

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-293/84-13

Docket No. 50-293

License No. DPR-35 Priority -- Category C

Licensee: Boston Edison Company
800 Boylston Street
Boston, MA 02199

Facility Name: Pilgrim Nuclear Power Station

Inspection At: Plymouth, Massachusetts

Inspection Conducted: April 24-27, 1984

Inspectors: P. Clemons
P. Clemons, Radiation Specialist

5/30/84
date

Approved by: W. Pasciak
W. Pasciak, Chief, Effluents Radiation
Protection Section, Radiation Protection
Branch

5/18/84
date

Inspection Summary: Inspection on April 24-27, 1984 (Report No. 50-293/84-13)

Areas Inspected: Routine, unannounced safety inspection by one region-based inspector of transportation activities including: purpose, outstanding items, shipments of radioactive material, audits, training, certificate of compliance, IE Bulletin 79-19, procedures, quality assurance program, and package selection. The inspection involved 38 inspector hours on-site by one region-based inspector.

Results: Three violations and one deviation were identified (procedures were not reviewed and approved, paragraph 4; failure to follow certificate of compliance conditions, paragraph 5; failure to identify transport packages as a part of the quality assurance program, paragraph 6; and failure to achieve full compliance with a commitment as stated, paragraph 7).

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DETAILS

1. Persons Contacted

1.1 Licensee Personnel

C. Mathis, Nuclear Operations Manager
E. Ziemianski, Nuclear Operations Support Manager
F. Schellenger, Quality Engineering Group Leader
J. Mattia, Quality Assurance Group Leader
R. Cook, Technical Training Group Leader
D. Sukanek, Station Services Group Leader
J. Crowder, Senior Compliance Engineer
L. Dooley, Nuclear Training Specialist
M. Bonnett, Waste Management Coordinator

1.2 NRC Personnel

P. Eapen, Lead Reactor Engineer
J. Prell, Reactor Engineer
R. Borchardt, Reactor Inspector

Other licensee personnel were contacted and interviewed during this inspection.

2. Purpose

The purpose of this routine inspection was to review the licensee's transportation activities with respect to the following elements:

- Review of shipments of radioactive material;
- Review of outstanding items;
- Review of management control;
- Review of audits;
- Review of training
- Review of certificates of compliance;
- Review of procedures;
- Review of package selection; and
- Review of IE Bulletin 79-19 commitments.

3. Status of Previously Identified Outstanding Items

(Closed) Violation (293/81-26-01) Licensed material transferred in a prohibited form. The inspector verified that Procedure No. 6.9-176, "Radioactive Waste Press - (Drum Compactor)" had been revised. The revised procedure should prevent recurrence of the free-standing water problem.

(Closed) Deviation (293/82-06-01) Failure to develop a radwaste training program. The inspector verified that a radwaste training program had been developed and implemented.

4. Procedures

The adequacy and effectiveness of the licensee's procedures were reviewed against the criteria contained in Technical Specification 6.8, "Procedures". The licensee performance relative to these criteria was determined by interviewing the Station Services Group Leader, the Waste Management Coordinator and by reviewing procedures.

Within the scope of this review, the following violation was identified:

Technical Specification 6.8 states "Written procedures and administrative policies shall be established, implemented and maintained that meet or exceed the requirements and recommendations of Section 5.1 and 5.3 of ANSI N18.7 - 1972 and Appendix "A" of USNRC Regulatory Guide 1.33"

Technical Specification 6.8.B states "Each procedure ... and changes thereto, shall be reviewed by the ORC and approved by the ORC Chairman prior to implementation ..."

It was determined that the Waste Management Group has used at least three contractor procedures during 1984 and the procedures have not been reviewed by the Operating Review Committee (ORC), and neither have the procedures been approved by the ORC Chairman.

The procedures used that were not reviewed were as follows:

- (a) Procedure No. FO-AD-002, "Operating Guidelines For Use of Polyethylene High Integrity Containers";
- (b) Procedure No. FO-AD-004, "Operating Guidelines For Use of Fiberglass Reinforced Plastic High Integrity Containers"; and
- (c) Procedure No. FO-OP-003, "Dewatering Procedure For CNSI Conical-Bottom High Integrity Containers (Containing Bead - Type Ion-Exchange Resin) 1% Free Standing Water."

The failure to have the procedures reviewed and approved as required by the technical specifications represents a violation (84-13-01).

5. Certificate of Compliance

Several Certificate of Compliances (C of C) were reviewed against the criteria contained in 10 CFR 71.12, "General license: NRC approved

packages." The licensee's performance relative to these criteria was determined by interviewing the Waste Management Coordinator, and by reviewing documents.

Within the scope of this review, the following violations were identified.

10 CFR 71.12(c) requires that a person using a package to transport licensed material must have a copy of the Certificate of Compliance, and the person must also comply with the conditions of the Certificate.

