

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Millstone Nuclear Power Station Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 4 2 3	PAGE (3) 1 OF 0 3
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TITLE (4)
Inadvertant Safety Injection Due to Personnel Error by Switch Mispositioning

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 NAMES											
0	2	1	7	8	9	8	9	-	0	0	5	0	0	0	0	0	0	0	0	0
0	2	1	7	8	9	8	9	-	0	0	5	0	0	0	0	0	0	0	0	0

OPERATING MODE (9) 5	THIS REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)											
POWER LEVEL (10) 0 0 0	20.402(b)			20.402(c)			<input checked="" type="checkbox"/> 50.73(a)(2)(iv)			73.71(b)		
	20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)			73.71(c)		
	20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii)			OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
	20.405(a)(1)(iii)			50.73(a)(2)(i)			50.73(a)(2)(viii)(A)					
	20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B)					
20.405(a)(1)(iv)			50.73(a)(2)(iii)			50.73(a)(2)(x)						

LICENSEE CONTACT FOR THIS LER (12)

NAME Frances M. Marshall, Engineer, X5400	TELEPHONE NUMBER AREA CODE 2 0 3 4 4 7 - 1 7 9 1
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS
X	E C	B K R	B 4 5 5	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> 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 fifteen single-space typewritten lines) (16)

On February 17, 1989, at 2023 hours at 0% power, 14.7 psia and 132 degrees, an inadvertent safety injection (SI), with flow to the core, occurred on Train B. The Reactor Coolant System had been at reduced inventory for maintenance activities. After troubleshooting in the Solid State Protection System, the Instrument and Control technician recommended to the Supervising Control Operator (SCO) that he "reset the SI block." The SCO placed the switch in the RESET direction, allowing the pressurizer low pressure SI signal to be processed.

The charging system was restored to normal operation and the vessel level was verified to be stable within 20 minutes of the SI actuation. A containment isolation occurred, initiated by the SI actuation.

Root cause of the SI was personnel error. The SCO placed the switch in RESET instead of the BLOCK position. One of the 480V load centers, bus 32X, deenergized 2 seconds after the SI actuation due to a defective circuit breaker. The circuit breaker was replaced. As action to prevent recurrence, all operators have been counseled on the importance of being cognizant of their actions when manipulating equipment. The SCO responsible for this error was individually counseled.

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

I. Description of Event

On February 17, 1989, at 2023 hours, while operating in Mode 5 (Cold Shutdown) at 0% power, 14.7 psia and 132 degrees Fahrenheit, with the Reactor Coolant System level at the center of the hot legs, an inadvertent safety injection (SI), with flow to the core, occurred on Train B. Prior to the SI actuation, the operators were starting to fill the Reactor Coolant System (RCS), which had been at reduced inventory for maintenance activities. Both of the high pressure safety injection pumps and one of the charging pumps were locked out, as permitted by the plant Technical Specifications when the reactor coolant temperature is below 350 degrees Fahrenheit. The Safety Injection Accumulator Tanks were also locked out since RCS pressure was below 1015 psia. The remaining charging pump and the residual removal system were available to provide injection and operated as required on the SI signal. During the day shift (0800-1600 hours) on February 17, 1989, the Instrument & Controls (I&C) department had performed a surveillance on the Train B Solid State Protection System (SSPS). At 2015 hours, one of the Control Operators (CO) saw that there was an unexpected indication on one of the Engineered Safety Features (ESF) annunciator panels. An I&C technician was called to verify that the proper restoration had been performed subsequent to the performance of the SSPS surveillance. After verifying that all the switches in the SSPS cabinet were positioned correctly, the I&C technician recommended to the SCO that he "reset the SI block." The SCO then moved the Pressurizer low pressure SI switch in the RESET direction instead of the BLOCK direction, causing the SI actuation signal. The RCS pressure was at 14.7 psia and the setpoint is 1892 psia.

The Shift Supervisor (SS) determined that the SI was not required and directed the Supervising Control Operator (SCO) to terminate the injection flow. The flow to the vessel was 500 gpm. The charging system was restored to the normal operating configuration within 10 minutes of the SI actuation and the vessel level was verified to be stable within 20 minutes of the SI actuation. A containment isolation occurred, initiated by the SI actuation. This was the only other ESF actuation required, and the only other one that occurred.

II. Cause of Event

The root cause of the Safety Injection was personnel error. The SCO should have placed the switch in the BLOCK position instead of the RESET position.

III. Analysis of Event

This event is reportable under 10CFR50.73(a)(2)(iv), any event or condition that resulted in the automatic actuation of an Engineered Safety Feature. The health and safety of the public were not affected since there was no requirement for a safety injection. The Cold Overpressure Protection System was operable to protect the primary system from overpressurization. The containment isolation actuation provided protection in the event that the SI caused flooding into the containment. Immediate notification was made under 10CFR50.72(b)(2)(ii).

One of the 480V load centers, bus 32X, deenergized 2 seconds after the SI actuation. This failure was caused by a defective circuit breaker. The circuit breaker was replaced. The failure mode of the defective circuit breaker is currently being investigated. All components that are required to function on an SI actuation functioned correctly. During the restoration, two motor operated valves, the charging pump safety injection header isolation, 3SIH*MV8801B, and the charging pump miniflow recirculation isolation, 3CHS*MV8511B, did not close properly. The valves were closed manually, then subsequently adjusted and retested satisfactorily.

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

IV. Corrective Action

The immediate corrective action was to terminate the injection flow and stabilize the plant. The flow to the vessel was observed to be 500 gpm. The charging system was restored to normal within 10 minutes of the SI actuation and the vessel level was verified to be stable within 20 minutes of the SI actuation.

As an action to prevent recurrence, all licensed operators have been counseled in the importance of being cognizant of their actions when manipulating equipment. The SCO responsible for this error was also individually counseled. The Pressurizer Low Pressure SI BLOCK/RESET switch and other similar switches will be evaluated to determine if they can be changed to different switches that will require at least two actions to place the switch into the RESET position. This evaluation and changeout is scheduled to be completed by the third refueling outage.

V. Additional Information

Another event of an inadvertent safety injection actuation was described in LER 88-001, the root cause of which was determined to be a sensitive switch. There have been no other inadvertent safety injections actuations due to personnel error, in the previous two years.

EIIS Codes

System

Component

Reactor Coolant System-AB

Switch-HS

Safety Injection System-BQ

Valve-V

Charging System-CB

Circuit Breaker - BKR

Solid State Protection System-JC

NORTHEAST UTILITIES



The Connecticut Light And Power Company
Western Massachusetts Electric Company
Holyoke Water Power Company
Northeast Utilities Service Company
Northeast Nuclear Energy Company

General Offices - Selden Street, Berlin Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06414-0270
(203)665-5000

March 20, 1989
MP-12894

Re: 10CFR50.73(a)(2)(iv)

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Reference: Facility Operating License No. NPF-49
Docket No. 50-423
Licensee Event Report 89-005-00

Gentlemen:

This letter forwards Licensee Event Report 89-005-00, required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(iv), any event or condition that resulted in the automatic actuation of any Engineered Safety Feature.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

A handwritten signature in cursive script that reads "Stephen E. Scace".

Stephen E. Scace
Station Superintendent
Millstone Nuclear Power Station

SES/faj

Attachment: LER 89-005-00

cc: W. T. Russell, Region I Administrator
D. H. Jaffe, NRC Project Manager, Millstone Unit No. 3
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2 and 3

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