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

Region I

Report No. 50-293/82-05

Docket No. 50-293

License No. DPR-35 Priority ____ Category C

Licensee: Boston Edison Company

800 Boylston Street

Boston, Massachusetts 02199

Facility Name: Pilgrim Nuclear Power Station

Inspection At: Plymouth and Boston, Massachusetts

Inspection Conducted: February 1-5, 1982

Inspectors: G. Napuda, Reactor Inspector — 3/4/82 date signed

C. Petrone, Reactor Inspector — 3/4/82 date signed

Approved By: D. L. Caphton, Chief, Management Program Section, EIB — 3/4/82 date signed

Inspection Summary: Inspection on February 1-5, 1982 (Inspection Report 50-293/82-05)

Areas Inspected: Routine, unannounced inspection by two region based inspectors of licensee action on previous inspection findings; Facility Modifications, QA, inspection/surveillance, audits and audit implementation. The inspection involved 58 inspector hours onsite and 14 inspector hours at the corporate office.

Results: Violations - None in four areas and one in one area (failure to take corrective action on audit Deficiency Reports in the specified time period, paragraph 6.b.)

DETAILS

1. Persons Contacted

a. Boston Edison Company

*H. Brannan, QA Department Manager
G. Campbell, Senior Construction Engineer
*J. Coughlin, NED Site Engineer
R. Deloach, QA Supervisor
*E. Graham, Senior Plant Engineer
*W. Harrington, Senior Vice President
*R. Kennedy, Senior QA Engineer
*R. Machon, Plant Manager
G. Mileris, Senior Mechanical Engineer
F. Morano, QC Inspector
*P. O'Brien, Construction Management Group Leader
J. Peters, Senior Construction Engineer
W. Snow, Engineer
K. St. George, QC Inspector
K. Walsh, QC Inspector

b. Consultants/Contractors

D. Brady, QA Supervisor, C.N. Flagg
F. Rothen, Craft Foreman, Fishback and Moore
M. Schnieder, Coating Specialist, Consultant

c. NRC

H. Eichenholz, Resident Inspector
*J. Johnson, Senior Resident Inspector

*denotes those present at the exit interview conducted February 5, 1982.

The inspectors also interviewed other licensee and contractor employees including administrative, engineering, QA/QC, operations, technical and trades personnel.

2. Facility Modifications

a. References

-- Procedure 1.3.13, Plant Design Changes, Rev. 14

b. Plant Design Change Request (PDCR) Packages

The inspector reviewed selected portions of the PDCR packages and associated documents for the modifications discussed in paragraphs 3 and 4 to verify the following:

-- 10 CFR 50.59 reviews were performed and documented.

-- The packages contained necessary instructions/records with respect to the work.

-- Acceptance inspection/testing including values and standards were included.

-- Changes to approved documents were accomplished in accordance with requirements.

-- Inspection/tests were acceptable (as applicable).

-- Drawings/procedures were being revised/established as necessary.

-- Codes/specifications were included.

-- Documentation was available onsite to support equipment/material conformance to procurement requirements.

-- Equipment/material was inspected and accepted upon delivery onsite.

-- Approved suppliers/vendors were utilized.

-- Deficiencies/deviations were documented and appropriate action initiated/completed.

No violations were identified.

3. Containment Atmospheric Monitoring and Sampling System

a. References

-- Quality Control Procedures CSP-1 through 6 and SP-342-1 through 9.

-- Isolation Valves Preoperational Test Procedures (eight) for Trains A-120 and 125 VAC; Trains B-120 and 125 VAC titled Containment Atmospheric Monitoring System, and Post Accident Sampling System.

-- Pilgrim Nuclear Power Station Procedure 3.M.3-15, Installation of Cable through Secondary Containment.

-- Preliminary Report for Customer Review-Post LOCA Sampling Design Objectives and Design Concept for Pilgrim Site, December 20, 1979.

