



Boston Edison

Pilgrim Nuclear Power Station
Rocky Hill Road
Plymouth, Massachusetts 02360

10 CFR 50.73

E. T. Boulette, PhD

Senior Vice President - Nuclear

September 27, 1995
BECo Ltr. #95- 102

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

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

The enclosed Licensee Event Report (LER) 95-009-00, "Surveillance Procedure for Core Spray Motor Operated Valve Quarterly Operability Test Not Performed due to Personnel Error", is submitted in accordance with 10 CFR Part 50.73.

Corrective actions to address the root cause of this event have been completed.

Please do not hesitate to contact me if there are any questions regarding this report.

E.T. Boulette
E.T. Boulette, PhD

RLC/laa/9500900

cc: Mr. Thomas T. Martin
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Aliendale Road
King of Prussia, PA 19406

Sr. NRC Resident Inspector - Pilgrim Station

Standard BECo LER Distribution

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LICENSEE EVENT REPORT (LER)

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ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST 50.0 HRS FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)
PILGRIM NUCLEAR POWER STATION

DOCKET NUMBER (2)
05000-293

PAGE(3)
1 of 5

TITLE (4)
Surveillance Procedure for "Core Spray Motor Operated Valve Quarterly Operability Test Not Performed due to Personnel Error"

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
08	21	95	95	009	00	09	27	95	N/A	05000
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR: (Check one or more) (11)										
OPERATING MODE (9)		N		20.402(b)		20.45(c)		50.73(a)(2)(iv)		73.71(b)
POWER LEVEL (10)		100		20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)
				20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER
				20.405(a)(1)(iii)		X 50.73(a)(2)(i)(B)		50.73(a)(2)(viii)(A)		(specify in Abstract below and in Text, NRC Form 366A)
				20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		
				20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME
Robert L. Cannon - Senior Compliance Engineer

TELEPHONE NUMBER (Include Area Code)
508-830-8321

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO		EXPECTED SUBMISSION DATE(15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On August 21, 1995, during an audit of the Core Spray System it was discovered that Surveillance Procedure 8.5.1.3, "Core Spray Motor Operated Valve Quarterly Operability Test" had not been performed for the "B" loop motor operated valves prior to the Master Surveillance Tracking Program (MSTP) dead date of May 7, 1995. The "B" Core Spray Loop was previously declared operable on May 9, 1995 without having performed the Technical Specification required quarterly valve operability testing. Therefore, the action statement of Technical Specification 3.5.A.2 had not been met during the period from May 9, 1995 to June 23, 1995. On June 23, 1995, Surveillance Procedure 8.5.1.3 was satisfactorily performed at 1407 hours and confirmed the continued operability of the "B" Core Spray Loop.

Although the previously completed Procedure 8.5.1.3 clearly identified that only the "A" Loop valves had been tested on April 7, 1995, a Nuclear Watch Engineer (NWE) Surveillance Test Review Form and Problem Report (PR) were not initiated to document the non-performance of the "B" loop testing as required by Procedure 1.8, "Master Surveillance Tracking Program" and Procedure 1.3.34, "Conduct of Operations". Performance of these procedural requirements provide necessary assurance that partially performed procedures are properly identified and tracked to completion and ensure Technical Specifications are met.

The cause of the missed surveillance was personnel error that resulted from non-adherence to procedural requirements. Appropriate management attention has been taken with the individuals involved. The MSTP for Procedure 8.5.1.3 has been separated into two separate nodes, one for the "A" Loop and one for the "B" Loop. The due dates for each loop have been verified to be correct.

The missed Technical Specification surveillance requirement was identified with the plant at 100 percent power with the reactor mode selector switch in the RUN position. The Reactor Vessel pressure was 1037 psig with the reactor water at saturation temperature for the reactor pressure. This event posed no threat to the public health and safety.

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
PILGRIM NUCLEAR POWER STATION	05000-293	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 of 5
		95	009	00	

