

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-293/84-30

Docket No. 50-293

License No. DPR-35 Priority -- Category C

Licensee: Boston Edison Company M/C Nuclear

800 Boylston Street

Boston, Massachusetts 02199

Facility Name: Pilgrim Nuclear Power Station, Unit 1

Inspection At: Plymouth, Massachusetts

Inspection Conducted: September 10-21, 1984

Inspectors: Robert A. McBrearty
R. A. McBrearty, Reactor Engineer

October 11, 1984
date

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

October 11, 1984
date

Inspection Summary:

Inspection on September 10-21, 1984 (Report No. 50-293/84-30)

Areas Inspected: Routine unannounced inspection of the ISI Program, Preservice inspection activities associated with the recirculation system piping replacement, and licensee action on previous inspection findings. The inspection involved 28 inspector hours onsite and 10 inspector hours in the office by one region based inspector.

Results: No violations were identified.

DETAILS

1. Persons Contacted

Boston Edison Company (BECO)

- *J. T. Crowder, Senior Compliance Engineer
- *F. N. Famulari, Quality Control Group Leader
- *E. T. Graham, Compliance Management Group Leader
- *C. J. Mathis, Nuclear Operations Manager
- B. Perkins, NDE Level III
- M. Williams, ISI Engineer

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- *J. R. Johnson, Senior Resident Inspector

*Denote attendees at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (293/84-21-01) - Lack of identification on newly installed welds. The inspector observed permanent marking which the licensee had applied to welds in the recently installed recirculation system piping. The marking included a unique weld identification number and a reference mark to locate the weld center line. Based on the inspector's observations this item is considered closed.

3. Inservice Inspection (ISI) Program

The inspector reviewed documents associated with the BECO ISI Program for the second ten year inspection interval to ascertain compliance with applicable ASME Code requirements, licensee commitments and regulatory requirements. The following were included in the inspector's review:

- Quality Control Instruction (QCI) No. 20.10, Revision 0, "Calibration Standards Control"
- Quality Control Instruction No. 20.20, Revision 0, "Inservice Inspection Review of PNPS Plant Design Changes (PDCA) and Field Revision Notices (FRNs)"
- Quality Control Instruction No. 20.30, Revision 0, "ISI Drawing and Documentation Control"
- Quality Control Instruction No. 20.80, Revision 0, "Preparation, Revision, Issuance and Control of the Inservice Inspection Program"

The program governs the second inspection interval which commenced in December, 1982, and is intended to meet the ASME Code, Section XI, 1980 Edition through Winter 1980 Addenda. The extent of examinations for Code Class 1 piping will be determined by the requirements of Table IWB-2500 and Table IWB-2600 Category B-J of Section XI, 1974 Edition through Summer 1975 Addenda. The extent of examinations for Code Class 2 piping welds will be determined by the requirements of paragraph IWC-1220, Table IWC-2520 Category C-F and C-G, and paragraph IWC-2411 of the 1974 Edition of Section XI through Summer 1975 Addenda. Use of the 1974 Edition of Section XI is permitted by 10 CFR 50.55 a(b)(2).

The reviewed documents provide assurance that various aspects of the program are adequately controlled, that new designs and/or modifications are incorporated into the program, and preservice inspection is done when required.

No violations were identified.

4. Quality Assurance (Quality Assurance) Audits

The inspector reviewed Audit Report No. 84-6 to ascertain that ISI activities are audited by the Quality Assurance group. The audit was conducted during the period from February 24 through March 6, 1984, and included the ISI Program and activities of two licensee vendors.

The audit provided a comprehensive overview of ISI activities of the licensee's vendors including comparison of vendor examination results to preservice inspection data.

The audit found that the EBASCO Quality Assurance Program was not audited prior to the commencement of EBASCO activities at the site which resulted in the issuance of a stop work order on February 29, 1984. A subsequent licensee audit resulted in the program being considered as unacceptable, and EBASCO personnel left the site.

The inspector found that selected EBASCO examinations were redone by another vendor, and that audit findings were properly closed out.

No violations were identified.

5. Review of Implementing Procedures

The licensee has reviewed and approved the vendor's implementing nondestructive examination (NDE) procedures, and has incorporated them into the BECO system.

