

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: 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 (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

Millstone Nuclear Power Station Unit 2

DOCKET NUMBER (2)

05000336

PAGE (3)

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TITLE (4)

Inadequate Surveillances for Reactor Protection System and Engineered Safety Actuation System Response
Time Testing

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
05	07	96	96	-- 024 --	01	02	03	97	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)(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 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)

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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

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/> 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 May 7, 1996 at 1300 and May 8, 1996 at 1417 it was identified that the response time for certain sensor channels in the Reactor Protection System (RPS) and the Engineered Safety Actuation System (ESAS) did not factor in the response time of the Foxboro Split Package Electronic Control (SPEC) 200 electronics. Therefore, the response time testing requirements of Technical Specifications 4.3.1.1.3 and 4.3.2.1.3 were not fully met. Further review since the discovery of this event has identified additional discrepancies in the response time testing of RPS and ESAS equipment.

The cause of these events was an inadequate program to ensure surveillance procedures fully implement Technical Specification requirements.

In the response to NOV 336/96-08-07, Millstone Unit 2 committed to perform a review of Technical Specification surveillance procedures to ensure compliance with Technical Specification surveillance requirements as part of the Operational Readiness Plan. This review will encompass the RPS and ESAS response time surveillance procedures to ensure that the identified discrepancies are adequately resolved.

This supplement is a complete revision. No revision bars are indicated in the text.

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

I. Description of Event

On May 7, 1996 at 1300 and May 8, 1996 at 1417 it was identified that the response time for certain sensor channels in the Reactor Protection System (RPS) [JC] and the Engineered Safety Actuation System (ESAS) [JE] did not factor in the response time of the Foxboro Split Package Electronic Control (SPEC) 200 electronics. Therefore, the response time testing requirements of Technical Specifications 4.3.1.1.3 and 4.3.2.1.3 were not fully met. Further review since the discovery of this event has identified additional discrepancies in the response times testing of RPS and ESAS equipment. At the time of discovery of this event, the unit was in Mode 5 at 0 percent power.

The surveillance procedures that were developed during the initial installation of the Foxboro SPEC 200 electronics incorrectly assumed that the response time characteristic of the SPEC 200 electronics was 0 seconds and, therefore, did not require testing. As a result, the surveillance procedures did not meet the requirements of Technical Specifications 4.3.1.1.3 and 4.3.2.1.3 which require demonstration of the RPS Response Time and ESAS Response Time, respectively.

As a result of this event, corrective actions were initiated to revise the appropriate surveillance procedures to incorporate the response time testing requirements and acceptance criteria for the SPEC 200 electronics. During the revision process, additional discrepancies in the completeness of response time testing were identified. As documented on January 13, 1997, instances were discovered where the complete RPS and ESAS circuitry was not being included as part of the response time testing. Portions that were not being tested include some components, cabling, wiring, connector pins, interposing relay devices, and plant end devices. Parameters or components affected by these discrepancies include pressurizer pressure, containment pressure, steam generator pressure, refueling water storage tank level, containment radiation monitors, and core protection calculator.

Also as the result of investigating other reportable events, additional discrepancies in response time testing have been identified. As a corrective action for LER 96-012-00, the applicability of ESAS response time requirements associated with the safety injection system Check Valve Leakoff Drain Stop Valves were investigated. In January 1997 the investigation determined that the response time testing was inadequate for the high pressure safety injection (HPSI) [BQ] system since it did not include proper testing of these stop valves. On January 3, 1997 during the investigation of LER 96-039-00, it was identified that the response time testing for the containment purge [VA] isolation function was not being correctly performed.

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, since the surveillance procedure testing did not fully meet the requirements of Technical Specifications 4.3.1.1.3 and 4.3.2.1.3.

II. Cause of Event

The cause of these events was an inadequate program to ensure surveillance procedures fully implement Technical Specification requirements.

III. Analysis of Event

The RPS monitors selected nuclear steam supply system conditions to effect reliable and rapid reactor shutdown if any one or a combination of conditions deviates from a preselected operating range. The system functions to protect the core and reactor coolant pressure boundary. The ESAS detects accident conditions and initiates the safety features systems which are designed to localize, control, mitigate, and terminate such incidents. The

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measurement of response time at the specified frequencies provides assurance that the protective and safety functions associated with each channel are completed within the time limit assumed in the accident analyses.

The discrepancies listed above are instances in which the RPS and ESAS response time testing was not complete. Therefore, the potential exists that the response time for some functions exceed their required response times. Procedures to correct the identified discrepancies are in the process of being revised. Following the approval of the procedure revisions, testing will be conducted to ensure that the time requirements of RPS and ESAS components are met. Currently, it is not expected that the response time requirements will be exceeded. However, since the response time testing was not performed in accordance with the Technical Specification requirements, this event is considered to be potentially safety significant.

IV. Corrective Action

In the response to NOV 336/96-08-07 (NNECO Commitment No. B16076-2), Millstone Unit 2 committed to perform a review of Technical Specification surveillance procedures to ensure compliance with Technical Specification surveillance requirements as part of the Operational Readiness Plan. The review will initially focus on Technical Specification surveillance procedures required for Mode 6 and defueled. Surveillance procedures required for subsequent mode changes will be reviewed prior to mode entry. This review will encompass the RPS and ESAS response time surveillance procedures to ensure that the identified discrepancies are adequately resolved.

V. Additional InformationSimilar Events

Recently submitted LERs that involve deficient surveillance procedures include:

- LER 96-023-01: Discrepancies Found in Various Technical Specification Required Valve Lineups
- LER 96-025-01: Enclosure Building Filtration Actuation Signal/Auxiliary Exhaust Actuation Signal Interlock Not Tested Periodically
- LER 96-026-00: Incomplete Technical Specification Required Surveillance - Valve Lineups Inside Containment
- LER 96-035-00: Failure to Perform Periodic Surveillance Testing for Interlock Function Associated with the Main Steam Isolation System Function of the Engineered Safeguards Actuation System
- LER 96-037-00: Inadequate Surveillance Procedure for Verifying Average Water Temperature at the Unit 2 Intake Structure
- LER 96-038-00: Inadequate Surveillance Procedures Used to Verify Emergency Diesel Generator Operability
- LER 96-039-00: Failure to Perform Periodic Surveillance Testing for Containment Purge System Containment Isolation Valves in Accordance with Technical Specification 4.9.10
- LER 96-040-00: 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

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