BOSTON EDISON
Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

Ralph G. Bird
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March 24, 1988
BECo Ltr. #88- 058

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

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

Subject: NRC Inspection Report 50-293/87-50

Dear Sir:

Attached are Boston Edison Company's responses to the Notices of Violation contained in the subject inspection report.

Please do not hesitate to contact me directly if you have any questions.

R.G. Bird

BPL/bl

Attachment I: Response to Violation A
Attachment II: Response to Violation B
Attachment III:Response to Violation C

cc:

Mr. William Russell
Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Rd.
King of Prussia, PA 19406

Sr. Resident Inspector - Pilgrim Station

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ATTACHMENT I

Response to Violation "A" (87-50-07)

Boston Edison Company
Pilgrim Nuclear Power Station

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

Notice of Violation "A"

Technical Specification 6.8.A requires that written procedures be established and implemented that meet the requirements and recommendations of Sections 5.1 and 5.3 of ANSI N18.7-1972.

ANSI N18.7-1972 Section 5.1 states that maintenance which can affect the performance of safety-related equipment shall be properly preplanned and performed in accordance with written procedures. Section 5.3 requires that the procedure shall be sufficiently detailed for a qualified individual to perform the required function without direct supervision, and that special attention shall be given to restoration of normal conditions.

Contrary to the above on November 24, 1987, replacement of safety-related relay coil 16A-K55 in the primary containment isolation system was initiated without proper preplanning and without a sufficiently detailed written procedure. In addition measures were not established to ensure restoration of normal conditions. No step-by-step procedure for isolation and removal of the relay coil, and for verification and independent verification of restoration was used. As a result, replacement of the relay coil caused several unanticipated engineered safety feature actuations.

Response to Notice of Violation "A"

Cause:

The root cause of this event was inadequate administrative controls for replacement of the relay coil. No specific precautions or guidance on the arrangement of neutral leads (neutral leads of the relay coils are connected in series) was provided by the Maintenance Request work package.

An oversight by the contractor supervisor responsible for the relay replacement also contributed to the event. Although the appropriate drawings were reviewed, the supervisor did not recognize the impact of removing the neutral lead from the neutral string.

Additionally, the Maintenance Request was assigned a 'UE' (unplanned emergency) priority. The sense of urgency communicated by the assigned priority may have contributed to the event.

Corrective Steps Taken and Results Achieved:

- After the relays in the panel became de-energized, further work in the panel was suspended and the Control Room was notified. Concurrently, annunciations in the Control Room prompted investigations for cause. The continuity of the neutral circuit was re-established using a spare contact on relay 16A-K55. The isolation logic was reset allowing reestablishment of shutdown cooling.

- Prior to resuming work in the panel, additional work controls were established using the Maintenance Summary and Control (MSC) form. The MSC specified additional reviews, installation of jumpers in the neutral string, tagging and verification of jumpers.

- The contractor supervisor and the utility supervisor responsible for the work were cautioned on the level of review necessary for work on logic relays.

- A night order was issued on November 25, 1987 requiring notification to the Maintenance Section Manager of priority 'A' or 'UE' Maintenance Request.

- On December 12, 1987 a night order was issued describing actions to be taken for work activities having the potential for causing inadvertent actuation or isolation of a safety system.

- Licensee Event Report 50-293/87-016-00 "Unplanned Actuations of Primary Containment, Secondary Containment and Standby Gas Treatment Systems" was submitted describing this event on December 23, 1987.

Corrective Steps Which Will be Taken to Avoid Further Violations:

- The Maintenance Summary and Control process will be restuctured to include the capability to sequence specific sections of a maintenance activity.

- Engineering Service Request #88-156 was initiated to evaluate the feasibility of achieving design improvement to neutral circuits.

- In response to the recurrence of unplanned ESF actuations an interdisciplinary task force has been chartered to evaluate recent ESF actuations, determine the underlying causes, and recommend corrective actions to avoid future events.

Date of Full Compliance:

Full compliance was achieved on November 25, 1987 when additional work controls were established using the MSC form to allow replacement of the relay coil without further incident. Corrective actions to prevent unplanned ESF actuations continue.

Safety Consequences:

This event posed no threat to the public health and safety or to plant operation.

ATTACHMENT II

Response to Violation "B" (87-50-04)

Boston Edison Company
Pilgrim Nuclear Power Station

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

Notice of Violation "B"

Technical Specification 6.11 requires that procedures for personnel radiation protection be prepared and adhered to for all operations involving personnel radiation exposure. Station Radiation Protection Procedure 6.1-022, "Issue, Use and Termination of Radiation Work Permits (RWP)," states in part that entry into areas having whole body radiation levels equal to or greater than 100 mRem per hour (high radiation area) requires a RWP.

