

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

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November 9, 1990

MP-90-1201

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

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

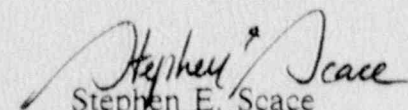
Reference: Facility Operating License No. DPR-65
Docket No. 50-336
Licensee Event Report 90-014-00

Gentlemen:

This letter forwards Licensee Event Report 90-014-00 required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(ii).

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY


Stephen E. Scace
Director, Millstone Station

SES/PP:ljs

Attachment: LER 90-014-0

cc: T. T. Martin, Region I Administrator
W. J. Raymond, Senior Resident Inspector, Millstone Unit Nos. 1, 2 and 3
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2

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LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this information collection request: 50.0 hrs. Forward comments regarding burden estimate to the Records and Reports Management Branch (p-530), U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503.

FACILITY NAME (1)

Millstone Nuclear Power Station Unit 2

DOCKET NUMBER (2)

0 5 0 0 0 3 3 6 1 OF 0 3

TITLE (4)

Main Steam Safety Valve Setpoint Drift Discovered During As-Found Simmer Test

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
1	0	1	0	9	0	1	1	0	0 5 0 0 0 0
1	0	1	0	9	0	1	1	0	0 5 0 0 0 0

OPERATING MODE (9) 3

POWER LEVEL (10) 0 0 0

THIS REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

20.402(b)	20.402(c)	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)	X 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

Paul Parulis, Engineer, Ext. 4423

TELEPHONE NUMBER

AREA CODE

2 0 3 4 4 7 - 1 7 9 1

COMPLETE 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
X	S	B	R	V					
			D	2					
			4	3					
				Y					

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 fifteen single-space typewritten lines) (16)

On September 15, 1990, at 0400 hours, the plant conducted routine main steam safety valve simmer testing as required by Technical Specification Surveillance 4.7.1.1. Plant conditions were as follows: Hot Standby (Mode 3), 0% power, 524 degrees Fahrenheit and 2260 psi. Seven of the sixteen valves passed their initial simmer test. Of the nine that failed, five had as-found setpoints below the required range and four had as-found setpoints above the required range. Applicable accident events were reviewed with respect to the impact of the setpoint drifts. On October 10, 1990, upon review of the single MSIV closure event, it was determined that the criterion for secondary design pressure would have been exceeded because of high lift pressure of one valve. The results for the other events (Steam Generator Tube Rupture, Loss of Load, Small Break LOCA and dual Main Steam Isolation Valve (MSIV) closure) indicated there would be no significant impact. Four of the nine failed valves were sent to an outside testing lab for routine preventative maintenance and adjustment. The remaining five determined to be out of tolerance were adjusted to within an acceptable setpoint or retested satisfactorily without adjustment. The plant complied with the requirements of Technical Specification Action Statement 3.7.1.1.a. The cause of the setpoint drift is unknown.

Similar Events: 85-002, 87-014, 86-008, 83-021

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 Records and Reports Management Branch (p-630), U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503.

FACILITY NAME (1) Millstone Nuclear Power Station Unit 2	DOCKET NUMBER (2) 0 5 0 0 3 6 9 0	LER NUMBER (6)		PAGE (3)	
		YEAR 0 1 4	INITIAL NUMBER 0 0	REVISION NUMBER 0 2	OF 0 3

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

I. Description of Event

On September 15, 1990, at 0400 hours, the plant was conducting routine main steam safety valve simmer testing in accordance with plant Technical Specification 4.7.1.1. Plant conditions were as follows: Hot Standby (Mode 3), 0% power, 524 degrees Fahrenheit and 2260 psi. Nine of the sixteen valves failed their initial simmer test. Five tested low compared to their setpoint tolerance and four tested high compared to tolerance. The Technical Specification tolerance is $\pm 1\%$ of the lift settings. The cause of the drift is not known. No major operator actions were required, nor were there any automatic or manually initiated safety response.

II. Cause of Event

The root cause of the setpoint drift is unknown. This is an industry wide problem which is still under investigation. Following the initial lift, the test procedure stipulates a five minute waiting period followed by a retest for every valve until two consecutive lifts are within acceptable limits. Of the nine valves failing the initial testing, five subsequently passed the retests. The remaining four and an additional three valves were sent to an outside testing lab for preventative maintenance and adjustment. Comparisons of test results from previous cycles show no trends in valve failures. It is theorized that plant thermal cycling or system vibration may cause the valve to take a "set."

III. Analysis of Event

This Licensee Event Report is submitted pursuant to the requirements of 10CFR50.73(a)(2)(ii) for an event or condition that resulted in the nuclear power plant being in a condition that was outside the design basis of the plant. On October 10, 1990, it was determined, based on the results of the simmer testing and a review of applicable FSAR events, that the secondary system design pressure for the single MSIV closure event may have been exceeded had this event been initiated. However, the secondary system is analyzed and has been tested at a much higher pressure. The pressure for a secondary system hydrostatic test, as performed in accordance with ASME Section XI is 1250 psi. The acceptance criteria for the single closure MSIV event is 1100 psi while the maximum lift pressure from the simmer testing was 1103.6 psi, for a single valve. No further analysis is required as a result of this determination.

In addition to the single MSIV closure event; the Steam Generator Tube Rupture, Loss of Load, dual MSIV closure and Small Break LOCA analyses were also reviewed for the as-found simmer test results. For these other events the simmer testing provides suitable results which are within the plant's design basis.

IV. Corrective Action

Following the initial simmer testing, three of the nine failed valves had spring adjustments made and passed the retesting. Two other failed valves passed subsequent testing without readjustment. The four remaining failed valves, one that had passed its initial test and two that had satisfactorily passed testing, were sent to Wyle Labs for refurbishment as part of the unit's ongoing preventative maintenance program.

Setpoint drift has been and continues to be a problem. Corrective maintenance and procedure enhancements have been unsuccessful in eliminating, relieving or controlling the as-found drift. Additional changes to the testing methods and refurbishment procedures are being considered to help improve the test performance and accuracy. Improved testing methods and techniques are being reviewed for future implementation.

As a consequence of previous problems with safety valve setpoint drift, most of the design basis accidents analyzed for Millstone 2 consider an increased setpoint tolerance above $\pm 1\%$. Only the single MSIV closure analysis provides unacceptable results at an increased safety valve tolerance.

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 Records and Reports Management Branch (p-530), U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to the Paperwork Reduction Project (3150-0106), Office of Management and Budget, Washington, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)	PAGE (3)
YEAR		SEQUENTIAL NUMBER	REVISION NUMBER
Millstone Nuclear Power Station			
Unit 2	0 5 0 0 0 3 3 6 9 0	- 0 1 4 - 0 0	0 3 OF 0 3

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

V. Additional Information

Manufacturer Dresser; Alexandria, LA
Valve Type 6"-3707 RAX-RT-22-XLP8-N0015
Design Pressure 1035 psig
Design Temperature 550 degrees Fahrenheit
ASME III Class 2
1968 Draft Edition, Summer 1970 addenda
EHS Code: XSBRV D243Y
Similar Events: 89-002, 87-014, 86-008, 83-021