NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98
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.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Millstone Nuclear Power Station Unit 3	05000423	1 of 3

TITLE (4)

Failure to Completely Test the Thermal Overload Bypass Protection Logic of Safety Related Motor Operated Valves that Receive Multiple Actuation Signals

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
08	15	97	97	-- 047 --	00	09	15	97	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10)	000	20.2201(b)	20.2203(a)(2)(v)	[X] 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	TELEPHONE NUMBER (Include Area Code)
David A. Smith, MP3 Nuclear Licensing Manager	(860)437-5840

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

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

On August 13, 1997, with the unit in Mode 5, it was identified that the testing of the safety-related motor operated valves (MOVs) which receive multiple actuation signals, may not have been adequately tested to ensure that the thermal overload protection, was bypassed for each actuation signal as required by Technical Specification (TS) 3.8.4.2.1, "Electrical Power Systems, Motor-Operated Valve Thermal Overload Protection." On August 15, 1997, it was determined that the testing performed was not adequate, and that this condition was reportable. This condition was discovered and described in accordance with the Millstone Corrective Action program via Condition Report M3-97-2613.

Because proper operation of the thermal overload bypasses was not demonstrated, and this situation existed when the MOVs were required to be OPERABLE, this resulted in performance of inadequate (or incomplete) surveillances, which are equivalent to missed TS surveillances. TS 4.0.3 states, "Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation." This is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B), as a condition or operation prohibited by the unit's TS.

Although, direct verification that the thermal overload protection would be properly bypassed upon receipt of each individual signal was not performed, there were no safety consequences involved in that the portions of the circuits, which function as the thermal overload bypass circuitry, are tested during loss of power and slave relay surveillance testing.

This is a historical event and the cause is indeterminate. By inspection, the root cause is considered to be inadequate initial development of the applicable surveillance test procedures. Prior to entry into Mode 4, surveillance testing procedures will be revised and testing performed such that the thermal overload bypass function is tested for Reactor Plant Component Cooling Water valves 3CCP*MOV222 through 229 and Service Water System valves 3SWP*MOV115A and B.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)					PAGE (3)
		YEAR		SEQUENTIAL NUMBER		REVISION NUMBER	
Millstone Nuclear Power Station Unit 3	05000423	97	--	047	--	00	2 of 3

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

I. Description of Event

On August 13, 1997, with the unit in Mode 5, it was identified that the testing of the safety-related motor operated valves (MOVs) listed below, which receive multiple actuation signals, may not have been adequately tested to ensure that the thermal overload protection, was bypassed for each actuation signal as required by Technical Specification (TS) 3.8.4.2.1, "Electrical Power Systems, Motor-Operated Valve Thermal Overload Protection." On August 15, 1997, it was determined that the testing performed was not adequate, and that this condition was reportable. This condition was discovered and described in accordance with the Millstone Corrective Action program via Condition Report M3-97-2613.

- 3CCP*MOV222 Containment Recirculation Cooling Coil C Supply Valve
- 3CCP*MOV223 Containment Recirculation Cooling Coil C Supply Valve
- 3CCP*MOV224 Containment Recirculation Cooling Coil C Return Valve
- 3CCP*MOV225 Containment Recirculation Cooling Coil C Return Valve
- 3CCP*MOV226 Containment Recirculation Cooling Coil B Supply Valve
- 3CCP*MOV227 Containment Recirculation Cooling Coil B Supply Valve
- 3CCP*MOV228 Containment Recirculation Cooling Coil B Return Valve
- 3CCP*MOV229 Containment Recirculation Cooling Coil B Return Valve
- 3SWP*MOV115A Circulating Water Pumps Lubricating Water Valve
- 3SWP*MOV115B Circulating Water Pumps Lubricating Water Valve

TS Surveillance Requirement (SR) 4.8.4.2.1 states: "The thermal overload protection for the above referenced valves shall be verified to be bypassed by the appropriate accident signal(s) by performance of a TRIP ACTUATION DEVICE OPERATIONAL TEST of the bypass circuitry during COLD SHUTDOWN or REFUELING at least once per 18 months." The APPLICABILITY section of TS 3.8.4.2.1 specifies that the bypass device is required to be OPERABLE whenever the MOV is required to be OPERABLE. Because proper operation of the thermal overload bypasses was not demonstrated, and this situation existed when the MOVs were required to be OPERABLE, this resulted in performance of inadequate (or incomplete) surveillances, which are equivalent to missed TS surveillances. TS 4.0.3 states, "Failure to perform a Surveillance Requirement within the allowed surveillance interval, defined by Specification 4.0.2, shall constitute noncompliance with the OPERABILITY requirements for a Limiting Condition for Operation." This is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B), as a condition or operation prohibited by the unit's Technical Specifications.

II. Cause of Event

This is a historical event and the cause is indeterminate. By inspection, the root cause is considered to be inadequate initial development of the applicable surveillance test procedures.

III. Analysis of Event

Failure to adequately test safety-related actuation logic circuitry is safety significant. Inoperable essential electrical components required for automatic actuation of accident mitigation systems can contribute to overall risk and can place additional burden on plant operators in requiring manual actuation of required functions. Additionally, compliance with the TS surveillance requirements is essential to maintaining the validity of assumptions in the licensing basis accident analyses. The OPERABILITY of the motor-operated valves thermal overload protection and bypass devices, ensures that the thermal overload protection will not prevent the safety-related MOVs from performing their safety functions.

Failure to ensure complete testing of the thermal overload bypass logic results in testing inadequacies that constitute missed TS surveillances.

Although, direct verification that the thermal overload protection would be properly bypassed upon receipt of each individual signal was not performed, there were no safety consequences involved. The portions of the circuits which function as the thermal overload bypass circuitry, are tested during loss of power and slave relay surveillance testing.

IV. Corrective Action

While in Mode 5, there was no impact on equipment operability and no immediate corrective actions were required.

The following corrective action has been completed:

1. A review of the surveillance test procedures associated with Technical Specification 3.8.4.2.1 was performed to identify those motor operated valves receiving multiple actuation signals, and to verify that the thermal overload bypass function was tested for each actuation signal.

The following corrective action will be taken prior to entry into Mode 4:

1. Surveillance testing procedures will be revised and testing performed for each actuation signal, to verify proper operation of the thermal overload bypass function for Reactor Plant Component Cooling Water valves 3CCP*MOV222 through 229 and Service Water System valves 3SWP*MOV115A and B.

V. Additional Information

None

Similar Events

An LER discussing inadequate testing and is identified below. Various elements of the Configuration Management Program are being conducted to detect design and licensing basis problems.

LER 97-017-01 Inadequate Testing of Logic Circuits

Manufacturer Data

EIIS System Code
Reactor Plant (Closed) Component Cooling Water System.....CC
Essential & Nonessential Service Water Systems.....BI and KG

EIIS Component Code
Valve, Electrically Operated.....20