BOSTON EDISON

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James M. Lydon
Chief Operating Officer

September 24, 1986
BECO Ltr. #86-147

Mr. William F. Kane
Director, Division of Reactor Projects
USNRC - Region 1
631 Park Avenue
King of Prussia, PA 19406

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

Subject: NRC Inspection Report No. 50-293/86-21

Dear Mr. Kane:

This letter is in response to your letter dated August 25, 1986 transmitting NRC Inspection Report No. 50-293/86-21. Attachment 1 contains Boston Edison Company's response to the Notice of Violation included with the subject inspection report. Attachment 2 responds to the five concerns identified in your cover letter to which a specific response was requested. Attachment 3 is unrelated to Inspection 86-21, but has been included at the request of our Senior Resident Inspector. This attachment discusses testing of backup scram valves. Attachment 4 is a summary schedule of the major corrective actions included in this response.

Please do not hesitate to contact me directly should there be any questions regarding these matters.

Very truly yours,

James M Lydon

James M. Lydon

PJH/la

Attachments:
1. Response to Notice of Violation
2. Response to Concerns Identified in Cover Letter Transmitting Inspection Report No. 86-21
3. Revised Response to NRC Generic Letter 83-28, Item 4.5.3
4. Summary Schedule of Corrective Action

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ATTACHMENT 1

RESPONSE TO NOTICE OF VIOLATION

Boston Edison Company
Pilgrim Nuclear Power Station

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

Violation as described in NRC Inspection Report No. 86-21, Appendix A

Technical Specification 6.8.A requires that written procedures be establish and implemented that meet or exceed the requirements of ANSI N18.7-1972. ANSI N18.7-1972, Section 5.3.1 states that procedures shall be sufficiently detailed for a qualified individual to perform the required function without direct supervision. Section 5.3.5 states that special attention shall be given to restoration of normal conditions.

Contrary to the above on July 1, 1986, PNPS Procedure 8.9.8, revision 8, Battery Rated Load Discharge Test, was performed and was not sufficiently detailed for a qualified individual to perform the test without direct supervision. It did not include steps addressing required system alterations and restoration. Specifically, procedural steps addressing lifted cables needed for installation of test equipment, placement of temporary jumpers, and the required isolation of certain battery loads were not included in the test procedure.

Boston Edison Response to Violation

Boston Edison has reviewed the subject violation and agrees that Procedure 8.9.8, revision 8, should contain additional detail to better enable a qualified individual to perform the Battery Rated Load Discharge test. In response Procedure 8.9.8 was revised to include specific procedural steps for lifting of cables for installation of test equipment and for placement of temporary jumpers. In addition,a reference to Nuclear Engineering Department (NED) memorandum 86-495 was added to the procedure to provide additional guidance on the required isolation of certain battery loads during testing. This reference combined with the specific procedural guidance to contact the Watch Engineer or Electrical Engineer for other required isolations was believed adequate to address this portion of the violation. The revised Procedure 8.9.8 (revision 9) was issued for use on July 3, 1986.

As revised Procedure 8.9.8 provides qualified Maintenance personnel with the instructions necessary to perform a battery rated load discharge test on station batteries. Attachments to the Procedure address the specific battery being tested. To preclude recurrence each of the applicable attachments were also revised to provide the same specific procedural steps required during testing. Full compliance was achieved on July 3, 1986 when the revised procedure was issued.

During preparation of this response it was determined that Procedure 8.9.8 should be revised to incorporate the key elements of NED memorandum 86-495 into the applicable attachments. This revision is expected to be issued in October 1986 and is expected to provide even more specific instruction on the required isolation of certain battery loads during testing.

RESPONSE TO NOTICE OF VIOLATION

Although not part of the violation a second discrepancy in Procedure 8.9.8 was also noted in the Inspection Report. That discrepancy involved monitoring of voltage during the discharge test. In response to the Senior Resident Inspector's concern, Procedure 8.9.8 was also revised to require constant rather than hourly monitoring of voltage during the discharge test.

