

Docket No. 50-336  
B17926

Attachment 2

Millstone Nuclear Power Station, Unit No. 2

NNECO's Submittal of  
LER 99-015-00

November 1999

# 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: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the 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. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

<b>FACILITY NAME (1)</b> Millstone Nuclear Power Station Unit 2	<b>DOCKET NUMBER (2)</b> 05000336	<b>PAGE (3)</b> 1 OF 3
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**TITLE (4)**  
 Unanticipated Reactor Protection System Trip Signal Generation On Low Steam Generator Level

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
09	19	99	99	-- 015 --	00	11	21	99	FACILITY NAME	DOCKET NUMBER

<b>OPERATING MODE (9)</b>	3	<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)</b>									
<b>POWER LEVEL (10)</b>	000	20.2201(b)			20.2203(a)(2)(v)			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)			X		50.73(a)(2)(iv)	OTHER
		20.2203(a)(2)(iii)			50.36(c)(1)			50.73(a)(2)(v)		Specify in Abstract below of NRC Form 366A	
20.2203(a)(2)(iv)			50.36(c)(2)			50.73(a)(2)(vii)					

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

<b>NAME</b> R. Joshi, MP2 Acting Regulatory Compliance Supervisor	<b>TELEPHONE NUMBER (Include Area Code)</b> (860) 440-2080
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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>		
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

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

On September 19, 1999, with the plant in Mode 3 with a plant cool down in progress following a normal reactor shutdown, an unanticipated Low Steam Generator Water Level actuation signal was received on four out of four Reactor Protection System (RPS) Channels. The Low Steam Generator Level RPS trip was set consistent with Technical Specifications at 49.5%. Steam Generator Level was being manually controlled between 45 percent (%) and 75% and "maintained in the lower end of the band until cooldown rate reduces" in accordance with plant procedures. Actual Steam Generator water level was decreased to less than 49.5%, constituting an actual plant parameter satisfying the requirement for RPS actuation.

The plant was in a mode for which actuation of the Steam Generator Low Water Level RPS trip was not required to mitigate the consequence of an accident. Additionally, no component changed state as a result of the trip since the control rods had been previously fully inserted and the TCB's had been opened.

The cause of this event was determined to be organizational and programmatic deficiencies in that operating procedures did not contain warnings for pre-planned ESF or RPS trips. As a result of this event, applicable procedures will be revised to identify pre-planned Engineered Safety Feature (ESF) and Reactor Protection System (RPS) trips.

This event is being reported pursuant to 10CFR50.73(a)(2)(iv), as an event or condition that resulted in an automatic actuation of any Engineered Safety Feature (ESF), including the RPS.

**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
		99	- 015 -	00	

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

I. Description of Event

On September 19, 1999, with the plant in Mode 3, with the Trip Circuit Breakers (TCB's) open following a normal reactor [RCT] shutdown, and with a plant cool down in progress, an unanticipated Low Steam Generator Water Level actuation signal was received on four out of four Reactor Protection System (RPS) [JC] Channels. Technical Specification (TS) 3.3.1.1 requires that the Low Steam Generator Level RPS trip be set at greater than or equal to ( $\geq$ ) 48.5% and the actual setpoint was set at 49.5%. Steam Generator Level was being manually controlled between 45 percent (%) and 75% and "maintained in the lower end of the band until cooldown rate reduces" in accordance with the approved plant procedure (OP-2207, Plant Cooldown) at the time of this event.

At the time of the event, the control rods had been fully inserted and the TCB's had been opened as part of the normal plant shutdown and cooldown. Following entry into Mode 3, the Steam Generator Low Water Level trip was not required by TS 3.3.1.1 to be OPERABLE. However, the RPS had not been removed from service at that time. Actual Steam Generator water level was decreased to less than 49.5%, constituting an actual plant parameter satisfying the requirement for RPS actuation. Therefore, the RPS actuation generated due to the Steam Generator Low Water Level condition must be considered a valid unplanned ESF actuation even though water level was intentionally lowered to less than the RPS setpoint consistent with approved plant procedures.

The discrepancy between Low Steam Generator Water Level actuation signal trip setpoint and the guidance contained within the plant cooldown procedure resulted from a change in the analysis of a Loss of Normal Feedwater event. This analysis had been implemented in accordance with the Design Change Process and had been included in Technical Specification Amendment 232.

This event is being reported pursuant to 10CFR50.73(a)(2)(iv), as an event or condition that resulted in an automatic actuation of any Engineered Safety Feature (ESF), including the RPS.

II. Cause of Event

The cause of this event was determined to be organizational and programmatic deficiencies in that operating procedures did not contain warnings for pre-planned ESF or RPS trips. Contributing to this event was the failure to adequately incorporate into plant procedures, changes to the trip setpoint resulting from changes to the plant's Technical Specifications.

III. Analysis of Event

The RPS monitors the Nuclear Steam Supply System to effect a reactor shutdown if conditions deviate from a preset operating range. The Steam Generator Water Level - Low Trip provides core protection by preventing the operation with the steam generator water level below the minimum volume required for adequate heat removal capacity and assures that the design pressure will not be exceeded.

The plant was in a mode for which actuation of the Steam Generator Low Water Level RPS trip was not required to mitigate the consequence of an accident and water level was being intentionally lowered in accordance with approved operating procedures. Additionally, no component changed state as a result of the trip since the control rods had been previously fully inserted and the TCB's had been opened. Therefore, this event is not considered safety significant.

**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	3 OF 3
		99	-- 015 --	00	

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, implemented:

1. The plant procedure "OP-2207, Plant Cooldown" has been revised to identify pre-planned Engineered Safety Feature (ESF) and Reactor Protection System (RPS) actuations.
2. Applicable operating procedures will be revised to identify pre-planned Engineered Safety Feature (ESF) and Reactor Protection System (RPS) trips. This revision will be completed by April 18, 2000.
3. Implementation of Technical Specification Amendments 226 and 232 will be reviewed to ensure that setpoint changes have been incorporated and accounted for in the guidance for parameter control within the applicable procedures. This review will be completed by February 15, 2000.

V. Additional Information

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

Similar Events

Not Applicable