

BOSTON EDISON COMPANY  
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WILLIAM D. HARRINGTON  
SENIOR VICE PRESIDENT  
NUCLEAR

December 31, 1984  
BECO Ltr. #84-219

Mr. Richard W. Starostecki, Director  
Division of Project and Resident Programs  
U. S. Nuclear Regulatory Commission  
Region 1 - 631 Park Avenue  
King of Prussia, PA 19406

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

Subject: Inspection 84-28

Reference: NRC Letter to Boston Edison, dated December 4, 1984

Dear Mr. Starostecki:

This letter is in response to the Appendix A, (Notice of Violation) and Appendix C (Licensee Weaknesses) as requested by you in the above noted reference.

Notice of Violation (Appendix A)

10 CFR 50, Appendix B, Criterion III, Design Control, states in part, "Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design..."

Contrary to the above, as of October 4, 1984, the installation of anchor bolts in safety related concrete floors in the reactor building as part of Plant Design Change 84-18 was being accomplished with inadequate design control as evidenced by the following:

1. General note 3 on Boston Edison Company drawing SK-C-84-18-04 for installation of anchor bolts for concrete floors supported on steel framing allows one rebar in each direction in the top rebar steel at each anchor bolt location to be cut. However, no documented design bases existed for such cutting of rebar.
2. The lack of control inherent in general note 3 permitted the unnecessary cutting of rebar, without considering preferable alternatives, and caused no record to be kept of the cut rebar.

As a result of the above, the structural adequacy of such floors in their existing condition with unknown amounts of cut rebar could not be demonstrated.

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Response

The following points are offered for your consideration in response to the alleged violation:

1. While it is agreed that no documented design basis existed for such cutting of rebar, what has been documented by the Architect Engineer is the design basis for these types of slabs and from that, the function of the top rebar can and has been determined. This function is clearly to allow for temperature change and shrinkage only during the curing of the concrete and performs no structural function. However, to justify the allowed cutting of rebar as specified in general note 3 of BECo drawing SK-C-84-18-04, a calculation has been completed which formally documents the technical acceptance of this activity as it applies to the installation of the environmental enclosures for the motor control centers.
2. Exception is taken to the statement that a lack of control is inherent in general note 3 by allowing unnecessary cutting of rebar as much planning went into the consideration of alternatives; and the design submitted for implementation reflects sound engineering principles.

In conclusion, the structural adequacy of the concrete floors is not at issue from a design basis, and never has been a structural issue because of the permitted cutting of the top rebar, whose function is of a non-structural nature as stated in 1 above. It is felt that 10CFR50, Appendix B, Criterion III, Design Control, was subjectively and inappropriately applied in this case.

With regard to your concern of possible damage which may have previously occurred:

The drilling was not uncontrolled or it would not have been discovered that an abandoned construction conduit and an embedded, unused drain line had been encountered.

Electrical, piping, and civil plan drawings of the areas under discussion were reviewed as part of good construction practices prior to layout of anchor bolt drilling. This review is standard practice prior to drilling for the installation of anchor bolts or core drilling for full floor or slab penetration throughout the station. The abandoned construction conduit does not appear on any plant drawing. The embedded (unused) drain line does appear on a drawing but is shown out of position.

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In both cases, while drilling with a "Hilti" bit, the craft drilled into the floor and, upon hitting an obstruction, stopped drilling. It was noted, in both cases, that a metallic obstruction at the expected depth of rebar had been encountered. It looked like rebar, was at the expected depth of rebar, and in the absence of documentation indicating the presence of pipe or conduit at that location, was evaluated as rebar. The bit was changed to a "core drill" bit for ease of drilling through the obstruction. In each case, after penetrating the outer wall, the obstructions were discovered to be conduit and pipe, respectively.

In both cases, the cognizant construction superintendent was aware of the work activities on his job. The performance of the particular craft was being closely supervised to ensure productivity.

Licensee Weaknesses (Appendix C)

Item 1 (84-28-01)

Control of nonconforming conditions during modification work needs improvement. Specific examples of this weakness included the following:

- A nonconforming safety relief valve was used to aid fit-up of piping. The valve had no tag or identification to show its nonconforming status.
- A piping gouge needing a Nonconformance Report (NCR) and the associated engineering review for resolution was allowed to exist as a Surveillance Inspection Report (SIR) for three weeks.
- The administrative control of SIRs is poor. The procedure describing SIRs does not address review, resolution, or approval, but only describes how an inspector is to complete the form.

Response

The subject safety relief valve had been tagged correctly with a Nonconformance Tag. However, following installation of the valve body for fit-up purposes, the tag was left in the storage box. Another tag was placed on the valve body upon notification to the Quality Control Group.



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In spite of the additional tag placed on the valve body, the Nonconformance would have become apparent upon any attempt to close out the work package through the lack of a Material Receipt Inspection Report (MRIR) number. Additionally, before final installation could take place after hydro-testing, a cross-check of serial numbers would have been performed between the Maintenance Request (MR), the MRIR, and the valve body and would have flagged any discrepancy. Sufficient administrative control is manifested to have prevented the valve body being inadvertently left installed. The non-conforming valve body has also been painted yellow for easy identification as a non-conforming component. No further action is planned on this issue.

With regard to the administrative control of General Electric (GE) Surveillance Inspection Reports (SIR's), the GE Site Instruction 3.0, "Minimum Requirements for Surveillance Inspection," has been revised to improve the resolution and disposition of SIR's.

Item 2 (84-28-02)

There is no P&ID drawing for the emergency diesel air start system.

Response

Although a vendor drawing exists for the diesel air start system, an Engineering Support Request has been initiated to have a P&ID type drawing prepared and issued for inclusion in the P&ID books.

Item 3 (84-28-03)

The Pre-Operational Test Procedure No. TP 83-43 identified by the inspector as lacking independent verification for each step restoring system alignment has been revised to include this requirement. Subsequently, pre-operational test procedures associated with modifications, which conclude with system alignment to normal, will require independent verification of valve positions.

Response

The subject Inspection Report and the Appendix C thereto incorrectly imply that two spectacle/blind flanges are located in the HPCI system when, in fact, only one exists, that being located in the 24" section of the HPCI turbine exhaust line, downstream of Valve 2301-74. This item will be included in the operating procedure check-off list by startup.

The blind flange installed (and removed) by Procedure TP 83-43, upstream of VRV 9066, was solely for the purpose of pre-operational testing and is not a permanent system component. This item, therefore, does not warrant inclusion in the check-off list of the HPCI system operating procedure.

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Item 4 (84-28-05)

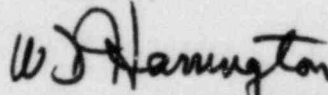
Administrative control of the turnover from construction to preoperational testing needs improvement. Specifically, there is no formal means to document the findings, exceptions, and system status identified during the turnover process.

Response

As committed during the inspection, a Modification Management Work Instruction has been developed and was issued 8 November, 1984 and is presently being used by the Test Directors to address the concerns expressed regarding system walkdowns. A checklist and guidance is provided to the Test Director for use during the walkdown prior to turnover for pre-operational testing.

If you have any questions or further concerns related to any of the above responses, please do not hesitate to contact me.

Sincerely,

A handwritten signature in dark ink, appearing to read "W D Harrington". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

William D. Harrington