ATTACHMENT 2

RESPONSE TO CONCERNS IDENTIFIED IN COVER
LETTER TRANSMITTING INSPECTION REPORT NO. 86-21

Boston Edison Company
Pilgrim Nuclear Power Station

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

1. "The recurring failure of the recirculation motor generator set field breaker used for anticipated transient without scram protection"

   Boston Edison Response

   This concern is detailed in Section 4.0.c of the Inspection Report. As indicated at the September 9, 1986 meeting with Dr. Murley and other senior regional managers in our Chiltonville office, this issue maintains very high priority with Boston Edison Company. A detailed root cause analysis effort on this issue has been developed with two distinct parts - the General Electric Company is performing an evaluation of the failed AKF breaker (estimated completion December 1986), while a consultant is conducting an independent assessment of breaker reliability (estimated completion October 1986). The recommendations resulting from these programs will be addressed in order to increase the reliability of this component.

   Unless the root cause analysis and corrective actions resulting from that analysis can clearly demonstrate that the cause has been corrected, Boston Edison will test the recirculation motor generator (MG) set field breakers at 6-month intervals until an increased reliability has been demonstrated. Included in the corrective action process will be a review of the available design options of replacing this specific breaker design application for tripping the Recirculation Pumps.

   As stated in the 9/9/86 meeting resolution of the field breaker issue will be achieved prior to startup of the unit.

2. "The apparent failure to properly schedule required surveillance tests"

   Boston Edison Response

   This concern is detailed in Section 7.0 of the Inspection Report and relates to surveillances whose test interval is once per operating cycle or once per refueling outage as defined by the Technical Specifications. Boston Edison will perform an analysis of this problem with the aid of an outside consultant. This analysis is expected to be complete by October 24, 1986, and an action plan to resolve the issue will be developed. An update to this response will be provided by November 21, 1986 based on the analysis.

3. "The completeness and technical adequacy of logic functional surveillance tests"

Boston Edison Response

As described in section 3.0.e.2 of the Inspection Report, concern #3 focuses on the completeness and technical adequacy of logic functional tests. A specific concern is the use of a series of overlapping surveillance tests to fulfill logic system functional test requirements. Boston Edison is currently reviewing a recently completed analysis, to determine completeness and technical adequacy of logic functional surveillance tests. The NRC will be informed of the results of this review by November 21, 1986 in a letter updating our response to this concern.

4. "Excessive leakage past primary containment isolation valves in excess of established criteria"

Boston Edison Response

This concern is detailed in section 8.0 of the Inspection Report and involves discrepancies identified by local leak rate test (LLRT) results being performed under 10CFR50 Appendix "J".

To date 98 of 101 Type B tests and 124 of 133 Type C tests have been completed. There have been 16 failures, a summary of which is included as Enclosure 1. As in previous outages, problem valves will be addressed. Boston Edison has had and will continue to have an aggressive LLRT corrective action program. Such a program was evident in the previous refuel outage when approximately 15 containment isolation valves were overhauled and 13 additional containment isolation valves were replaced.

As corrective action on this concern, an LLRT Failure Analysis Team is being designated. The Team is multi-disciplined and is comprised of members from both the Nuclear Engineering Department and Nuclear Operations Department. The LLRT Failure Analysis Team will be responsible to determine root cause and recommend corrective actions for each valve that has failed to pass the Local Leak Rate Tests. Corrective action will include a repair, change, or modification that addresses the root cause of excessive leakage, an assessment of the impact of root cause on valves of similar design, and a review of the testing program for adequacy and frequency to detect valve failures. A schedule has been established to complete these tasks for the 16 failed valves as follows:

-- Designate LLRT Failure Analysis Team....September, 1986

-- Determine root cause.....December, 1986

-- Provide recommended corrective actions...December, 1986

-- Implement corrective actions to address root cause.....February, 1987

-- Review testing program to ensure methodology and frequency of testing adequately addresses recommended corrective actions to detect valve failures.....March, 1987

A second item noted in Section 8.0 of the Inspection Report discussed the lack of a caution statement in LLRT Procedure 8.7.1.5 on correcting packing leakage prior to taking "as found" data. In response, caution statements were added to leak rate Procedures 8.7.1.5, 8.7.1.6 and 8.7.1.7 on July 17, 1986 to address this item.