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

DESCRIPTION

On August 21, 1995, during a Quality Assurance Department audit of the Core Spray System, the Auditor discovered that Surveillance Procedure 8.5.1.3, "Core Spray Motor Operated Valve Quarterly Operability Test" had not been performed for the "B" Loop motor operated valves (MO-1400-24A/B and MO-1400-3A/B) prior to the Master Surveillance Tracking Program (MSTP) dead date of May 7, 1995. On April 7, 1995 MSTP Node 2051 (Procedure 8.5.1.3, "Position Indication Test") and 2052 (Procedure 8.5.1.3, "Quarterly Valve Operability Test") had been signed as complete on the MSTP master schedule and did not identify that only the "A" Loop portion of the surveillance procedure had been performed. Based on the completion signature on the Master MSTP log, a new due date of July 8, 1995 was established for MSTP Nodes 2051 and 2052. The new due date was correct for the "A" Loop valves but the new due date of July 8, 1995 was incorrect for the "B" Loop which remained dead on May 7, 1995. This error was not identified at the time. The "B" Core Spray Loop was declared operable on May 9, 1995 without having performed the Technical Specification required quarterly valve operability testing. Therefore, the action statement of Technical Specification 3.5.A.2 had not been met during the period from May 9, 1995 to June 23, 1995. On June 23, 1995, Surveillance Procedure 8.5.1.3 was satisfactorily performed at 1407 hours and confirmed the continued operability of the "B" Core Spray Loop.

Although the previously completed Procedure 8.5.1.3 clearly identified that only the "A" Loop valves had been tested on April 7, 1995, a "Nuclear Watch Engineer (NWE) Surveillance Test Review Form" and "Problem Report" (PR) were not initiated to document the non-performance of the "B" Loop testing as required by Procedure 1.8, "Master Surveillance Tracking Program", and Procedure 1.3.34, "Conduct of Operations". Performance of these procedural requirements provide the necessary assurance that partially performed procedures or surveillances are properly identified and tracked to completion to ensure the requirements of the Technical Specifications continue to be met.

The missed surveillance requirement was identified with the plant at 100 percent reactor power with the reactor mode selector switch in the RUN position. The reactor vessel pressure was 1037 psig with the reactor water at saturation temperature for the reactor pressure. This event posed no threat to the public health and safety.

ROOT CAUSE

The cause of this event was licensed operator error. On April 7, 1995, Surveillance Procedure 8.5.1.3, Section 11.0, "Acceptance Verifications and Signoff" was completed by the NWE indicating the acceptance criteria of the surveillance procedure had been met. Procedure step 11.3.a/b was also signed off by the Nuclear Operating Supervisor (NOS) that stated "If acceptance criteria was met, sign MSTP Node 2052 (Procedure 8.5.1.3, "Quarterly Valve Operability Test") and Node 2051, (Procedure 8.5.1.3, "Position Indication Test"). Although Procedure Steps 11.3.a/b had been annotated "for 'A' valves", the NWE failed to initiate the "NWE Surveillance Test Review Form" and Problem Report (PR) as required by Procedure 1.8 and Procedure 1.3.34. Generation of the "Test Review Form" and Problem Report would have provided the necessary procedural controls to have precluded this event.

LICENSEE EVENT REPORT (LER)

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

CONTRIBUTING CAUSE

Some PNPS procedures, when developed, contained procedural guidance for the testing of multiple trains/loops of a given system. In these instances, testing is required to be completed before the procedure and MSTP can be signed off as complete. During recent outages, PNPS has been utilizing the "Loop Outage Concept" where for example, all "A" loop systems are taken out of service for maintenance and testing. Following completion of the "A" loop maintenance and testing, the "A" loops are returned to service and the "B" loops are then removed for maintenance/testing etc.

This concept created the need for additional controls to ensure completion of all maintenance/testing prior to procedure or MSTP signoff. The "NWE Surveillance Test Review Form", and "Problem Report" as discussed in Procedures 1.8 and 1.3.34 provide these necessary controls.

CORRECTIVE ACTION

Appropriate management attention/action has been taken regarding the NWE and NOS that signed off Surveillance Procedure 8.5.1.3 on April 7, 1995 without having initiated the documentation required by Procedures 1.8 and 1.3.34.

New MSTP Nodes have been generated for Procedure 8.5.1.3 to separate the "A" and "B" Loops into separate MSTP Nodes as follows:

- Node 2051, Loop "A" Valve Position Indication Test
- Node 2052, Loop "A" Quarterly Valve Operability
- Node 2054, Loop "B" Valve Position Indication Test
- Node 2060, Loop "B" Quarterly Valve Operability

An Operations Engineer (SRO) and the Plant Repetitive Task Coordinator (PRTC) reviewed multiple loop operations surveillance procedures to identify other similar cases. There were eight multiple loop surveillance procedures performed during the recent Refueling Outage (RFO-10). No other occurrences were found that had not been fully completed.

A review of other (non RFO-10) Operations Surveillance procedures was performed. Thirteen multiple loop procedures were identified. These procedures are now split into separate "A" and "B" loop Nodes within the MSTP. All other discipline surveillance procedures had previously been split into separate MSTP Nodes. The above actions are believed adequate to preclude recurrence of this event.

