had been reviewed by the maintenance engineering staff and two snubbers were identified as failed pending performance of a functional test for operability.

No violations were identified.

2.1 Acceptance Criteria

BECO Procedure No. 3.M.4-28 for in-service inspection of snubbers lists the cold settings of the piston rod extensions and requires that the as-found extensions be measured during the inspection. These

measurements had been taken and recorded on the inspection records. Criteria were not available in the procedures to determine whether the as-found piston rod extensions were acceptable although the inspection records had been reviewed by the maintenance engineering staff who are familiar with the requirements.

This item is unresolved pending provision of acceptance criteria.
(293/84-18-01)

3.0 In Service Inspection (ISI)

ISI of snubbers, hangers and supports had been performed during January and February 1984, in accordance with ASME Section XI. Records of these inspections showed nonconforming conditions in several instances. Information concerning these nonconformances had not been furnished to the Nuclear Engineering Department (NED) for evaluation as required by Nuclear Operations Procedure No. NOP83 M1. The inspector questioned the delay in providing this information to NED and was informed that since performance of the inspections, there had been a change in ISI subcontractors. The licensee had been considering re-inspection of the hangers and restraints, and therefore was holding up any corrective action. During the exit meeting the licensee committed to performance of the re-inspection.

This item is unresolved pending re-inspection of hangers and supports and performance of any necessary corrective action (293/84-18-02).

4.0 Functional Tests of Snubbers

The inspector observed functional tests of three 30-Kip hydraulic snubbers and the disassembly and reassembly of a 20-kip hydraulic snubber. The tests and rework were performed by maintenance mechanics and inspected by a Quality Control Inspector. All personnel involved appeared to be knowledgeable and well qualified for their tasks.

No violations were identified.

5.0 Tour of Drywell

A tour of sections of the drywell at Elev. 9, 23 and 41 was made to observe the condition of the remaining snubbers and evaluate the potential for damage during the work in progress on recirculation piping. Most of the hydraulic snubbers have been removed but a few remained at Elev. 41 which were in the work area and potentially subject to damage during the work. The licensee planned to re-inspect these snubbers prior to start-up and agreed that instructions for this inspection would specifically stress observation of damage and would include stroking of

each snubber if this was feasible. All mechanical snubbers are adjacent to the drywell wall and do not appear in danger of damage by the work.

No violations were identified.

6.0 Torus External Piping Support Modifications

Modification of torus external piping supports outside of the drywell have been completed except for painting and insulation. The work within the drywell is held up to avoid interference with other work in progress. A walkdown of the lines was completed by Engineering with some rework required. Final Quality Control inspection has not been performed.

The inspector reviewed selected "Work Plan and Inspection Records" for some of the completed supports and inspected several supports within the torus room and the HPCI cubicle.

No violations were identified.

7.0 Quality Assurance and Quality Control Activities

The inspector discussed quality assurance and quality control activities with respect to snubber inspection and tests, the ISI program for snubbers hangers and supports, and the torus external pipe support modification program with BECO and Bechtel representatives, and examined selected quality assurance procedures. BECO quality control activities are the responsibility of the Operations Quality Control (OQC) Group. ISI activities are also the responsibility of this group. Quality assurance activities are the responsibility of a Quality Engineering Group and an Audit Group both of which are located off-site. The Audit Group has recently assigned two auditors to the site for surveillance (monitoring) of operations.

7.1 Snubber Surveillance and Test Program

Quality Control witnesses snubber tests and performs surveillance inspections of removal, rework and installation of snubbers. Surveillance inspections are performed by maintenance and ISI inspection personnel. The OQC group does not direct this work but rather assigns the ISI personnel to maintenance. The Audit group has not, to date, audited or monitored the snubber surveillance program. However, the inspector was informed that this program will be included in the activities to be monitored by the on-site auditors. A draft of this monitoring program and a matrix for performance of these activities was reviewed. The matrix includes all auditable activities of the technical specifications. The inspector also reviewed selected QC reports of snubber tests.

No violations were identified.

7.2 ISI Program

ISI has been performed under subcontract using the subcontractors procedures which are approved by BECO. This work is under the direction of ISI personnel in the OQC group. Selected ISI reports were reviewed and are discussed in Paragraph 3.0.

No violations were identified.

7.3 Pipe Support Modifications

These modifications are included as part of a contract by Bechtel for torus modifications. Inspection is performed by a Bechtel Field Quality Control group assigned to the site for inspection of all work under this contract; BECO audits the Bechtel program.

The inspector reviewed selected Bechtel inspection records and audit reports together with corrective actions for identified deficiencies. The inspector also reviewed BECO surveillance and audit reports and corrective actions.

No violations were identified.

8.0 Licensee Action on Previous Inspection Findings

(closed) Unresolved Item (293/80-26-10): Failure of HPCI exhaust line snubbers. This item was reviewed during inspection 50-293/83-26 but remained open pending review of additional information concerning the adequacy of supports in the North-South direction for seismic loading.

The licensee has since provided information stating that, as a result of re-analysis of the entire HPCI turbine exhaust line, two additional 20 Kip snubbers are being installed on this line. The location of these snubbers was provided.

The inspector had no further questions and this item is resolved.

9.0 Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations or deviations. Unresolved items are contained in paragraphs 2.1 and 3.0 of this report.

10.0 Exit Interview

The inspectors and Mr. J.R. Johnson, the NRC Senior Resident Inspector,

met with licensee representatives, denoted in paragraph 1, at the conclusion of the inspection on June 15, 1984. The inspector summarized the scope and findings of the inspection. At no time during this inspection was written material provided to the licensee by the inspector.