5. "The extent of fire brigade training at the station"

Boston Edison Response

This concern is detailed in section 2.0 on page 8 of the Inspection Report and discusses the fire brigade drill requirements set forth by 10CFR50 Appendix R. Specifically Appendix R, Section I.3.b requires that each fire brigade member participate in at least two drills per year. A review, however, of 10CFR50.48 (b) indicates that 10CFR50 Appendix R. section I is not applicable to Pilgrim Station. Instead, Branch Technical Position (BTP) APCSB 9.5-1, Appendix A is applicable at Pilgrim. Although it includes similar drill and training requirements, it does not include a specific drill attendance requirement for each brigade member. Nevertheless, we believe the Inspector's concern is valid and in response plan to implement the following corrective action.

Presently there are 35 fire brigade members who have not participated in a drill in 1986. Our plan is to secure the necessary resources to perform additional drills commencing on or about October 1, 1986 in order to ensure that each of these 35 brigade members will have participated in at least one drill by the end of 1986. At the end of 1986 any of the 35 brigade members who have not been drilled will not be allowed to return to active fire brigade status until they participate in a drill. Beginning in 1987 the drill schedule will provide a minimum of 2 drills per man per year as recommended. Applicable procedures will be revised accordingly by December 31, 1986 to reflect the new drill schedule.

"Enclosure 1"

Attachment 2

SUMMARY OF LLRT FAILURES

AS OF 9/22/86

System Component	Date Tested	LLRT Type	Penetration Number	As Found Leakage SLM InBoard	As Found Leakage SLM OutBoard	As Found Leakage SLM Minimum-Path
MSIV "A"	04-19-86	C	7A	70.31 *	-	-
	04-19-86	C	7A	-	8.69 *	8.69
MSIV "B"	04-20-86	C	7B	36.66 *	-	-
	04-20-86	C	7B	-	4.40	4.40
MSIV "D"	04-20-86	C	7D	52.93 *	-	-
	04-20-86	C	7D	-	13.43 *	13.43
D/W Access	06-10-86	B	2	0.00	-	-
	06-10-86	B	2	-	10.50 *	0.00
MS Drain	06-24-86	C	8	1.00	-	-
	06-24-86	C	8	-	15.75 *	1.00
FW Ck "A"	06-26-86	C	9A	177.88 *	-	-
	07-01-86	C	9A	-	648.50 *	177.88
FW Ck "B"	06-27-86	C	9B	73.63 *	-	-
	06-30-86	C	9B	-	16.50 *	16.50
Recirc Sample	07-11-86	C	41	169.9 *	-	-
	07-11-86	C	41	-	4.40	4.40
D/W Purge Exhaust	07-18-86	C	25	-	335.0 *	-
	08-12-86	C	25	0.00	-	0.00
Gas Sample Return	07-23-86	C	228G	9.50 *	-	-
	07-23-86	C	228G	-	1.00	1.00
D/W Equip Drain	07-25-86	C	19	20.30 *	-	-
	07-25-86	C	19	-	4.40	4.40
RWCU Supply	07-07-86	C	14	4.00	-	4.00
	07-07-86	C	14	-	23.00 *	4.00

*Denotes Valve Failure

Total Minimum Path Leakage - 235.7 SLM

ATTACHMENT 3

REVISED RESPONSE TO NRC GENERIC
LETTER 83-28, ITEM 4.5.3

Boston Edison Company
Pilgrim Nuclear Power Station

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

1. Testing on Back-up Scram Valves

NRC Generic Letter 83-28, item 4.5.3 requested that the licensee evaluate the need for on line functional testing of the back-up scram valves.

Boston Edison Response

This letter supplements the previous Boston Edison letter from W.D. Harrington to D.B. Vassallo, U.S.NRC, dated August 23, 1985 on this topic. Although the need for on-line functional testing of the back-up scram valves is not warranted as explained in the above letter, additional assurance of their ability to function can be demonstrated by periodic testing with the plant shutdown.