1. Certificate of Compliance No. 6601, Revision 13, Condition 5(b)(2) requires that the decay heat load not exceed 40 thermal watts.
2. Condition 10 of Certificate of Compliance 6601, Revision 76.13 states, "For all packages containing residual water or other substances which could radiolytically generate combustible gases, a determination must be made by tests and measurements of a representative package such that the following criteria are met over a period of time that is twice the expected shipment time:
 - (i) The hydrogen generated must be limited to a molar quantity that would be no more than 5% by volume (or equivalent limits for other inflammable gases) of the secondary container gas void if present at STP (i.e., no more than 0.063 g. moles/ft³ at 14.7 psia and 70°F) or
 - (ii) The secondary container and cask cavity must be inerted with a diluent to assure that oxygen shall be limited to 5% by volume in those portions of the package which could have hydrogen greater than 5%.

For packages to be delivered to a carrier for transport, the secondary container must be prepared for shipment in same manner in which determination for gas generation is made..."

On February 10, 1984, the licensee shipped 118 curies of licensed material in a package Model No. CNSI 8-120, Certificate of Compliance (C of C) 6601, without determining the decay heat load as required by the certificate. Furthermore, it is apparent that the licensee has never evaluated the decay heat load for this package. According to the shipping records, the package has been used routinely in recent years.

It was also learned that the licensee did not determine by tests or measurements that the criteria described in Condition 10 of C of C 6601 had been met for the shipment made on February 10, 1984.

The failure to comply with the conditions of C of C 6601 represents a violation of 10 CFR 71.12 (84-13-02).

6. Quality Assurance Program

The implementation of the licensee's quality assurance program for transport packages was reviewed against the criteria contained in 10 CFR 71, "Subpart H - Quality Assurance." The licensee's performance relative to these criteria was determined from discussion with a Senior Quality Assurance Group Leader, the Quality Engineering Group Leader, and by reviewing the Quality Assurance Manual.

Within the scope of this review, the following violation was identified:

10 CFR 71.101(b) requires each licensee to establish a quality assurance program for packages. 10 CFR 71.101(f) states that a Commission approved quality assurance program that satisfies the applicable criteria of Appendix B of Part 50 of this chapter, and which is established, maintained, and executed with regard to transport packages will be accepted as satisfying the requirements of paragraph (b) of this section.

Criteria II, Appendix B of Part 50 of the licensee's previously approved program requires that the licensee identify the structures, systems, and components to be covered by the quality assurance program.

It was determined that the licensee has identified the structures, systems, and components to be covered by the quality assurance program in a Q List, but transport packages are not identified in the list.

Section 2.4.4 of the Boston Edison Quality Assurance Manual (BEQAM) states "In accordance with the requirements of 10 CFR 71.51, the BEQAM is also applied to Boston Edison activities, including procurement activities, related to delivery of licensed material to a carrier for transport under the license provisions of 10 CFR 71.12. Applicable shipping containers or transport packages are identified on the 10 CFR 71.12 Licensed Shipping Container List."

The inspector determined that licensee has not established a 10 CFR 71.12 Licensed Shipping Container List.

The failure to identify transport packages as a component of the licensee's quality assurance program as of April 27, 1984 represents a violation of 10 CFR 71.101(b) [84-13-03].

7. IE Bulletin 79-19 - Training

Personnel training in transportation activities was reviewed against criteria contained in IE Bulletin 79-19, "Packaging of Low-Level Radioactive Waste For Transport and Burial."

The licensee's performance relative to these criteria was determined by interviewing the Waste Management Coordinator, the Station Services Group Leader, the Technical Training Group Leader, and by reviewing documents and reviewing previous correspondence.

During Inspection 50-293/82-06 in February 1982, it was identified that you had not developed and implemented training and periodic retraining programs for personnel involved in the transfer, packaging and transport of radioactive material as committed to by you in your letter dated October 2, 1979 and as noted in Inspection Report No. 50-293/79-19.

In your letter to the Commission dated July 19, 1982 (BECO Ltr. #82-196) in response to Inspection Report 50-293/82-06 you stated, "We are in the process of developing the associated course content, lesson plans and a training schedule. This process is scheduled for completion by January 1, 1983, and full compliance shall be achieved at that date.

To preclude recurrence of failing to implement commitments, we have developed a commitment tracking system, which is now place."

It was determined during this inspection that you were not in full compliance with your commitments to IE Bulletin 79-19 by January 1, 1983. Although the training program apparently was developed by that date, actual training did not begin until the time period of April-June 1983. In addition, it was also determined that several of your employees who were involved in the transfer, packaging and transport of radioactive material, have not received the training as of April 27, 1984. Therefore you have not fulfilled your commitment as committed by January 1, 1983.

It was also determined that your "commitment tracking system" was ineffective, because your system did not detect the fact that you were not in full compliance by January 1, 1983.

The failure to fulfill your commitment in the time frame as stated in your letter dated July 19, 1982 represents a deviation from a commitment (84-13-04).

8. Audits

The implementation of your quality assurance audit program for transport packages was reviewed against the criteria contained in Criterion XVII, "Audits," of Appendix B, 10 CFR 50.

The licensee's performance relative to these criteria was determined from discussion with a Quality Assurance Engineer, the Quality Assurance Group Leader, and by reviewing documents.

