

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

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February 1, 1994
MP-94-86

DONALD B. MILLER, Jr.
SENIOR VICE PRESIDENT - MILLSTONE

Re: 10CFR50.73(a)(2)(v)(c)

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

Reference: Facility Operating License No. DPR-21
Docket No. 50-245
Licensee Event Report 94-003-00

Gentlemen:

This letter forwards Licensee Event Report 94-003-00 required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(v)(c).

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Donald B. Miller, Jr.
Senior Vice President - Millstone Station

DBM/JS:ljs

Attachment: LER 94-003-00

cc: T. T. Martin, Region I Administrator
P. D. Swetland, Senior Resident Inspector, Millstone Unit Nos. 1, 2 and 3
J. W. Andersen, NRC Acting Project Manager, Millstone Unit No. 1

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LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MN/98 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0031, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) Millstone Nuclear Power Station Unit 1	DOCKET NUMBER (2) 05000245	PAGE (3) 1 OF 03
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TITLE (4)
Simultaneous Inoperability of Both Channels of Steam Tunnel Ventilation Radiation Monitoring System

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
01	03	94	94	003	00	02	01	94		05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	THIS REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)										
	20.402(b)			20.405(c)			50.73(a)(2)(iv)			73.71(b)	
POWER LEVEL (10)	94	20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v) <input checked="" type="checkbox"/>			73.71(c)
		20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vi)			OTHER
		20.405(a)(1)(iii)			50.73(a)(2)(i)			50.73(a)(2)(vii)(A)			(Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(vii)(B)			
		20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(viii)			

LICENSEE CONTACT FOR THIS LER (12)

NAME Drexel N. Harris, Site Licensing	TELEPHONE NUMBER (Include Area Code) (203) 437-5903
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

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 January 3, 1994, at 1013 hours, with the plant operating at 94% power, during the performance of routine surveillance testing of the Steam Tunnel Ventilation Radiation Monitoring System, monitor RIS-1705-39A failed to initiate a high radiation trip within allowable limits. With no adjustments or repairs, three successive checks of the monitor then met the acceptance criteria and RIS-1705-39A was returned to service. Surveillance testing proceeded successfully on monitor RIS-1705-39B.

At 1420 hours, during a subsequent surveillance to reverify Channel 'A' operability, RIS-1705-39A again failed to trip within the acceptance criteria, and the monitor was declared inoperable from the time of the original failure, 1013 hours. During this period, RIS-1705-39B had been bypassed for testing, resulting in both channels of the Steam Tunnel Ventilation Radiation Monitoring System being inoperable for a four minute period.

I&C personnel affected repairs and, on January 4, 1994, the monitor was declared operable and returned to service under an increased surveillance frequency. Both RIS-1705-39A and RIS-1705-39B had been previously scheduled for end of qualified life replacement during the current refueling outage, which commenced on January 15, 1994. This replacement will be completed prior to startup.

No safety consequences resulted from this event.

EXPIRES: 5/31/95

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), 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 1	DOCKET NUMBER (2) 05000245	LER NUMBER (6)			PAGE (3) 02 OF 03
		YEAR 93	SEQUENTIAL NUMBER 003	REVISION NUMBER 00	

TEXT (If more space is required, use additional copies of NRC Form 365A) (17)

I. Description of Event

On January 3, 1994, at 1013 hours, with the plant operating at 94% power, during the performance of routine surveillance testing of the Steam Tunnel Ventilation Radiation Monitors (STVRM), monitor RIS-1705-39A failed to initiate a high radiation trip within allowable limits. With no adjustments or repairs, three successive checks of the monitor then met the acceptance criteria. At 1030 hours, RIS-1705-39A was declared operable and returned to service. Surveillance testing was successfully conducted on monitor RIS-1705-39B, and the monitor was returned to service at 1034.

