

BOSTON EDISON COMPANY
EXECUTIVE OFFICES
800 BOYLSTON STREET
BOSTON, MASSACHUSETTS 02199

FRANCIS M. STASZESKY
PRESIDENT AND
CHIEF OPERATING OFFICER

March 19, 1982

BECO Ltr #82-87

Mr. Richard C. DeYoung, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

License No. DPR-35
Docket No. 50-293
EA 81-63

Response to Notice of Violation
and Proposed Imposition of
Civil Penalties

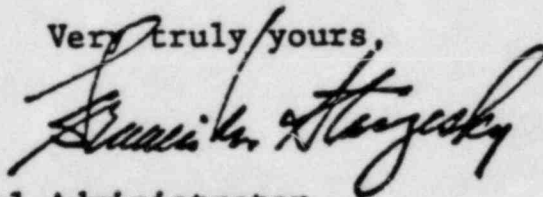
Dear Sir:

Boston Edison Company (BECO) holder of License DPR-35, pursuant to 10 CFR §§2.201, 2.205 and otherwise according to law, hereby responds to the Notice of Violation and Proposed Imposition of Civil Penalties issued January 18, 1982. The response is set forth as Attachment A hereto.

The BECO response to the Order Modifying License Effective Immediately issued January 18, 1982 is being sent to the Administrator of Region I under separate cover. Each response is being provided within the time for submission as allowed by the orders issued February 26, 1982.

In response to the Notice of Proposed Imposition of Civil Penalty transmitted herewith is our check in the amount of \$550,000 payable to the U.S. Nuclear Regulatory Commission.

Very truly yours,



cc Ronald C. Haynes, Regional Administrator
U. S. Nuclear Regulatory Commission

Attachments

Hand Delivered

8204160212 YA

IECI
PDR
LPDR
NSIC

Mr. Richard C. DeYoung, Director
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Commonwealth of Massachusetts)
County of Suffolk)

Then personally appeared before me Francis M. Staszkesky, who, being duly sworn, did state that he is President and Chief Operating Officer of Boston Edison Company and that he is duly authorized to execute and file the submittal contained herein in the name and on behalf of Boston Edison Company and that the statements in said submittal are true to the best of his knowledge and belief.

My Commission expires: June 30, 1983

William S. Stowe
Notary Public

WILLIAM S. STOWE, NOTARY PUBLIC
COMMISSION EXPIRES JUNE 30, 1983

Attachment A

Response to Notice of Violation

Boston Edison Company
Pilgrim Nuclear Power Station

Docket No. 50-293
License No. DPR-35
EA 81-63

Pursuant to Sections 2.201 and 2.205 of the NRC's "Rules of Practice" Part 2, Title 10 of the Code of Federal Regulations, and otherwise according to law, Boston Edison Company (BECO) hereby provides its answer to the "Notice of Violation and Proposed Imposition of Civil Penalties" dated January 18, 1982, issued in the above captioned docket.

Response to Item I:

- (1) Boston Edison Company admits the violation.
- (2) Reasons for the Violation

At about the time that the November, 1978 version of 10 CFR 50.44 and Revision 2 of Reg. Guide 1.7 were issued, a planning effort was initiated to determine the scope and cost of modifications to Pilgrim Station based on the results of necessary accident dose calculations which were to be performed over the subsequent four to five month period. This planning effort included a recognition that the new regulation did not specify a required backfitting schedule.

In March and June of 1979 the NRC Staff and BECO corresponded concerning the establishment of a schedule for meeting the requirements of Revision 2 of Reg. Guide 1.7. Based upon a calculation of dose rates which was completed in September 1979 it appeared that applicable 10 CFR 50.44(g) limits were in fact satisfied assuming the use of existing Station equipment. Based upon this analysis the NRC was notified by letter dated October 19, 1979 that existing Station equipment satisfied the requirements of 10 CFR 50.44.

In retrospect since the focus of the analytical efforts was primarily on dose rate calculations, inadequate consideration was given to the other requirements of 10 CFR 50.44 including the need for installed systems to meet the requirements of General Design Criteria 41, 42 and 43. As a result, an erroneous conclusion was reached that existing Station equipment satisfied the requirements of 10 CFR 50.44. Prior to issuance of the October 19, 1979 letter, this letter was subjected to a documented review process which, however, did not identify the

deficiencies in the analysis.

