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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December 4, 1992
MP-92-1272

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

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 91-009-01

Gentlemen:

This letter forwards update Licensee Event Report 91-009-01 being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i).

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Stephen E. Scace
Vice President-Millstone Station

SES/EJG:ljs

Attachment: LER 91-009-01

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

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Cert No P929873703
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NRC Form 366 (6-89) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

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.

LICENSEE EVENT REPORT (LER)

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

TITLE (4)
LLRT Failure

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 4	0 8	9 1	9 1	- 0 0 9	- 0 1	1 2	0 4	9 2		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9): N

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)	20.405(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)	X 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)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Lou Georgian, Engineer, Ext. 5198	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 NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
X	S B	I S V	V 0 8 5	Y	X	A A	J S V	V 0 8 5	Y
X	S J	I S V	A 3 9 1	Y	X	N H	P E N	C 3 1 0	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 April 8, 1991, at 0100 hours with the plant shut down for refueling, it was identified that the main steam header stop drain valves 1-MS-5 & 1-MS-6 (Penetration X-8) exceeded the maximum allowable leakage rate as specified by Technical Specification 4.7.A.3.e. Testing of all primary containment isolation valves, cable penetrations, and manways as required by 10CFR50 Appendix J revealed additional valves and manways that did not meet the local leak rate test requirements.

All valves and manways that failed to meet the local leak rate test requirements were satisfactorily retested subsequent to repairs.

NRC Form 366B (6-89) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

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.

LICENSEE EVENT REPORT (LER)
FAILURE CONTINUATION

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

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	
X	N H	P E N	C 3 1 0	Y							
X	V B	I S V	A 1 8 0	Y							
X	V B	I S V	A 1 8 0	Y							
X	V B	I S V	A 1 8 0	Y							
X	V B	I S V	A 1 8 0	Y							

I. Description of Event

During the 1991 refuel outage, all testable primary containment isolation valves, penetrations and manways were local leak rate tested (LLRT). Of the total number of valves, penetrations and manways tested, seven valves and two Gibs manways required maintenance in order to meet the leakage requirements as specified in the plant Technical Specification 4.7.A.3.e. Technical Specifications require that no single isolation valve(s) or penetration, except main steam isolation valves, exceed a leakage rate of 18.8 SCFH at accident pressure (43 psig).

Technical Specifications further require that a total combined leakage rate for all testable isolations valves and penetrations does not exceed 300.3 SCFH (0.60 La) at 43 psig.

The total "as found" leakage rate exceeded 0.60 La (300.3 SCFH). The "as left" leakage rate was 141.35 SCFH.

The following is a list of valves and manways, that failed to pass the LLRT, with their "as found" and "as left" leakage rates:

	As Found	As Left
A. Atmospheric Control Valves (Penetrations X-25/X-202D)		
1-AC-7, 1-AC-8, 1-AC-9 1-AC-10, 1-AC11, 1-AC-12 (Tested concurrently)	270.38 SCFH*	9.52 SCFH
B. Head Spray (Penetration X-17)		
1-HS-5	269.53 SCFH*	1.007 SCFH
C. Main Steam (Penetration X-8)		
1-MS-5, 1-MS-6	68.94 SCFH	0.165 SCFH
D. Feedwater (Penetration X-9A)		
1-FW-9A	83.50 SCFH	0.02 SCFH
E. Gibs Manways		
Gibs #1	29.75 SCFH	0.03 SCFH
Gibs #8	57.40 SCFH	0.03 SCFH

* Maximum reading within the capability of the local leak rate test equipment. Actual leakage rate for these valves (not quantified) are in excess of the value recorded and are considered greater than 0.60 La.

II. Cause of Event

A. Atmospheric Control Valves

1-AC-10	Worn seat ring
1-AC-8	Worn seat ring
1-AC-7, 1-AC-11	Undetermined. Suspect that valve closed position changed due to actuator mounting bracket shifting.
1-AC-9, 1-AC-12	Replaced valves.

B. Head Spray

1-HS-5	Worn seat and disc.

C. Main Steam

1-MS-5	Minor wear on wedge.

