



PECO ENERGY

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10CFR 50.73

June 17, 1994
Docket No. 50-353
License No. NPF-85

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

SUBJECT: Licensee Event Report
Limerick Generating Station - Unit 2

This LER reports an event which resulted in a condition prohibited by Technical Specifications (TS) in that the 'B' Inboard and Outboard Main Steam Isolation Valves were inoperable, and the required TS actions were not taken in the required time as a result of the failure to perform a surveillance test procedure.

Reference: Docket No. 50-353
Report Number: 2-94-006
Revision Number: 00
Event Date: January 10, 1994
Discovery Date: May 20, 1994
Report Date: June 17, 1994
Facility: Limerick Generating Station
P.O. Box 2300, Sanatoga, PA
19464-2300

This LER is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

Very truly yours,

KOS:cah

cc: T. T. Martin, Administrator Region I, USNRC
N. S. Perry, USNRC Senior Resident Inspector, LGS

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LICENSEE EVENT REPORT (LER)

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TITLE (4) This LER reports a condition where the 'B' Inboard and Outboard MSIVs were inoperable and the required TS Actions were not taken due to a failure to perform a ST.

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 NAMES		DOCKET NUMBER(S)	
0	1	10	94	006	0	0	0	6	1	7	94	0 5 0 0 0

REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

OPERATING MODE (9)	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	20.405(a)(1)(ii)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
1	20.405(a)(1)(iii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
	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)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
J. L. Kantner - Manager, Experience Assessment	6 1 0 3 2 7 - 1 2 0 0

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces - i.e. approximately fifteen single-space typewritten lines) (16)

On 5/20/94, an Instrumentation and Controls (I&C) supervisor identified that the 'B' Inboard and Outboard Main Steam Isolation Valves (MSIVs) were out of surveillance since 1/10/94. Operations personnel were immediately notified and the valves were satisfactorily tested on 5/20/94 at 1620 hours. The actual and potential consequences of this event were minimal in that the MSIVs were verified to be operable following the event, and would have functioned as designed had an accident or operating transient occurred during the time period in which the valves were out of surveillance. The primary cause of this event was a less than adequate review of Surveillance Test (ST) data by the system manager which led to an incorrect decision not to perform the 'B' Inboard and Outboard MSIV stroke test. The failure to stroke the valves during the next scheduled performance was due to unclear procedural guidance and less than adequate pre-job briefing to the technicians on the change to the requirements and the scope of the revised I&C STs. Corrective actions include: a review of this event with Site Engineering personnel along with expectations on how to confirm whether a procedure has been satisfactorily complete, and review and revision as appropriate of the specific I&C ST procedures to more clearly identify the need to stroke the MSIVs.

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

Unit Conditions Prior to the Event:

Unit 2 was in Operational Condition 1 (Power Operation) at 100% power level.

On September 17, 1993, the quarterly Inservice Inspection (ISI) Surveillance Test (ST) Procedure ST-1-041-200-2, "Main Steam Isolation Valves Quarterly Valve Test," was satisfactorily performed for the 'B' MSIV. Technical Specifications (TS) Section 4.0.5, "Surveillance Requirements for Inservice Inspection and Testing," requires the Surveillance Requirements (SR) interval for a quarterly ISI SR to be 92 days, and allows a maximum extension of 25% of the SR interval (i.e., 92 days plus an extension of 23 days). Therefore, the next performance of procedure ST-1-041-200-2 was due by January 10, 1994.

Description of the Event:

On May 20, 1994 at 1620 hours, during a review of the Unit 2 Main Steam Isolation Valve (MSIV, EIIS:ISV) Surveillance Test (ST) procedures, an Instrumentation and Controls (I&C) supervisor identified that valves HV-41-2F022B and HV-41-2F028B, the 'B' Inboard and Outboard MSIVs, were out of surveillance since they had not been stroked as required by TS 4.0.5. Operations personnel were immediately notified and the valves were satisfactorily tested on May 20, 1994 at 2030 hours using a partial performance of procedure ST-2-041-616-2, "RPS-MSIV Closure; Division 1A, Channel A1 Functional Test (ZS-41-222A, ZS-41-228A, ZS-41-222B, ZS-41-228B)." The ST procedure and the affected valves were out of surveillance since the end of the surveillance grace period which occurred on January 10, 1994.

The MSIV quarterly valve test, procedure ST-1-041-200-2, was scheduled to be performed on January 5, 1994 to satisfy TS Section 4.0.5 requirements. In lieu of actual performance of this test, a Test Results Evaluation (TRE) was processed by the system manager in accordance with procedure A-43, "Surveillance Testing Program." This TRE was written to take credit for stroking these valves during the performance of I&C procedures ST-2-041-616-2 on December 20, 1993 and ST-2-041-619-2 "RPS- Main Stream Line Isolation Valve - Closure, Division II B, Channel B2 Functional Test (ZS-41-222B, ZS-41-228B, ZS-41-222D, ZS-41-228D)," performed on January 4, 1994, thereby intending to satisfy the SR.