At 1420 hours, after review of the surveillance data, it was decided to reverify the high radiation trip setting of monitor RIS-1705-39A. During the performance of this surveillance, the monitor failed to trip within acceptance criteria. Based on the second failure, RIS-1705-39A was declared inoperable from the time of the original failure, 1013 hours. During this period, RIS-1705-39B had been bypassed for surveillance testing, resulting in the Steam Tunnel Ventilation Radiation Monitoring System being inoperable for a four-minute period.

I&C personnel troubleshot the monitor and replaced the high level trip amplifier. Three successful checks of RIS-1705-39A were performed, and the monitor was returned to service at 1655 hours in a functional but not operable status.

On January 4, 1994, at 0817 hours, after successfully completing the surveillance on the monitor, RIS-1705-39A was declared operable and returned to service under an increased frequency (every other day) surveillance monitoring program. No failures were encountered during the period of increased surveillance frequency from January 5 to 15, 1994, at which time the plant was shutdown for a scheduled refueling and maintenance outage.

II. Cause of Event

The root cause of this event has been attributed to equipment failure. Although the specific fault could not be positively identified due to its intermittent occurrence, evidence from troubleshooting and subsequent successful surveillance testing suggests the fault is within the high level trip circuit of RIS-1705-39A, most likely the high level trip amplifier.

III. Analysis of Event

This event is reportable pursuant to 10CFR50.73(a)(2)(v)(C), which requires the reporting of any event or condition that alone could have prevented the fulfillment of the safety structures or systems that are needed to control the release of radioactive material. Immediate notifications were performed in accordance with 10CFR50.72(b)(2)(iii).

The objective of the surveillance test is to functionally test and calibrate the steam tunnel ventilation radiation monitors' indication and alarm setpoints. The surveillance ensures proper operation of the monitor's photomultiplier tube and electronics by directly inputting an artificial light source of variable intensity into the photomultiplier tube of the scintillation detector and verifying proper response of the meter and high level trip circuit. The monitor under test is bypassed such that the simulated trip does not result in an actual trip signal.

In the event of a steam tunnel leak, a trip from either of the two steam tunnel ventilation radiation monitors will isolate Reactor Building and Steam Tunnel ventilation and initiate the Standby Gas Treatment (SBGT) system to prevent an uncontrolled release of radioactive gases to the environment. The system is comprised of two identical Nuclear Measurements Corporation model GA-2TO gamma scintillation monitors. A high radiation trip from either monitor or downscale trips from both will initiate the automatic ventilation isolation and initiate the SBGT system. A failure of one monitor to trip, therefore, will not result in the system being inoperable.

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

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FACILITY NAME (1) Millstone Nuclear Power Station Unit 1	DOCKET NUMBER (2) 05000245	LER NUMBER (6)			PAGE (3) 03 OF 03
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
		93	-- 003 --	00	

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

The possible simultaneous inoperability of both channels of the STVRMs occurred during the performance of the surveillance and existed for a brief period of time. Moreover, because RIS-1705-39B was bypassed and surveilled immediately following three successful checks of the RIS-1705-39A high radiation trip setpoint, it is unknown if the fault existed in the channel 'A' monitor during the brief testing of the channel 'B' monitor.

IV. Corrective Action

I&C personnel performed the troubleshooting of RIS-1705-39A on January 3, 1994. Based on proper meter response to the artificial light source, the technicians concluded the fault was in the high radiation trip portion of the monitor and replaced the integrated circuit high level trip amplifier. Following the chip replacement, the monitor passed three consecutive surveillances and was returned to service. Operations declared the monitor available but not operable pending further evaluation of the repair.

On January 4, 1994, the monitor was checked satisfactorily and declared operable at 0817 hours. Channel 'A' was returned to service and declared operable. An increased frequency (every other day) surveillance monitoring program was undertaken to ensure equipment operability until the scheduled shutdown on January 15, 1994. No failures were encountered during this period.

The suspect component was installed in a spare radiation monitor in the I&C shop. Several days of operation and surveillance failed to reproduce a like failure.

Both RIS-1705-39A and RIS-1705-39B had been previously scheduled for end of qualified life replacement during the current refueling outage, which commenced on January 15, 1994. This replacement will be completed prior to startup.

V. Additional Information

None.