-- PDCR Package 80-40, Containment Atmospheric Monitoring System H/O and Sample System, Rev. 13.

b. Observations

The inspector observed the installation of Hangers SI 534 and 616, in the Control Room, and verified that they conformed to sketches 80-40-SKW-50 and 60 respectively. The partially installed H_2/O_2 C174 and C175 Monitoring Panels were examined and the inspector verified that wire connectors were correctly installed; no more than two connectors were attached to each terminal; the cable had been receipt inspected and accepted; and, the lubricant had been receipt inspected, accepted and was compatable with the cable type. The inspector noted that the Percent H_2 and Percent O_2 meters on Panel C174 had been damaged after installation. The licensee representative was aware of the condition and stated they would be replaced prior to final QC acceptance.

The inspector toured and observed ongoing activities in the H_2/O_2 Turbine Building Mezzanine Sample Station, Cable Spreading Room, Lower Switchgear Room, Containment Building Levels 23, 51 and 74, and the Fishback and Moore Storage Area (the sub-contractor installing the modification).

No violations were identified.

4. Torus Modifications

a. References

-- Boiling Water Reactors Owners Group Torus Modification Report.

-- PDCR Package 81-04A, Saddle Supports.

-- Reactor Building Torus Saddle Tiedown Mat Cutting Rebar Study.

-- Drawing SK-C-1360(Q), Reactor Building Mat Rebar.

-- Drawings TES A-5150, 2" Concrete Anchor Bolt Assembly.

-- Drawing TES D-5622, Alternate Saddle Tiedown.

-- Drawing TES E-5110, Sheets 1 and 2, Saddle Support Assembly.

-- PDCR Package 81-04H, Internal Piping Modifications-Downcomer Cutoff.

-- WP-103 B, Electrode Control, Rev. 1.

-- QCP-3, Surface Preparation and Carbozinc II Application Above Water Level-Construction Personnel, Rev. 0.

-- QIP-3, Surface Preparation and Carbozinc II Application Above Water Level-Inspection Personnel, Rev. 1.

-- Drawing G5067, Consumable Insert-12" x 3/8" Groove-Double Bevel One Side.

-- Drawing G5448, 24" HPCI Exhaust-37 1/2" x 1/2" Groove-Double Bevel.

-- PDCR Package 81-04T, Torus Water Level Monitoring-Mechanical Installation.

-- WP-1-34, SMAW Welding Procedure, Issue IV.

-- WP-8-2, GTAW Weld Procedure, Issue III.

-- CNF 2603, Installation of Torus Water Level Transmitters, Issue I-Rev. a.

-- CNS 72381, Section XI Electrode Issuance, Issue I.

-- CNF-B, NDE Procedure for Liquid Penetrant Testing, Issue V.

b. Observations

The inspector observed ongoing saddle fit-up; Reactor Building Mat Core Drilling/Rebar Cutting; Lubricated Plate installation; partially installed Saddle Tiedowns; and, general work area housekeeping. All the foregoing was in areas external to the Torus but within the Reactor Building. The inspector noted that no welding was in progress and that the Weld Issue Crib was a secure structure and locked.

The inspector noted that approximately twelve Non Conformance Reports addressing rebar cutting/core drilling had not yet been resolved. The inspector discussed these with the licensee cognizant engineer and the overspraying of Torus internal surfaces with the licensee painting consultant. The inspector stated that he had no further questions.

The inspector reviewed several Sparger Welds (designated FWI) radiographs for base metal condition, presence of cracking, film placement, geometric unsharpness, and visibility of penetrameter essential hole. The inspector stated that the film density in the areas of interest; and, the penetrameter essential hole met

only the minimum standards for acceptability. The licensee Level II (RT), who had previously accepted the film, acknowledged the statement. The inspector then reviewed radiographs of MS Vacuum Breaker Valves Welds AFW-1 and AFW-2 and found them of better quality.

The inspector examined the installation of the transmitters for the monitoring of Torus water level including the attached lines welds. These were in the area external to the Torus but within the Reactor Building.

No violations were identified.

