

EXPIRES 04/30/98

### LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 90.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), 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) <p style="text-align: center;">Millstone Nuclear Power Station Unit 2</p>	DOCKET NUMBER (2) <p style="text-align: center;">05000336</p>	PAGE (3) <p style="text-align: center;">1 OF 3</p>
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TITLE (4)  
Insufficient verification of boron injection flowpaths

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
04	23	97	97	-- 020 --	01	06	30	97	FACILITY NAME
									DOCKET NUMBER

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)							
POWER LEVEL (10)	000	20.2201(b)		20.2203(a)(2)(v)		<input checked="" type="checkbox"/> 50.73(a)(2)(i)		50.73(a)(2)(viii)	
		20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)	
		20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71	
		20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER	
		20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below # NRC Form 366A	
20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)					

**LICENSEE CONTACT FOR THIS LER (12)**

NAME <p style="text-align: center;">R. G. Joshi, MP2 Nuclear Licensing Manager</p>	TELEPHONE NUMBER (Include Area Code) <p style="text-align: center;">(860) 440-2080</p>
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**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

<b>SUPPLEMENTAL REPORT EXPECTED (14)</b>				<b>EXPECTED SUBMISSION DATE (15)</b>		MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	NO						

**ABSTRACT** (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On April 23, 1997 it was discovered that Technical Specification Surveillance Requirement 4.1.2.1.a was not being performed on the B High Pressure Safety Injection Pump suction and discharge power operated valves. This Technical Specification surveillance requires the valves to be operated to ensure that a viable boron injection flow path is available. Upon further review it was discovered that Technical Specification Surveillance Requirement 4.1.2.1.a was also not being performed for another boric acid flow path. The power operated valves on the discharge line of the charging pumps were also not being tested.

The cause of this event was failure to properly incorporate Technical Specification surveillance requirements into plant surveillance procedures.

Corrective actions for this deficiency include revising the appropriate surveillance procedure to ensure that the power operated valves for all credited flow paths are properly tested. An ongoing review of Technical Specification surveillance procedures to ensure compliance with Technical Specifications surveillance requirements shall be completed.

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**LICENSEE EVENT REPORT (LER)**  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
Millstone Nuclear Power Station Unit 2	05000336	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		97	- 020 -	01	

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

**I. Description of Event**

On April 23, 1997 it was discovered that Technical Specification Surveillance Requirement 4.1.2.1.a was not being performed on the B High Pressure Safety Injection (HPSI) [BQ] Pump suction and discharge power operated valves [ISV]. This Technical Specification surveillance requires the valves to be operated to ensure that a viable boron injection flow path is available. Upon further review it was discovered that Technical Specification Surveillance Requirement 4.1.2.1.a was also not being performed for another boric acid flow path. The power operated valves on the discharge line of the charging pumps were also not being tested. At the time of discovery of this event, the unit was defueled.

Technical Specification Surveillance Requirement 4.1.2.1.a requires the boron injection flow path be demonstrated operable at least once per 7 days by exercising all testable power operated valves in the flow path required for boron injection through at least one complete cycle. The associated surveillance procedures for this requirement tests the power operated valves in the A and C HPSI Pump flowpaths, but did not test the power operated valves in the B HPSI pump and charging pump flowpaths. A review of operational logs for the period January 1995 to April 1997 identified that the B HPSI pump flowpath is believed to have been the credited flowpath at some point in time between April 1995 and June 1995, and is also believed to have been the credited flowpath at some time prior to the beginning of the review period (January 1995). Additionally, the charging pumps are believed to have been the credited flowpath on numerous occasions. A charging header stop valve and the charging loop isolation valves, located between the charging pumps and the Reactor Coolant System (RCS) [AB], were not tested in accordance with Technical Specification 4.1.2.1. Therefore, the Technical Specification 3.1.2.1 requirement to maintain at least one boron injection flow path operable was not satisfied.

This event is being reported in accordance with 10 CFR 50.73(a)(2)(i)(B), any operation or condition prohibited by the plant's Technical Specifications.

**II. Cause of Event**

The cause of this event was failure to properly incorporate Technical Specification surveillance requirements into plant surveillance procedures.

**III. Analysis of Event**

The refueling water storage tank (RWST) supplies borated water to the RCS to provide shutdown margin for the reactor core. The purpose of boron injection is to reduce shutdown risk. One of the boron injection flow path options is a HPSI pump and its associated valves and piping. Three HPSI Pumps are provided, with the A and C Pumps supplying Facility 1 and Facility 2 respectively. The B HPSI pump can be used as the credited flow path for either facility, by opening the B HPSI Pump suction and discharge cross-tie valves. It is used when one of the other HPSI Pumps is out of service.

The Charging System can also be used as a credited flowpath for boron injection. The charging pumps supply borated water to the RCS from the boric acid storage tank or from the RWST.

The suction and discharge valves for the B HPSI Pump and the associated flow path are tested on a quarterly basis, ensuring their operability. The discharge valves for the charging pumps are also tested on a quarterly basis, ensuring their operability. Therefore, this event was not safety significant.

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

IV. Corrective Action

As a result of this event, the following actions have been, or will be performed.

1. The appropriate surveillance procedure shall be revised prior to entry into Mode 6 from the current outage to ensure that the power operated valves for all credited flowpaths are properly tested.
2. Technical Specification surveillance procedures will be reviewed to ensure compliance with Technical Specifications surveillance requirements as part of Millstone Unit 2 Operational Readiness Plan (Reference NOV 336/96-08-07, NNECO Commitment No. B16076-2).

V. Additional Information

Similar Events

Previous LERs that involve deficient surveillance procedures include:

- LER 96-023: Discrepancies Found in Various Technical Specification Required Valve Lineups
- LER 96-024: Inadequate Surveillances for Reactor Protection System and Engineered Safety Actuation System Response Time Testing
- LER 96-025: Enclosure Building Filtration Actuation Signal/Auxiliary Exhaust Actuation Signal Interlock Not Tested Periodically
- LER 96-026: Incomplete Technical Specification Required Surveillance - Valve Lineups Inside Containment
- LER 96-035: Failure to Perform Periodic Surveillance Testing for Interlock Function Associated with the Main Steam Isolation System Function of the Engineered Safeguards Actuation System
- LER 96-037: Inadequate Surveillance Procedure for Verifying Average Water Temperature at the Unit 2 Intake Structure
- LER 96-038: Inadequate Surveillance Procedures Used to Verify Emergency Diesel Generator Operability
- LER 96-039: Failure to Perform Periodic Surveillance Testing for Containment Purge System Containment Isolation Valves in Accordance with Technical Specification 4.9.10
- LER 96-040: Inadequate Surveillance Procedure for Verifying Motor Circuit Breaker Position in Accordance with Technical Specification Requirements 4.1.2.3.2, 4.1.2.3.3, and 4.4.1.4
- LER 97-003: Surveillance Procedure SP2618C Fails to Meet Technical Requirements Manual Surveillance Requirements
- LER 97-007: Inadequate Surveillance Procedure for Verifying Operability of Reactor Coolant System Vents
- LER 97-016: Technical Specification 4.0.4 Incorrectly Applied To Surveillance Requirements For The TDAFW Pump

Energy Industry Identification System (EIS) codes are identified in the text as [XX].