



**BOSTON EDISON**

Pilgrim Nuclear Power Station  
Rocky Hill Road  
Plymouth, Massachusetts 02360

December 7, 1990  
BECo Ltr. 90-153

George W. Davis  
Senior Vice President - Nuclear

Mr. Thomas T. Martin  
Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

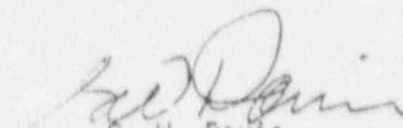
Docket No. 50-293  
License No. DPR-35

Subject: REPLY TO NOTICE OF VIOLATION (REFERENCE NRC REGION I INSPECTION REPORT NO. 50-293/90-20)

Dear Mr. Martin:

Enclosed is Boston Edison Company's reply to the Notice of Violation contained in the subject inspection report. Also included is a description of the administrative measures that ensure quality standards are maintained during leak seal repairs as requested by the November 7, 1990 inspection report cover letter.

Please do not hesitate to contact me if there are any questions regarding the enclosed reply.

  
G. W. Davis

TFM/bal

Enclosure

cc: Sr. NRC Resident Inspector - Pilgrim Station

Standard BECo Distribution

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ENCLOSURE 1

REPLY TO NOTICE OF VIOLATION

Boston Edison Company  
Pilgrim Nuclear Power Station

Docket No. 50-293  
License No. DPR-35

As a result of the inspection conducted at Pilgrim Nuclear Power Station from August 16 through October 8, 1990 and in accordance with the NRC Enforcement Policy (10 CFR 2, Appendix C), the following Violation was identified:

NOTICE OF VIOLATION

10 CFR 50, Appendix B, Criterion III requires that, design changes, including field changes, be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design.

The Boston Edison Quality Assurance Manual, Volume II, Section 3 requires that subsequent changes to an approved plant design change package are made using Field Revision Notices (FRNs). Nuclear Engineering Department Procedure (NED), 3.03, "Field Revision Notices," states that: The cognizant discipline division manager (DM) or an engineer assigned by the DM review FRNs and make determinations to whether they are major or minor and safety related or non-safety related. A major FRN is defined as one that: (1) changes the original conceptual design or the intent of the implementation document, or (2) affects the (bases) on which the approved safety evaluation was made. NED 3.03 also requires that the original design change safety evaluation be revised (to reflect the affect of major FRNs) and approved prior to implementation.

Contrary to the above, on September 11 and September 23, the licensee issued two minor FRNs which affected the safety evaluation bases of a plant design change for the temporary leak seal repair of a shutdown cooling system valve. As a result, the appropriate safety evaluation (revision) and required approval did not occur.

This is a Severity Level IV Violation (Supplement 1).

RESPONSE TO VIOLATION

REASON FOR THE VIOLATION

The two Field Revision Notices (FRNs) issued on September 11 and September 23, 1990 were inadvertently issued as minor due to personnel error. The same cognizant engineer that prepared both FRNs, the independent reviewers and the cognizant Division Manager (DM) did not properly review the basis for the safety evaluation of the Plant Design change. This resulted in the failure to identify that these FRNs affected the bases supporting the original safety evaluation.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

Failure and Malfunction Report (F&MR) 90-340 was issued on September 23, 1990 upon recognition that major FRNs were required for these changes. A major FRN (89-49-19) was issued on September 29, 1990, which documented the "as-built" condition of the leak seal repair done on valve MO-1001-50. The safety evaluation (#2504) for FRN-89-49-19 concluded an unreviewed safety question does not exist.

CORRECTIVE ACTION TAKEN TO PREVENT RECURRENCE

The personnel involved were counseled as to the importance of conducting a thorough review of the original safety evaluation bases during preparation of minor FRNs.

Technical Quality Memo (TQM) #131 was issued by NED management that described the independent verification policy for safety related and fire protection related design documents. Training was completed on November 30, 1990 for NED personnel on the independent verification process. These measures will help ensure the purpose and process for independent reviews are fully understood by the appropriate NED personnel.

A memorandum (NED 90-529) was issued to NED personnel specifying that design output documents that designate or change component leak seal repairs receive NED management approval by the Nuclear Engineering Manager, the Deputy Engineering Manager, or the Design Section Manager. This is a temporary measure enacted to ensure proper reviews are conducted for leak seal repairs. This measure will remain in place until NED Management is satisfied all responsible personnel fully understand the requirements.

DATE OF FULL COMPLIANCE

Full compliance was achieved on September 29, 1990, with the approval of FRN 89-49-19 and the associated safety evaluation.

## ENCLOSURE 2

### TEMPORARY LEAK SEAL REPAIR PROGRAM DESCRIPTION

Temporary leak seal repairs are performed in accordance with Station Procedure 3.M.4-42, "Valve, Pipe Flange and Heat Exchanger Gasket Leak Sealing". This procedure provides instructions and administrative measures for personnel performing temporary leak seal repair. The administrative measures include:

- Check for Technical Specification compliance before sealing repair is performed if equipment is to be removed from service.
- Obtain isolations and protective tagging as necessary.
- Obtain Radiation Work Permits as necessary.
- Obtain valid Maintenance Request (MR).
- Nuclear Engineering Department (NED) shall review each valve or pipe flange leak sealing application to ensure that code compliance is maintained and valve operability and function are not adversely affected.
- Re-injections require a new engineering review.
- NED shall calculate the maximum quantity of leak sealant allowed for injection into the component.
- Any leakage after leak seal repair will be evaluated by the Maintenance Section Manager.
- An MR is written to remove all leak sealant during next scheduled maintenance outage. The MR shall require complete disassembly inspection to ensure no leak sealant migrated into the system.

An MR is generated in accordance with station procedure 1.5.3, "Maintenance Work Requests", to perform the leak seal repair. The maintenance work plan (MWP) is developed in accordance with Station Procedure 1.5.3.1, "Maintenance Work Plan", which contains the necessary documentation for performing the work.

Typically, NED will prepare an engineering response memorandum or a design change document, such as a Plant Design Change (PDC), depending on the type of leak repair. If a PDC already exists, a Field Revision Notice (FRN) is issued. Nuclear Organization Procedure (NOP) 83E1, "Control of Modifications for Pilgrim Station", provide the overview of controls and interdepartmental responsibilities for performing modifications. The specific instructions for generating the appropriate design document are contained in procedures NED 3.02, "Preparation, Review Verification, Approval and Revision of Design Documents for Plant Design Changes", and NED 3.03, "Field Revision Notice". The required design documents are approved, issued and included as part of the MWP for the temporary leak seal repair.

Administrative measures have been established to ensure quality standards are maintained during temporary leak seal repairs. However, a review of the temporary leak seal repair process will be conducted to identify any areas that could be strengthened.