D. Feedwater

1-FW-9A	Damaged seat

E. Gibs Manway

Gibs #1	Defective "O" ring seal
Gibs #8	Defective "O" ring seal

III. Analysis of Event

Due to the configuration of the Atmospheric Control System, valves 1-AC-7, 1-AC-8, 1-AC-9, 1-AC-10, 1-AC-11, and 1-AC-12 are tested concurrently and perform an isolation function for penetrations X-25 and X-202D. Efforts to determine which one of the valves was the major contributor to the high leakage rate were unsuccessful and as such, the combined leakage rate for penetrations X-25 and X-202D was assumed to be greater than 0.6 La.

Head Spray valves 1-HS-4 and 1-HS-5 provide the isolation function for penetration X-17. Since only the outboard isolation valve 1-HS-5 exhibited leakage that exceeded the allowable leakage rate for penetration X-17, isolation valve 1-HS-4, with an "as found" leakage rate of 0.02 SCFH, would have provided the required isolation function.

Main Steam header stop drain valves 1-MS-5 and 1-MS-6 provide the isolation function for penetration X-8. Maintenance was performed only on valve 1-MS-5 since this was identified as the main contributor to the high leakage rate for this penetration. The "as left" leakage rate for this penetration was 0.165 SCFH. Based on the results of the "as left" leakage rate with no maintenance performed on valve 1-MS-6, this valve would have provided the required isolation function for penetration X-8.

Feedwater check valves 1-FW-9A and 1-FW-10A provide the isolation function for penetration X-9A and are tested individually. The "as found" leakage rate for valve 1-FW-10A was 0.02 SCFH and as such would have provided the required isolation function for penetration X-9A.

The Gibs manways employ a double "O" ring arrangement for sealing and test pressure is applied between the "O" rings. The minimum pathway leakage for Gibs Manway #1 would have been 14.875 SCFH which meets the leakage requirements of the Plants Technical Specifications. Gibs Manway #8 minimum pathway leakage would have been 28.7 SCFH which exceeds the maximum allowable leakage rate of 18.8 SCFH for a single penetration.

IV. Corrective Action

Atmospheric Control System

Valve 1-AC-10 ; Inspection of this valve revealed a scale build-up on the carbon steel vane which resulted in the seat ring being worn. The carbon steel vane was replaced with a stainless steel vane and a new seat ring was installed. Further modifications were performed on the actuator mounting bracket to preclude any shifting of the valve full closed position.

Valve 1-AC-8; Replaced slightly worn seat ring and performed mounting bracket modifications to ensure positive valve full close positioning.

Valve 1-AC-7 and 1-AC-11; Modifications were made to the actuator mounting brackets. Since the valve seat rings showed no signs of wear, the apparent reason for these valves leaking by could only be attributed to a slight shifting of the actuator mounting bracket relative to the valve body resulting in a change in the valve full closed position. The actuator mounting brackets are designed from 1/4 inch carbon tube steel and attached to the valve body by two mounting bolts. Shifting of the mounting bracket resulted from the clearance in the mounting bolt holes. To prevent the bracket from shifting during valve actuation, the bracket and valve body were fixed together by the addition of two stainless steel case hardened dowel pins. In addition to the dowel pins, the tube steel mounting brackets had stiffeners installed to preclude any buckling that may take place during valve actuation. The brackets were also modified in this manner on valves 1-AC-8 and 1-AC-10.

To further increase the reliability for containment isolation of penetrations X-25/X-202D, two new DeZurik two inch eccentric plug valves (1-AC-9, 1-AC-12) were installed.

Head Spray

Valve 1-HS-5; Valve repaired by lapping seat and disc.

Main Steam

Valve 1-MS-5; Repaired by lapping wedge and seat.

Feedwater

Valve 1-FW-9A; Replaced seat

Gibs Manways

Gibs #1; Replaced "O" rings

Gibs #8; Replaced "O" rings.

Further corrective action will consist of a periodic maintenance program which will replace all the "O" ring seals on the eight Gibs manways every third refueling outage. This program will start with the next refueling outage which will be in 1994.

V. Additional Information

A. Previous Similar Events
LER 89-008
LER 87-015
LER 85-023
LER 82-23/3L
LER 80-14/1D
LER 80-14/1T