The System Engineer for the Core Spray System reviewed the Nucleis Computer Database to determine if other work during the time interval of May 7, 1995 through June 23, 1995 had occurred that may have satisfied the Technical Specification requirements of the quarterly testing. No other testing was identified that would satisfy the Technical Specification requirements.

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SAFETY SIGNIFICANCE

This event posed no threat to public health and safety.

Two independent loops are provided as a part of the Core Spray System design. Each loop consists of a core spray pump, a sparger ring, a spray nozzle, and the necessary piping, valves and instrumentation. In case of low water level in the Reactor Vessel or high pressure in the Drywell, the Core Spray System, when reactor vessel pressure is low enough, automatically sprays water onto the top of the fuel assemblies in time and at a sufficient flow rate to cool the core and limit fuel clad temperature.

The Core Spray system provides protection of the core for a large break in the Nuclear System when the Feedwater System, Control Rod Drive water pumps, Reactor Core Isolation Cooling (RCIC), and the High Pressure Coolant Injection (HPCI) are unable to maintain reactor vessel water level.

The protection provided by the Core Spray System also extends to a small break in which the Feedwater System, Control Rod Drive Water pumps, RCIC, and HPCI are all unable to maintain the reactor vessel water level and the Automatic Depressurization System has operated to lower the reactor vessel pressure so LPCI and the Core Spray System can provide core cooling.

The satisfactory performance of Procedure 8.5.1.3 on June 23, 1995 confirmed the continued operability of both loops of the Core Spray System to perform its design function.

This report is submitted in accordance with 10 CFR 50.73(a)(2)(i)(B) because the requirements of Technical Specification 3.5.A.2 were not met during the period of May 9, 1995 to June 23, 1995.

SIMILARITY TO PREVIOUS EVENTS

A review of Licensee Event Reports (LERs) issued since 1984 was conducted. The review focused on reports submitted in accordance with 10 CFR 50.73(a)(2)(i)(B) involving surveillance procedures that had been signed on the MSTP as having been fully completed but were actually partially or not fully completed. The review identified related instances reported in LERs 91-002-00, 92-012-00, and 93-008-00.

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For LER 91-002-00, it was determined that one of the five Salt Service Water System (SSWS) pumps had not been surveillance tested once per three months as specified by Technical Specification 4.5.B.1.b. Specifically, the pump had not been surveillance tested during the period December 13, 1990 to January 17, 1991. The pump was surveillance tested on January 17, 1991 with satisfactory as-found results. The cause was an error (inappropriate instructions) in the procedure used when a system or component is inoperable. The error resulted in signing the MSTP for an inoperable component test even though the pump was not tested. The pump was not tested because the other four SSWS pumps were tested and were operable.

For LER 92-012-00, it appeared the Neutron Monitoring System Recirculation Flow Converters had not been calibrated once per cycle as specified by Technical Specification 4.2.C. Specifically, the recirculation flow converters may not have been calibrated during the period July 24, 1990, to September 16, 1992. This period, in excess of 25 months, exceeded the once-per-cycle definition in Technical Specifications. The cause was utility non-licensed personnel error upon completion of the functional test of Procedure 8.M.2-3.6.5 on February 12, 1992. A supervisor signed-off the MSTP for performance of the calibration test and functional test when only the functional test was performed. Corrective action taken included performance of the calibration on September 16, 1992, and correction of the MSTP to reflect when the calibration was performed.

For LER 93-008-00 it was determined that the Control Room High Efficiency Air Filtration System Relative Humidity Switches (Humidistats) had not been functionally tested once-per-cycle as specified by Technical Specification 4.7.B.2.d. Specifically, the humidistats had not been functionally tested during the period July 1, 1988, to January 23, 1992. This period, in excess of 42 months, exceeded the once-per-cycle definition in Technical Specifications. The cause was utility non-licensed personnel error in the non-performance of the functional test and subsequent review of Procedure 8.E.47.1, conducted on March 10, 1990. An Instrumentation and Control (I&C) Supervisor signed-off the MSTP for performance of the functional test when a portion of the test was not performed. Initial action taken included I&C verifying the performance of the functional test on January 23, 1992, with satisfactory as-found results. Corrective Action taken includes training for I&C Supervisor review of completed surveillance procedures.

ENERGY INDUSTRY IDENTIFICATION (EIIS) CODES

COMPONENTS

CODES

Motor Operated Valves (MOV-1400-24A/B and MOV-1400-3A/B) ISV

SYSTEMS

Core Spray System BM