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TEXT (if more space is required, use additional NRC Form 366A's) (17)

These I&C ST procedures were written to test the Reactor Protection System (RPS, EIIS:JC) logic by verifying that when an MSIV closure is sensed, the appropriate limit switch contacts in the logic are actuated as required by TS Table 4.3.1.1-1 Item 5. However, at the time the I&C ST procedures were performed, a plant condition existed that placed the logic in the tripped condition for both the 'B' Inboard and Outboard MSIVs feeding RPS, and therefore the logic could not be tested.

Since the logic was already in the tripped condition as required by the Action statement of TS Section 3.3.1, the surveillance on the logic for these valves was not required to be performed per TS Section 4.0.3 according to TS Section 4.0.3 states that surveillance requirements do not have to be performed on inoperable equipment. The ST procedure was properly signed off for the plant conditions and properly recorded in the ST scheduling module as "Satisfactory."

On February 4, 1994, the system manager revised procedures ST-2-041-616-2 and ST-2-041-619-2 to incorporate a reference to TS Section 4.0.5, along with a specific signoff step to document the requirement that the A & B Inboard and Outboard MSIVs be stroked to satisfy SR 4.0.5. Procedure ST-1-041-200-2 was then cancelled on February 4, 1994.

On March 16, 1994, and March 17, 1994, procedures ST-2-041-616-2 and ST-2-041-619-2, respectively, were performed by I&C technicians to satisfy the quarterly surveillance requirements. Again, plant conditions were such that the RPS logic for both the 'B' Inboard and Outboard MSIVs was tripped and the RPS logic was not tested. However, the valves should have been stroked to satisfy TS 4.0.5 requirements and they were not. These tests were incorrectly signed off as "Satisfactory." This contributed to the length of time the out of surveillance condition existed for the 'B' MSIVs.

As a result of the ST procedure being out of surveillance, the 'B' Inboard and Outboard MSIVs had been inoperable for 130 days. TS Section 3.4.7 requires that with both MSIVs in a line inoperable, a plant shutdown to at least Hot Shutdown within the next 12 hours and Cold Shutdown within the following 24 hours is required. When the valves became inoperable on January 10, 1994, upon expiration of the surveillance interval and allowable grace, the valves were not declared inoperable since plant personnel were unaware that the ST procedure had not been performed and affected valves were out of surveillance. This resulted in a failure to comply with the corresponding TS Action statement of TS Section 3.4.7 in the specified time period. Therefore, this report is being submitted in accordance with the requirements of 10CFR50.73(a)(2)(i)(B).

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

Analysis:

The actual and potential consequences of this event were minimal in that the affected MSIVs were verified to be capable of being closed following the event, and would have functioned as designed had an accident or operating transient occurred during the time period in which the valves were out of surveillance. There was no release of radioactive material to the environment as a result of this event.

Cause of the Event:

The primary cause of the event is a less than adequate evaluation and review of procedure ST-1-041-200-2 in that the system manager did not review the actually performed ST procedure to ensure that the 'B' Inboard and Outboard MSIVs had been stroked which led to an incorrect decision not to perform the stroke test. The system manager relied upon the information in the computer based Plant Information Management System (PIMS), but did not understand that the procedure could be signed off satisfactorily without stroking the valves. The I&C ST procedures had not been written to satisfy the TS 4.0.5 requirement to stroke the MSIVs, and therefore did not contain a signoff step which would require an "Unsatisfactory" test results signoff if the valves were not stroked.

The failure to stroke the valves on March 16, 1994 and March 17, 1994 was due to unclear directions in the I&C ST procedures to the technicians defining the conditions when the valves needed to be stroked and how this was to be accomplished. A less than adequate pre-job briefing by the foreman to the technicians contributed to this event. The briefing should have described the change to the requirements and scope of the I&C STs following the procedure revisions.

Corrective Actions:

All Unit 1 and Unit 2 MSIV ST procedures were reviewed to ensure TS 4.0.5 was being met and in surveillance. All other valves had been properly stroked and remained in surveillance.

This event will be reviewed with Site Engineering personnel via a self check memorandum by July 30, 1994. Additionally, expectations concerning how to confirm satisfactory completion of a procedure or test will be disseminated to Site Engineering personnel by July 30, 1994.

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

The appropriate Unit 1 and Unit 2 MSIV ST-2 procedures will be revised to more clearly identify the TS 4.0.5 requirement to stroke the MSIVs and the need to sign the test off as "Unsatisfactory" if the valves are not stroked.

This event will be discussed in I&C All Hands meetings by July 8, 1994.

Expectations regarding reviewing revisions to procedures as part of pre-job briefings will be re-emphasized to all Maintenance/I&C supervisors through a training bulletin.

Previous Similar Occurrences:

LERs 1-92-009, 89-001, 88-003, 87-054, and 86-057 all reported overdue STs as a result of personnel error. However, none of these LERs were a result of a less than adequate evaluation of ST results. Therefore, the previous corrective actions could not have prevented this event.