5. Inspection/Surveillances

The inspectors verfied that the licensee and sub-contractors were providing an independent QA/QC overview of the activities discussed in paragraphs 3 and 4. Objective evidence included presence of sub-contractor inspection personnel at work locations; assignment of a licensee site QC person to conduct surveillance of activities for each of the modifications; QC signoffs accomplished at the time of the activity; and, licensee QC Reports of surveillances (written daily).

6. Audits

a. References

-- Boston Edison Quality Assurance Manual (BEQAM), Volume II, Operation of Nuclear Power Plants.

-- ANSI N45.2.12-1977, QA Program Auditing Requirements for Nuclear Power Plants.

b. Implementation

The inspectors verified that the licensee had conducted all the audits that had been scheduled for 1981 (reference Management Appraisal Inspection Report 50-293/81-20(PAS) and Office of Inspection and Enforcement Inspection Report 50-293/81-36, paragraphs 3 and 5 respectively). Objective evidence that the audits in question were performed was provided by Audit Reports 81-16, 21-23, 25, 28, 30, and 32-35.

The inspectors reviewed the following audits in depth to verify that they were conducted in accordance with written checklists/ procedures, by qualified auditors whose technical expertise was evident, with findings documented and reviewed, with followup actions initiated/completed/closed out, and in accordance with established schedules:

-- 81-27, NUREG-0737, Clarification of TMI Action Plan Requirements,

-- 81-28. Maintenance, and

-- 81-29, Operations PNPS.

The inspectors also reviewed the Deficiency Report Log and selected Deficiency Reports (DRs). Adverse audit findings are documented on DRs (which are a means of obtaining corrective action) and forwarded to the auditee.

A violation and a safety concern are discussed below.

(1) 10 CFR 50, Appendix B, Criterion II, requires that a quality assurance program be established and that "This Program shall be documented by written policies, procedures...and shall be carried out...in accordance with those policies, procedures...." The Foreword to the Boston Edison Quality Assurance Manual, Volume II, Operation of Nuclear Power Plants, signed by the Vice President-Nuclear, states in part, "The Boston Edison Quality Assurance Program for operation of nuclear power plants is defined in ` `ume II of the Boston Edison Quality Assurance Manual. It the governing document for quality related activities of the Boston Edison Company relating thereto." The BEQAM, Section 18, paragraph 18.5.1, states "Appropriate action to resolve deficiencies identified during Internal audits conducted by BECo QA is taken by the cognizant BECo manager before the scheduled resolution date."

Contrary to the above, approximately 31 of 65 responses to DRs, due between October 15, 1981 and January 30, 1982, had not yet been responded to or responses had surpassed the due date. Examples are DRs 671, 778, 795, 800 and 801. This is a Level V Violation (50-293/82-05-01).

(2) During the review of Audit Report 81-27 the inspector noted that at least ten adverse findings (DRs), on face value, appeared to be safety concerns with respect to plant operations. The inspector also noted that approximately 19 DR responses, due between May 22, 1980 and September 25, 1981, were still unresolved. These were in addition to the ones discussed in (1) above. The inspector's concern that the plant should not start up prior to ensee review of all open/unresolved DRs was communicated to NR management. One of the requirements of Confirmatory Action Letter 82-05, issued by NRC Region I, was that, prior to start up, the licensee review all open DRs to assure that no safety concern existed. Should any be identified, acceptable corrective action must be completed prior to plant start up from the current outage. Verification

that this requirement was accomplished will be followed up within the context of the NRC Inspection Program.

7. Management Meetings

Licensee management was informed of the scope and purpose of the inspection at entrance interviews conducted at the Pilgrim Nuclear Station on February 1, 1982, and the Boston Edison Corporate office on February 4, 1982. The findings of the inspection were discussed with licensee representatives periodically during the inspection.

An exit interview was conducted at the Pilgrim Nuclear Station on February 5, 1982, at which time the findings of the inspection were presented to licensee management (see paragraph 1 for attendees).