

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
Millstone Nuclear Power Station Unit 1DOCKET NUMBER (2)
0 5 0 0 0 2 4 5 1 OF 0 3TITLE (4)
Main Steam Line Hi-Hi Radiation Level ScramEVENT DATE (5)
MONTH DAY YEAR
0 8 13 8 5 8 5
LER NUMBER (6)
YEAR SEQUENTIAL NUMBER REVISION NUMBER
0 0 9 0 0 0 9
REPORT DATE (7)
MONTH DAY YEAR
1 2 8 5
OTHER FACILITIES INVOLVED (8)
FACILITY NAMES
DOCKET NUMBER(S)
0 5 0 0 0 0
0 5 0 0 0 0OPERATING MODE (9) N
POWER LEVEL (10) 1 0 0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)
20.402(b) 20.406(c) 50.73(a)(2)(iv) 73.71(b)
20.406(a)(1)(i) 50.36(c)(1) 50.73(a)(2)(v) 73.71(c)
20.406(a)(1)(ii) 50.36(c)(2) 50.73(a)(2)(vii) OTHER (Specify in Abstract below and in Text, NRC Form 366A)
20.406(a)(1)(iii) 50.73(a)(2)(i) 50.73(a)(2)(viii)(A)
20.406(a)(1)(iv) 50.73(a)(2)(ii) 50.73(a)(2)(viii)(B)
20.406(a)(1)(v) 50.73(a)(2)(iii) 50.73(a)(2)(ix)LICENSEE CONTACT FOR THIS LER (12)
NAME John M. Quinn, Assistant Engineering Supervisor, X4450
TELEPHONE NUMBER
AREA CODE 2 0 3 4 4 7 - 1 7 9 1COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)
CAUSE SYSTEM COMPONENT MANUFACTURER REPORTABLE TO NRC
CAUSE SYSTEM COMPONENT MANUFACTURER REPORTABLE TO NRC
CAUSE SYSTEM COMPONENT MANUFACTURER REPORTABLE TO NRCSUPPLEMENTAL REPORT EXPECTED (14)
YES (If yes, complete EXPECTED SUBMISSION DATE) NO
EXPECTED SUBMISSION DATE (15)
MONTH DAY YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

On August 13, 1985 at 1207 hours, while returning a condensate demineralizer to service, a reactor scram occurred which was initiated by Main Steam Line Hi-Hi Radiation. The cause of the scram was attributed to air becoming entrained in the feedwater system when the demineralizer was placed back in service after a routine cleaning process. The air, after passing through the reactor core, was detected as an increasing radiation level by the Main Steam Line radiation monitors, whose normal function is to detect gross fuel failure. The trip of those monitors also caused a Group I Containment Isolation, where the Main Steam Isolation valves shut. In order to maintain pressure control, the Isolation Condenser system was manually initiated and routine scram recovery actions were initiated by the plant personnel. The plant had been operating at 100% power prior to the event and no other anomalies were noted subsequent to the scram.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1) Millstone Nuclear Power Station Unit 1	DOCKET NUMBER (2) 05000245815-0109-01002 OF 03	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

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

On August 13, 1985 at 1207, while returning the "C" condensate demineralizer bed to service, a reactor scram occurred which was initiated by Main Steam Line Hi-Hi Radiation.

The "C" demineralizer had been taken out of service approximately one hour earlier in order to perform an ultrasonic resin cleaning of it. This was being done to reduce the differential pressure across it while it was in service. This procedure had been completed and the demineralizer recycled and vented for the normal twenty minutes to remove air. Shortly after placing the demineralizer back in service the reactor scrambled when a high radiation level was detected by the Main Steam Line radiation monitors. The Main Steam line radiation monitors main function is to detect a major fuel failure. They will initiate a reactor scram and a Group I Containment Isolation when a radiation level of seven times normal background is detected.

Plant Conditions Prior to Occurrence

The plant was operating at 100% power at normal operating temperature and pressure.

Response to Event

Following the scram, normal plant procedures were followed for recovery. In order to control pressure, the Isolation Condenser was manually initiated. After verification that radiation levels in the Main Steam lines had returned to normal and no other indications of major fuel failure were evident, the Main Steam Isolation valves were reopened and the Isolation Condenser secured.

A chemistry sample of the reactor coolant was taken and the analysis showed no abnormal readings.

Cause of the Failure

The cause of the scram is attributed to air becoming entrained in the feedwater when the demineralizer was valved back into service. This air was detected by rapid increase on the Dissolved Oxygen recorder in the control room and a spike in the radiation levels on both the Main Steam lines and the off-gas systems recorders. The levels in all these instruments promptly returned to normal readings which substantiated that this was a transient phenomena.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 3/31/85

FACILITY NAME (1) Millstone Nuclear Power Station Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 2 4 5	LER NUMBER (6)			PAGE (3)		
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A review of the procedures used to vent and recycle the demineralizer indicated that normal procedures, which have been used many times in the past, with no such response, had been followed. It was noted, however that two factors may have contributed in the entrainment of the air. The first was that, due to a problem with a radwaste system transfer line, the contents of one spent condensate demineralizer bed was in a temporary holding tank. Thus, in order to perform the ultrasonic resin cleaning process on the "C" demineralizer bed, several additional transfers between holding and processing tanks were needed. These additional steps may have introduced additional air into the demineralizer. Secondly, because several demineralizer beds had high differential pressures, the ultrasonic resin cleaning process was being performed on several beds in a short period of time. Normal processing, however, generally would let the cleaned bed sit for approximately one week before it was recycled and vented and placed in service. This additional time may allow more dissolved oxygen to come out of solution. Prior to the event, there was only a one hour period between when the "C" demineralizer bed was taken out of service to when it was returned.

Corrective Actions

Short term corrective actions included a revision to plant procedures to add a warning that under the above conditions, such an event is possible and additional care should be taken in venting and placing the demineralizer back in service. Night orders were written for both Operations and Chemistry personnel to alert them to the event and precautions to be taken. Additional venting and recycle times were initiated.

The actual setpoint of the Main Steam line radiation monitors were found to alarm at approximately four times normal versus seven times normal per plant technical specifications. The setpoint was recalibrated to approximately six times normal. This additional margin, although still conservatively within the Technical Specification limits may eliminate an unnecessary scram.

The problems with the radwaste transfer system was resolved and then the spent condensate demineralizer bed was able to be transferred. Normal processing procedures could then be followed when cleaning the demineralizer beds.

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 • Seiden Street, Berlin, Connecticut

P.O. BOX 270
HARTFORD, CONNECTICUT 06141-0270
(203) 666-6911

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MP-8184

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 85-009-00

Gentlemen:

This letter forwards the Licensee Event Report 85-009-00 required to be submitted within thirty (30) days pursuant to the requirements of 10CFR50.73.

Yours truly,

NORTHEAST NUCLEAR ENERGY COMPANY

A handwritten signature in dark ink, appearing to read 'W D Romberg', written over the printed name.

Wayne D. Romberg
Station Superintendent
Millstone Nuclear Power Station

WDR/JMQ:mo

Attachment: LER 85-009-00

cc: Dr. T. E. Murley, Region I

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