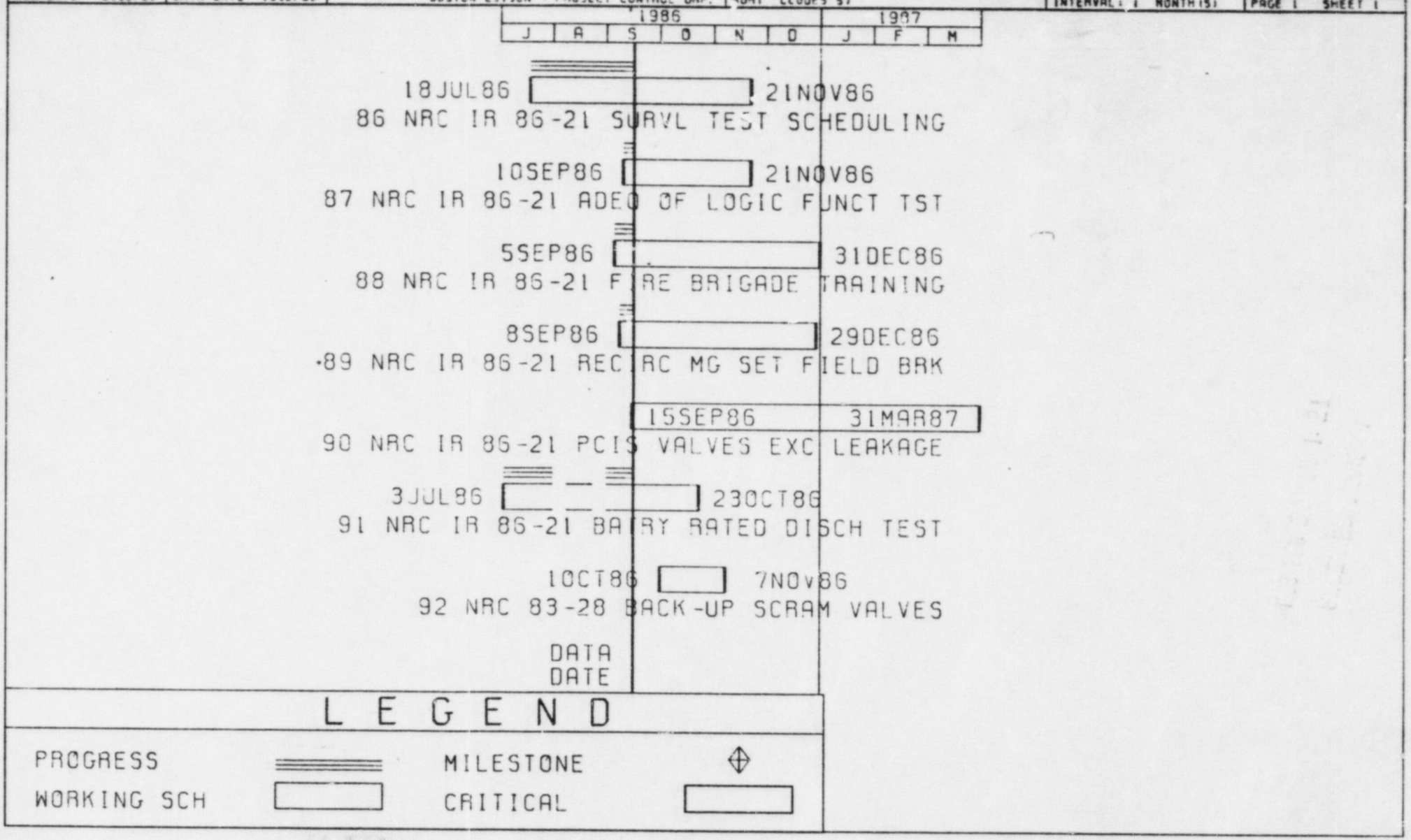
Boston Edison, therefore, intends to perform testing during the current outage to demonstrate the ability of these valves to properly function. This testing will be performed during each subsequent refueling outage.

Attachment 4

SUMMARY SCHEDULE OF

CORRECTIVE ACTION

PROJECT ONLINE PLOT NRC86-21 RUN DATE 23SEP86	START 19DEC84 COMPLETION 22FEB88 DATA DATE 15SEP86	RESPONSE TO IR 86-21 BOSTON EDISON - PROJECT CONTROL GRP.	SUMMARY W O R K I N G SCHEDULE SORT CCODES S7	MODE C/PE INTERVAL: 1 MONTH(S)	PROJECT/2 8451 BAR CHART GRAPHICS PAGE 1 SHEET 1



LEGEND

PROGRESS		MILESTONE	
WORKING SCH		CRITICAL	