The inspector reviewed the following procedures for technical adequacy and to ascertain compliance with applicable ASME Code and regulatory requirements:

- Temporary Procedure No. TP83-88-1, Revision 1, "Ultrasonic Examination of Austenitic Piping and Branch Connection Welds."
- Temporary Procedure No. TP83-86-1, "Ultrasonic Examination of Piping Systems by Longitudinal Wave".
- Temporary Procedure No. TP84-105-1, Revision 1, "Ultrasonic Examination of Austenitic Piping and Branch Connection Welds".
- Procedure No. 22.A.21, Revision 1 - Winter 1980, "Ultrasonic Examination General Requirements."

The inspector's review indicated that the procedures were technically adequate for their intended use and that applicable code and regulatory requirements were met.

No violations were identified.

6. Observations of Preservice Inspection (PSI) in Progress

The inspector witnessed a portion of the ultrasonic examination of 18 inch diameter weld 10R-IA-9 and weld 10R-IA-11 to ascertain that Code and regulatory requirements were met, and that the examinations were done by qualified personnel in accordance with approved procedures. The examinations were done to meet the Section XI requirement for preservice inspection of new welds.

The inspector found that the examinations were performed by qualified Magnaflux personnel in accordance with approved procedures, and that the PSI requirements were met.

No violations were identified.

7. Preservice Inspection Data

The inspector reviewed PSI data associated with the following welds:

- 2R-NIB-7, 18 inch diameter pipe to elbow weld
- 2R-NIB-7ALD, 18 inch diameter elbow seam weld
- 2R-NIB-7BLD, 18 inch diameter elbow seam weld
- 10R-IB-5, 18 inch diameter valve to elbow weld
- 10R-IB-5ALD, 18 inch diameter longitudinal seam weld
- 10R-IB-5BLD, 18 inch diameter longitudinal seam weld
- 10R-IB-1, 18 inch diameter pipe to tee weld

- 10R-IB-1-LU, 18 inch diameter longitudinal seam weld
- 2R-NIA-5, 28 inch diameter pipe to elbow weld
- 2R-NIA-5-LU, 28 inch diameter pipe seam weld
- 2R-NIA-5ALD, 28 inch diameter elbow seam weld

The review was done to ascertain completeness of the data, and that recordable indications were properly evaluated and dispositioned.

The data associated with weld 10R-IB-5ALD and -5BLD were accepted by the licensee and represented completed examinations. A recordable indication was evaluated and deemed acceptable by the licensee. Data and calibration sheets were cross referenced and the inspector found that applicable requirements were met.

The remaining data were in the review process and were not yet presented to the licensee for his acceptance. The inspector found that associated data and calibration sheets were not identified. The inspector discussed this item with cognizant licensee representatives who stated that the matter would be corrected before the inspector left the site. Evidence was provided to the inspector at the exit meeting which verified that acceptable corrective action was taken. The inspector had no further questions regarding this matter.

The inspector examined calibration blocks B-PIL-64 and B-PIL-67 which were used to establish system sensitivity for the examination of the aforementioned welds. The blocks contain square notches which are five percent of thickness in depth. The resulting examination sensitivity is greater than would result from the Code required 10 percent notches. The blocks comply with other applicable Code requirements.

No violations were identified.

8. NDE Personnel Qualification/Certification Records

The inspector reviewed the records of the Magnaflux Quality Services (MQS) personnel who participated in the examinations which were witnessed by the inspector, and additionally, of other MQS personnel at the site. This review was done with regard to compliance with applicable requirements of SNT-TC-1A and with regulatory requirements.

The records of a Level I trainee in the ultrasonic method were incomplete in that a current visual acuity record was not available at the site for the period from April 18, 1984 to June 12, 1984. The individual was additionally certified as Level II in the liquid penetrant and magnetic particle method, but he had performed no penetrant or magnetic examinations during the interim in which his records were incomplete. He had assisted in two ultrasonic examinations which were performed by a Level II individual.

At the exit meeting the licensee produced documentation obtained from the MQS home office which verified that the individual's visual acuity was examined on March 23, 1984, and that the applicable near vision and color perception requirements were met. The inspector stated that this documentation was acceptable and that it should have been available on site before the individual was permitted to perform or assist at any examinations.

All other documentation was found to be complete and current.

9. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on September 21, 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.