Within the scope of this review, no violations were identified.

9. Selection of Packages

The licensee's program for selection of packages was reviewed against the requirements of 10 CFR Parts 71.12, 71.13 and 71.14 and the DOT requirements of 49 CFR Part 173.

Copies of the Certificate of Compliance were available for all Type A and Type B casks in use.

All shipments of radioactive material were made as full load shipments in a transport vehicle consigned as exclusive (sole) use only.

Within the scope of this review no violations were identified.

10. Exit Interview

The inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on April 27, 1984. The inspector summarized the scope of the inspection and the findings.

A copy of the outstanding items report was provided to a licensee representative by the inspector (see attachment).

04/17/84

 REGION 1
 OUTSTANDING ITEMS REPORT

Mr. P. Clemons

PAGE 1

ITEN-NUM	TYPE	MODULE	AREA	RESP	ORIGINATOR	MODIFIER/CLOSER	DATE OPENED/MOD OR CLOSED	ACTION DUE DATE	UPDATE/CLOSEOUT REPORT NUMBER
DESCRIPTIVE TITLE									
I									
05000293 80-05-16	IFI	83750	RDP	R/R	NIMITZ	JOHNSON J	83-03-02	09/01/81 50	85-03-0 50
REVIEW SYSTEM TO ROTATE SAMPLE TRAY LOCATION TO ENSURE CONSERVATIVISM									
81-5a-01	IFI	92705	RDP	R/R	JOHNSON		92-19-81	03/19/81	- -
REVIEW PROGRAM TO REDUCE ABNORMALLY HIGH RADIATION LEVELS IN PLANT. (FOR EX. CRD INSTRUMENT VOL. LIMIT SWITCHES 80 R/HR) IS EQUIPMENT SURVEILLANCE AFFECTED?									
81-04-02	NC4	92705	RDP	R/P	NIMITZ		06-24-81	04/01/81	- -
FAILURE TO HAVE PROCEDURES WHICH MEET ANSI N1807 AS PER T.S. 6.8 FOR RESIN ADDITION									
81-21-10	IFI	92701	RDP	R/R	NIMITZ		04-05-82	03/01/82	- -
REVIEW NUREG-0578 PROCEDURES									
81-21-11	IFI	92701	RDP	R/R	NIMITZ		04-02-82	01/30/82	- -
REVIEW WHOLEBODY COUNTER CALIBRATION PROCEDURE									
81-26-01	NC3	86740	RDP	I	CLEMONS		02-04-82	/ /	- -
LICENSED MATERIAL TRANSFERRED IN A PROHIBITED FORM									
81-35-05	IFI	71708	RDP	R/R	JOHNSON		12-08-81	06/08/82	- -
REVIEW ACCEPTABILITY OF LICENSEE'S PROGRAM FOR CALIBRATION FREQUENCY OF RADIATION SURVEY INSTRUMENTS									
82-06-01	DEV	86740	RDP	R/R	CLEMONS		- -	03/30/82	- -
FAILURE TO DEVELOP RADWASTE TRAINING PROGRAM									
82-20-02	IFI	92705	RDP	R/R	NIMITZ	MCBRIDE	11-22-82	10/30/82	82-27-0
COMPLETE REVIEW OF LICENSEE IMPLEMENTATION OF CAL-82-19 NRC UNDERSTANDINGS									
82-27-05	IFI	83741	RDP	R/R	MCBRIDE		- -	03/30/82	- -
CHECK IMPLEMENTATION OF INTERNAL DOSIMETRY PROCEDURE CHANGE COMMITMENTS									

1/22/82 Procedure changed? BCL # 82-59
 1/22/82

6/21/82 See letter dated 7/19/82; BCL # 82-96

ITEM-NUM	TYPE	MODULE	AREA	RESP	ORIGINATOR	MODIFIER/CLOSER	DATE OPENED/MOD OR CLOSED	ACTION DUE DATE	UPDATE/CLOSEOUT REPORT NUMBER
----- DESCRIPTIVE TITLE -----									
I									
05000293 82-27-04	IFI	83741	RDP	R/	MCBRIDE		- -	03/30/82	- -
CHECK FOLLOWUP ON OCTOBER 14, 1982 LICENSEE AUDIT OF CONCENTRATOR ROOM DECONTAMINATION INCIDENT *****									
83-02-01	IFI	25544	RDP	R/R	WHITE		- -	11/01/83	- -
REVIEW PASS/H2-O2 SYSTEM WHEN INSTALLED *****									
83-17-03	IFI	62712	RDP	R/R	WHITE		08-15-83	02/22/84	- -
REVIEW ACCIDENT ASSESSMENT: 1) PAM PANEL EQT. 2) NOMAGRAMS FOR HI RAD VS CORE DAMAGE AND 3) CAPABILITY TO TAKE NOBLE GAS SAMPLE OF CONTAINMENT ATMOSPHERE *****									
83-20-03	IFI	83741	RDP	R/Z	WHITE		- -	01/01/84	- -
REVIEW GET TRAINING PROGRAM ON FULL IMPLEMENTATION *****									