BOSTON EDISON COMPANY
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WILLIAM D. HARRINGTON
SENIOR VICE PRESIDENT
NUCLEAR

June 7, 1982

BECo. Ltr. #82-162

Mr. Thomas T. Martin, Director
Division of Engineering and Technical Programs
Office of Inspection and Enforcement
Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA. 19406

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

Response to IE Inspection #82-13

Dear Sir:

The subject inspection report contained one item of non-compliance in the area of design control. Boston Edison Company's response is enclosed. Please note that as suggested in Section 4 of the Inspector's report, we have not limited our corrective actions to only those items identified by the Inspector, but have approached the situation with the intent of strengthening our overall Design Control Program.

Please do not hesitate to contact us if further information or clarification is deemed necessary.

Very truly yours,

WD Harrington

Commonwealth of Massachusetts)
County of Suffolk )

Then personally appeared before me William D. Harrington, who, being duly sworn, did state that he is Senior Vice President - Nuclear of Boston Edison Company, the applicant herein, 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: October 21, 1988 Peter M Kahler
Notary Public

cc: Mr. Darrell G. Eisenhut, Director

Enclosure

Violation

As a result of the inspection conducted on April 12-16, 1982, and in accordance with the NRC Enforcement Policy (10 CFR Part 2, Appendix C), 47 FR 9987 (March 9, 1982), the following violation was identified:

10 CFR Part 50, Appendix B, Criterion III states in part, "(Design Control) measures shall include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled...Measures shall be established for the identification and control of design interfaces and for coordination among participating organizations...The design control measures shall provide for verifying the adequacy of design..."

Contrary to the above:

(a) Three randomly selected Plant Design Change Requests (PDCR's) for TMI related design changes, namely, PDCR-79-61, PDCR-79-59 and PDCR 77-78, used design criteria that are different from those delineated in NUREG 0737. The control of these deviations from original design requirements were inadequate in that the design documents neither demonstrated how the installed modifications met the intent of the NUREG 0737 requirements nor provided justifications for acceptance of these designs for plant use.

(b) Review of the licensee's controls for the PDCR's referenced in (a) above showed inadequate control of design interfaces and coordination among participating design organizations in that the engineering organizations did not inform the licensing organization about the difference between NUREG 0737 requirements and the actual design in a timely and controlled manner. Additionally, the licensing organization did not appraise the Engineering organizations about the NUREG 0737 provisions for submitting alternate designs to the NRC to obtain relief from the subject requirements.

(c) The supporting documents for the PDCR's referenced in (a) above did not contain required information for verifying the adequacy of their respective designs.

This is a Severity Level IV violation (Supplement I).

Response

As a result of Mr. P. K. Epean's observation relative to the above, Boston Edison Company is reviewing the completed TMI-related plant modifications. The process includes a rigorous review by a multi-disciplined task force using detailed compliance checklists. Each related NUREG 0737 position was dissected and listed. The method of conformance or exception basis was researched and referenced.

To date the review of nine items (out of ten) has been completed. The results indicate that our overall implementation of each position is considered to be consistent with the guidance provided in the NUREG. Accordingly, rather than submitting a list of exceptions and justification on each NUREG item we are submitting the design details which describe how our design meets the NUREG criteria.

Our short-term corrective steps have led us to conclude that the symptoms noted regarding our implementation of NUREG-0737 do not support the observation above but rather are a manifestation of a problem which occurs when using the NUREG, a guidance document, as a prescriptive auditing tool.

It should be noted that guidance regarding post-TMI action plan items has been issued over a period of two years. Significant dialogue and interface between the staff and licensees, including Boston Edison, has taken place during this period. Our designers were intimately involved with the evolving requirements throughout the post-TMI era and their reading and interpretation of the requirements is based on the continuity of NUREG-0737 taken in context with previous NRC guidance, both written and verbal. The general conclusion of our review process was that the implementation of the NUREG-0737 positions met the intent of that guidance. It was also recognized, however, that it could be difficult to demonstrate compliance with specific design detail. This was particularly true if the method of conformance to a particular design detail was reviewed out of context with the overall system design or without the benefit of previous guidance and interface. We have therefore concluded that although we continue to believe we have met the intent of the NUREG and that the licensing/engineering interface problems identified were minor, it would be prudent to describe our design to NRR in detail and obtain their concurrence with our overall approach to avoid problems with post-implementation reviews.

In order to avoid further instances of potential problems relative to our implementation of NUREGs, we intend to document clearly in the design process and in requested communication with the NRC, our design criteria for mandated modifications.

In terms of strengthening our design control process, we have instituted several measures over the last few months and plan to implement others. Corrective actions taken include:

A Nuclear Organization Policy was issued May 13, 1982 to all Department Managers requiring complete identification of design criteria and deviations prior to Nuclear Operations Manager approval for implementation of design changes.

A new procedure (#3.02) was added to the Q.A. Procedures on April 20, 1982 which requires that the Quality Assurance Dept. review all plant design change requests and related major field revisions prior to field implementation for proper incorporation of quality requirements. Additionally, regular internal audits of the Engineering design process and procedures are conducted by Q.A. Dept.

As discussed previously, a complete analysis of installed modifications associated with NUREG-0737 is being performed by an interdisciplinary team. This activity will delineate the requirements of NUREG-0737, review the designs and verify conformance or document the safety rationale for exceptions.

Deputy Manager memo #82-246 was issued May 13, 1982 notifying all Nuclear Engineering Group Leaders of the requirements to follow completely the engineering procedures for design change and design verification. These design change procedures are currently being revised to improve the interdisciplinary establishment of initial design criteria and the design verification process.

A plan and schedule for a review and revision, as needed, of engineering procedures affecting design change and associated training programs is being developed as part of our Performance Improvement Program established in response to the 1/18/82 NRC Order modifying the PNPS License.