By letter dated October 30, 1979 the NRC Staff requested BECo to transmit the referenced analysis. From that point BECo efforts were directed towards formalization of the analysis for transmittal to the NRC. The results of the post-TMI reactor building habitability study were incorporated into the formalized analysis. Based upon this study it was determined that local operator action, necessary to satisfy the single failure criterion, could not be accomplished when using the fission product source terms corresponding to degraded core conditions of 10 CFR 100, although utilization of fission product source terms corresponding to the spectrum of LOCA's in which emergency core cooling systems perform as required by 10 CFR 50.46 did result in reactor building radiation levels that would permit individual access.

As a result of the post-TMI study, modifications to the containment atmospheric control system were adopted to preclude the need for local operator access. These were implemented under our existing design change control process during the 1980 Refueling Outage (January to May, 1980). During the construction efforts associated with the modifications, the design change control process properly recognized the need to translate the new system requirements into procedures. An Operations Review Committee action item associated therewith mandated procedure revisions in two separate disciplines. An error was made upon closure of the action item with the result that only one of the two disciplines had actually initiated procedure revisions.

From the time of issuance of the regulation (November, 1978) until the modifications were complete, revisions to Procedure 2.2.70 were implemented without adequate consideration of the effect of post-LOCA accessibility to the reactor building and without translation to related procedures and drawings affected by these revisions. This error occurred because of a failure to fully recognize the role of the containment atmospheric control system in accident mitigation and a belief that operator access for manual positioning of valves would be possible.

(3) Corrective Actions Taken and the Results Achieved

On June 5, 1981, the containment atmospheric control system was made fully operable at Pilgrim Station.

This system, modified to conform to General Design Criteria 41, 42 and 43 of 10 CFR 50 Appendix A requirements, assured post-LOCA combustible gas control in accordance with the requirements of 10 CFR 50.44. Revisions to the primary containment atmospheric control system operating procedure 2.2.70 and emergency procedure 5.4.6 "Post Accident Venting" were initiated to accurately reflect the operable system. Specifications and drawing changes were processed in accordance with the plant design change closeout process for PDCR's 80-03 and 80-21.

Corrective actions have been initiated to improve the performance and documentation of safety evaluations for the control of configuration changes resulting from operating activities. A corporate directive has been issued re-emphasizing the responsibility for, and necessity of, performing substantive 10 CFR 50.59 safety evaluations for all plant configuration changes.

Regarding the integration of design changes into operating procedures, drawings and operator training, a startup management organization was established coincident with the start of the 1981 Refueling Outage. The group consists of a Group Manager and a team of experienced operating and engineering personnel. The startup management system monitors the implementation of design changes made to the plant and assures that appropriate procedures, drawings and training programs reflect the completed design changes in a timely manner in order to provide the plant operator with the knowledge and tools he must have to continue safe and reliable operation of the facility.

(4) Corrective Actions Planned to Prevent Recurrence

An organizational level procedure which addresses the performance of analyses conducted for new or revised regulations has been prepared and is currently being reviewed in draft format. The intent is to provide documented assurance that each new or revised regulation is comprehended in full, its implementation requirement is adequately and accurately assessed and resolved and a substantive basis for establishing full compliance is developed.

The experience and resultant process refinements which ensues from the startup management organization will be

integrated into a permanent modification management group which will function during normal operations and provide a permanent process to maintain operator cognizance of the as-built plant.

The present systems used in the safety review and evaluation function will be reviewed, evaluated and strengthened specifically addressing 10 CFR 50.59 considerations and responsibilities.

- (5) Full compliance with 10 CFR 50.44 was achieved on June 5, 1981.

Response to Item II

- (1) Boston Edison Company admits the violation.
(2) Reason for the Violation.

The analysis which formed the basis for the October 19, 1979 letter was not adequately prepared, received neither multidisciplinary nor peer review and was not adequately documented. The Group Leader supervising the analysis did not confirm peer review, did not personally review the "supporting analysis" and did not assure that the letter he approved was in fact accurate. Subsequent approvals depended upon confidence in the review performed by the Group Leader and the intermediate approvers.