Contrary to the above, on November 14, 1987, a radioactive waste worker was found inside a posted High Radiation area adjacent to the chemical waste tanks, without the required RWP, required anti-contamination clothing and required health physics coverage.

Response to Notice of Violation "B"

Cause:

The failure to use the Radiation Work Permit (RWP) for picking up contaminated trash from high radiation areas resulted from ineffective communications between the involved Radioactive Waste Handler and the Health Physics Technician. The Radioactive Waste Handler misunderstood the health physics instructions in part because previous instructions were inconsistent. At times Health Physics personnel had permitted access beyond the high radiation area posting, using the RWP for areas less than 100mr/hr when (1) visual contact could be maintained, and (2) the actual whole body dose rate was verified to be less than 100mr/hr.

Corrective Steps Taken Including Steps Taken to Avoid Further Violations:

- A review of RWP entries made by the Radioactive Waste Handlers for the period of January 1, 1987 to November 15, 1987 was performed. One Hundred Twenty Five (125) high radiation area entries were documented by the RWPs indicating proper RWP usage. Interviews with the Radioactive Waste Handlers determined that the problem involving failure to sign in on the correct RWP occurred on a few occasions, however, it was not a wide spread problem.

- The involved Radioactive Waste Handler was suspended without pay. Upon his return to work, the individual was reapprised of the seriousness of the RWP infraction, retrained on the requirements of the waste handling RWPs and proper handling of contaminated materials.

- On November 16, 1987, a meeting was conducted with the Radioactive Waste Handlers. The topics discussed included:

  A. Adherence to procedures.
  B. The importance of fully understanding the RWP briefing.
  C. Maintaining good Health Physics work practices.
  D. The relationship of the topics listed to the Station's Operating License.

It was emphasized that violations of procedure, RWP briefing, or good health physics practices would not be tolerated.

- The Radiation Protection Technicians were instructed that entry to a posted high radiation area required a high radiation area RWP, even if the actual whole body dose rate was verified to be less than 100 mr/hr.

Date of Full Compliance:

Full compliance was achieved on November 24, 1987 when the waste handler exited the high radiation area. The corrective actions taken to avoid further violations of RWP requirements by Radioactive Waste Handlers were completed on November 16, 1987.

Safety Consequences:

No adverse safety consequences resulted from the event. The Radioactive Waste Handler's net dose was documented on the RWP as zero. No spread of contamination to clean areas or personnel was identified.

ATTACHMENT III

Response to Violation "C" (87-50-05)

Boston Edison Company
Pilgrim Nuclear Power Station

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

Notice of Violation "C"

Technical Specification 6.6 states that for each reportable event the Commission shall be notified pursuant to the requirements of 10 CFR 50.72.

10 CFR 50.72 (b)(2) states that the licensee shall notify the NRC within four hours of any event or condition that results in manual or automatic actuation of any Engineered Safety Feature.

Contrary to the above on November 23 and again on November 24, 1987, automatic actuations of the primary containment isolation system, an engineered safety feature, resulting in isolation of the reactor water cleanup system occurred and were not reported to the NRC within four hours.

Response to Notice of Violation "C"

CAUSE:

Failure to report in accordance with the requirements of 10CFR 50.72 resulted from a lack of complete understanding of these requirements. In particular, the involved personnel did not fully understand to what extent actuations of only portions of a safety system are reportable.

Corrective Steps Taken and Results Achieved:

- The NRC was notified of the events via the Emergency Notification System on November 24, 1987.

- A memorandum OPS 87-948 was issued on November 25, 1987 to the Nuclear Watch Engineers, Nuclear Operations Supervisors, and Shift Technical Advisors. This memo provided clarification of the 10CFR 50.72 requirements for reporting Engineered Safety Feature (ESF) actuations and included select pages from NUREG 1022, Supplement I.

- A copy of NUREG 1022 and NUREG 1022 Supplement I have been made available in the Control Room for reference.

Corrective Steps to be Taken to Avoid Further Violations:

- A list of Pilgrim specific ESFs is being prepared and will be proceduralized.

- The 10CFR 50.72 reporting requirements will be discussed during the next annual requalification program for Licensed Operators.

Date of Full Compliance:

Full compliance with the requirements of 10CFR50.72 was achieved on November 24, 1987 when the NRC was notified via the Emergency Notification System.

Safety Consequences:

No adverse safety impact resulted from the violation of 10CFR 50.72 requirements.