

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: 50.0 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 (IT-
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)

Millstone Nuclear Power Station Unit 2

DOCKET NUMBER (2)

05000336

PAGE (3)

1 of 3

TITLE (4)

Failure to Perform Periodic Surveillance Testing for Interlock Function Associated with the Main Steam Isolation
System Function of the Engineered Safeguards Actuation System

EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER	
10	09	96	96	-- 035 --	00	12	09	96	FACILITY NAME	DOCKET NUMBER	
OPERATING MODE (9)		5	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)(iii)		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 or in NRC Form 366A		
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)				

LICENSEE CONTACT FOR THIS LER (12)

NAME

R. T. Laudenat, MP2 Nuclear Licensing Manager

TELEPHONE NUMBER (Include Area Code)

(860) 444-5248

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).	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION	MONTH	DAY	YEAR
---	--	------------------------	-------	-----	------

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

On October 9, 1996 during an Instrument & Controls (I&C) department review of a procedure change to a surveillance procedure, it was identified that the procedure did not note all the bistables that trip during the performance of the functional test. On November 7, 1996, an engineering evaluation determined that complete functional testing of the Engineered Safety Feature Actuation System logic for the steam generator (SG) low pressure signal was not being periodically performed as required by Technical Specification 3.3.2.1. The current testing did not verify an interlock trip function between the bistables on both SGs instrument channels.

The cause of this event was a lack of knowledge by the people involved in surveillance procedure development. These people had not received adequate training on the design basis of this system.

As a result of this event, the surveillance procedure has been revised and testing of the interlock function has been successfully completed. A review is on-going which includes an assessment of Technical Specification surveillance requirements to address the concerns identified in Generic Letter 96-01. Training will be provided to I&C and Operations Department surveillance procedure development personnel on the information produced by the Generic Letter 96-01 review. For the interim period, awareness briefings will be held with I&C and Operations Department surveillance procedure writing personnel. The procedures that direct the process of writing and revising surveillance procedures will be revised to incorporate the process developed in response to Generic Letter 96-01.

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)				PAGE (3)
		YEAR	SEQUENTIAL NUMBER		REVISION NUMBER	
		96	--	035	--	00
Millstone Nuclear Power Station Unit 2	05000336					2 of 3

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

I. Description of Event

On October 9, 1996 during an Instrument & Controls (I&C) department review of a procedure change to Surveillance Procedure (SP) 2402P, "SPEC 200 Safety Parameters Functional Test," it was identified that the procedure did not note all the bistables that trip during the performance of the functional test. An engineering evaluation was initiated to review the design and testing of the affected logic circuit. At the time of discovery of this event, the unit was in Mode 5 at 0 percent power.

On November 7, 1996, an engineering evaluation determined that complete functional testing of the Engineered Safety Feature Actuation System (ESFAS) [JE] logic for the steam generator (SG) [SG] low pressure signal was not being periodically performed as required by Technical Specification 3.3.2.1. The current testing did not verify an interlock trip function between the bistables [RLY] on both SGs instrument channels. The interlock function provides a main steam isolation signal (MSIS) in both facilities of the ESFAS on a SG low pressure sensed on either SG. This interlocking trip is designed to provide signal redundancy in the MSIS/ESFAS logic to protect against a single failure to the actuation circuitry. This design function had not been recognized by the surveillance procedure writers in the past and, therefore, the requirement to test this feature had not been included in the appropriate surveillance procedure.

Technical Specification 3.3.2.1 provides the operability and testing requirements for the Engineered Safety Feature Actuation System Instrumentation including the main steam line isolation function initiated by a SG Pressure - Low signal. Testing of this design function for the SG low pressure logic had not been performed in the past. Therefore, this event is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B), any operation or condition prohibited by the plant's Technical Specifications.

Testing of this interlock feature was completed satisfactorily on November 26, 1996.

II. Cause of Event

The cause of this event was a lack of knowledge by the people involved in the surveillance procedure development. These people had not received adequate training on the design basis of this system. The lack of knowledge as to the design basis of the interlock function resulted in an inadequate surveillance procedure that did not perform complete functional testing of the MSIS/ESFAS logic.

III. Analysis of Event

The pressure in each SG is sensed by four pressure transmitters. A drop in pressure to 500 psia on any two out of the four sensor channels on either SG will actuate a MSIS. In order to protect against a single failure preventing an actuation signal, the ESFAS is wired as two redundant actuation facilities. The interlocking bistable feature provides the redundant logic signal processing for the MSIS.

The interlock function had not been previously tested as part of the periodic functional testing of the ESFAS. Failure of this interlock to function could result in the failure to actuate all required MSI components on a low pressure sensed in one SG during certain postulated single failures. Testing of this interlock function has been successfully completed. This testing verified that the interlock function would have operated as designed. Therefore, this event is not safety significant.

LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)					PAGE (3)	
		YEAR	SEQUENTIAL NUMBER		REVISION NUMBER			
		96	--	035	--	00		
Millstone Nuclear Power Station Unit 2	05000336						3 of 3	

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 corrective actions have been, or will be, performed.

1. SP-2402P has been replaced with SP-2402PA, B, C, and D. These new surveillance procedures ensure that the interlock function associated with each SG low pressure logic channel is tested as required by Technical Specifications.
2. The interlock function has been satisfactorily tested with the revised surveillance procedures.
3. A review is on-going which includes an assessment of Technical Specification surveillance requirements to address the concerns identified in Generic Letter 96-01. This review will be completed by September 30, 1997.
4. Training will be provided to I&C and Operations Department surveillance procedure development personnel on the information produced by the Generic Letter 96-01 review. This training will emphasize the process utilized to ensure complete testing of logic circuits required by Technical Specifications. This training will be completed by September 30, 1997. For the interim period, awareness briefings will be held with I&C and Operations Department surveillance procedure writing personnel by January 15, 1997.
5. The procedures that direct the process of writing and revising surveillance procedures will be revised to incorporate the process developed in response to Generic Letter 96-01. This will ensure that future surveillance procedure revisions will maintain compliance with logic testing requirements. This revision will be completed by September 30, 1997.

V. Additional Information

In response to Generic Letter 96-01, "Testing of Safety-Related Logic Circuits," surveillance procedures are being reviewed to ensure that complete testing is being performed as required by the Technical Specifications. This review effort is currently in progress and is scheduled to include the MSIS logic identified in this event. However, the MSIS logic had not been reviewed at the time of this event. The discrepancy identified in this event would have been discovered during the review process for the MSIS logic. The review in response to Generic Letter 96-01 is continuing and will identify any additional discrepancies in the surveillance testing program.

Similar Events

LER 96-025: On April 1, 1996, an engineering review performed in response to Generic Letter 96-01 issues identified that an interlock between the Enclosure Building Filtration Actuation System and the Auxiliary Exhaust Actuation System was not being periodically tested. The appropriate surveillance procedure was revised and the interlocks for both trains were tested.

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