The determination that the requirements of 10 CFR 50.44 could not be assured when considering 10 CFR 100 fission product source terms was documented within the Organization and an evaluation formally transmitted to the Superintendent of Nuclear Operations by memorandum dated March 28, 1980. This should have resulted in NRC notification but did not receive adequate followup.

The lack of an adequate commitment tracking and reporting system contributed to both the failure to respond to the Commission's request for the submittal of the analysis referenced in BECo's October 19, 1979 letter and the failure to notify the Commission that the October 19, 1979 letter contained inaccurate information.

- (3) Corrective Actions Taken and the Results Achieved

In May, 1981 BECo notified both the onsite resident IE Inspector and the NRR project manager for Pilgrim Station of the apparent non-compliance with the requirements

of 10 CFR 50.44. A more detailed documented analysis was performed to determine the extent of Pilgrim's compliance to 10 CFR 50.44 with existing equipment as referenced in BECo's October 19, 1979 letter. Similar detailed analysis was performed to confirm that the modifications accomplished during the 1980 Refueling Outage assured compliance with the 10 CFR 50.44 criteria. These analyses were transmitted to the NRC.

The revisions and additions to 10 CFR 50 since the issuance of the Pilgrim operating license through 1980, were reviewed to determine applicability to Pilgrim Station. Correspondence from BECo to the NRC during the same time period pertaining to the applicable regulation changes was compiled and a comparative review performed. This review concentrated upon identifying references to analyses and commitments relating to compliance with 10 CFR 50. No outstanding items were discovered during the review.

An organizational level procedure has been drafted to improve the system for identifying, reviewing and evaluating changes to NRC regulations to determine the potential impact upon the organization and assure appropriate actions are developed, implemented and documented.

(4) Corrective Actions Planned to Prevent Recurrence

The development and implementation of an improved Commitment Control System is a major part of our concerted effort to improve and control management performance especially in regard to timely resolution of regulatory issues. The system will provide the organization with commitment status through reports issued on a predetermined or on demand basis. Issues which exhibit potential for delay will be highlighted through exception reports.

The elements of the first phase of this system, for NRC Licensing commitments, have been developed and are in the management review process.

- (5) Full compliance was achieved by submittal of a corrected analysis of compliance with 10 CFR 50.44 on July 7, 1981.

Response to Item III

- (1) Boston Edison Company admits the violation.

(2) Reasons for the Violation.

During the course of a troubleshooting operation which determined the source of an electrical ground condition on the "A" 125 volt DC battery bus, a decision was made to de-energize the faulted bus section for maintenance which involved repair and replacement of an inverter. Authorization to perform that maintenance was granted in accordance with approved equipment control procedures. During the establishment of plant conditions to ensure hazard-free repairs, conservative equipment isolations were performed. These isolations included the opening of a circuit breaker to the Reactor Core Isolation Cooling (RCIC) turbine controls. However, operations personnel did not verify that the opening of this breaker also caused a loss of power to the automatic closure circuitry for the RCIC steam supply valves which had been left open during the subject maintenance activities.

(3) Corrective Actions Taken and Results Achieved

A review of the circumstances surrounding this incident has been conducted by Station management and the personnel involved. Based on the procedures used to verify the isolation, it was not apparent that any safety-related functions would be lost. A revision to the trouble-shooting procedure has been implemented. Operations group personnel have been provided information regarding the details of this incident. The operations personnel involved were informed that they must review isolations more thoroughly.

(4) Corrective Actions Planned to Prevent Recurrence

The investigation also included a review of other power supplies which if isolated may result in the inadvertent defeating of safety functions. Breaker panels D4, D5 and D6 and Y1, Y2, Y3 and Y4 have been identified as providing power to logic circuitry and/or multiple components in safety-related systems. To preclude repetition of this incident, an interim policy has been established whereby only single component isolations will be authorized for equipment powered from these panels. Longer term corrective actions include revisions

to system procedures which deal with electrical distribution panels. Format changes are being developed to include the effects of de-energizing power sources and to identify applicable Technical Specification requirements.

- (5) Full compliance was achieved by November, 1981.