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

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June 26, 1989
MP-13239

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

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 89-011-00

Gentlemen:

This letter forwards Licensee Event Report 89-011-00 required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(i), any operation or condition prohibited by the plant's Technical Specifications.

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

For: Stephen E. Scace
Station Superintendent
Millstone Nuclear Power Station

By: Harry F. Haynes
Station Services Superintendent
Millstone Nuclear Power Station

SES/JAP:tjp

Attachment: LER 89-011-00

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

IE22
1/1

NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

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

TITLE (4)
Containment Unfiltered Leakage in Excess of Limits Due to Valve Leakage

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 5 0 0 0
0 5	2 7	8 9	8 9	0 1 1	0 0	0 6	2 6	8 9		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
6		20.402(b)	20.402(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
0 0 0		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)
	X	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	TELEPHONE NUMBER
James A. Petrosky, Engineer	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
B	J M	I S V	W 0 3 0	Y					
B	K M	I S V	F 0 3 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 May 27, 1989 at approximately 1700 and on June 3, 1989 at approximately 1830, while at 0% power in Mode 6 (Refueling), atmospheric pressure, and 89 degrees, the "as found" Local Leak Rate Testing (LLRT) containment unfiltered leakage exceeded the Technical Specification limit of 0.01 La (13,690 sccm). 3CVS*V20, the Containment Vacuum system outside containment isolation valve as found leakage was 12,040 sccm. 3CDS*CTV40B, the "B" Train Chilled Water System inside containment isolation valve, as found leakage was 17,980 sccm.

The root cause of 3CVS*V20 leakage was a poor wedge-to-seat fit. The wedge angle was changed and the valve seats were resurfaced to ensure the existence of a proper seal. The root cause of 3CDS*CTV40B leakage was a burr on the disc. The burr was removed and the elastomer T-ring was replaced. The post-maintenance LLRT's on both valves were satisfactory.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Millstone Nuclear Power Station Unit 3	0 5 0 0 0 4 2 3	8 9	— 0 1 1	— 0 0	0 2 OF 0 3

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

I. Description of Event

On May 27, 1989, at approximately 1700, while at 0% power in Mode 6 (Refueling), atmospheric pressure, and 89 degrees Fahrenheit, during the performance of Local Leak Rate Testing (LLRT) on 3CVS*V20 the "as-found" leak rate contributed to a total containment unfiltered leakage that exceeded the Technical Specification limit. 3CVS*V20 is the Containment Vacuum System outside containment isolation valve to the containment vacuum air ejector. No immediate operator action was required since the plant was shutdown (See Attachment A).

On June 3, 1989, at approximately 1830 while, at 0% power in Mode 6, (Refueling), atmospheric pressure, 89 degrees Fahrenheit, during the performance of Local Leak Rate Testing (LLRT) on 3CDS*CTV40B, the "as found" leak rate Technical Specification limit. 3CDS*CTV40B is the "B" Train Chilled Water System inside containment isolation valve. No immediate operator action was required since the plant was shutdown (See Attachment A).

II. Cause of Event

The root cause of the 3CVS*20 leakage was a poor wedge-to-seat fit in which the lower portion of the wedge was not in full contact with the seating surface. 3CVS*V20 is an 8 inch Walworth model N226SP gate valve.

The root cause of the 3CDS*CTV40B leakage was a "burr" on the valve disc which apparently caught on the elastomer T-ring seat and rolled it out of its retaining groove. 3CDS*CTV40B is a 10 inch Fisher 9220 series butterfly valve.

III. Analysis of Event

These events are reportable under 10CFR50.73(a)(2)(i), in that the total containment unfiltered leakage exceeded the limit allowed by plant Technical specification 3.6.1.2.c.

The health and safety of the public were not at risk due to these events.

In the first event, containment integrity was maintained by verifying the inside containment isolation valve, 3CVS*AOV23, was operable. 3CVS*AOV23 had passed its LLRT this outage, and thus provided an acceptable containment boundary (See Attachment A).

In the second event, containment integrity was maintained by verifying the outside containment isolation valve, 3CDS*CTV39B was operable. 3CDS*CTV39B has passed its LLRT this outage, and thus provided an acceptable containment boundary (See Attachment A).

IV. Corrective Action

In both events, no immediate corrective action was required since the plant was shutdown.

As corrective action for 3CVS*V20 leakage, the valve seats were resurfaced and the wedge angle was changed to obtain 360 degree wedge-to-seat contact. The post maintenance LLRT indicated a satisfactory leakage.

As corrective action for 3CDS*CTV40B leakage, the elastomer T-ring (which was pinched and had rolled out of its retaining groove) was replaced and the valve was bench tested. During bench testing it was observed that the small burr on the valve disc was catching on the T-ring. Repeated valve strokings resulted in the T-ring being eased from its retaining groove. To prevent this event from recurring, the burr was removed from the valve disc, the elastomer T-ring was replaced, and the valve was successfully bench tested. The post maintenance LLRT indicated a satisfactory leakage.

As action to prevent recurrence, data from all bypass leakage valves was evaluated for leakage trends in valves of similar design. It was determined that the bypass leakage occurring on 3CDS*V20 and 3CDS*CTV40B did not have generic implications.

V. Additional Information

The current containment unfiltered leakage limit is low. It limits the total leakage of unfiltered penetrations to 0.01 La. A proposed change in normal containment operating pressure will increase the unfiltered leakage limit fraction to 0.042 La. (However, La will be reduced from 0.9 to 0.65 to wt %/day). The result will be a 219% increase in the unfiltered leakage limit.

The net effect of this change will be a more realistic unfiltered leakage limit as well as imposing even tighter containment leakage limits (excluding unfiltered leakage) upon the type A, B and C containment boundary systems and their components. Radiological dose analysis has determined this change to be acceptable. The containment integrity will be improved and provide additional assurance that the public will be protected from core damage accidents.

The previous similar event, LER 87-043 discussed "Bypass Leakage in Excess of Technical Specification Limits" due to improper installation of the elastomer T-ring in a Fisher 9220 series butterfly valve. The corrective actions for this event included: revised maintenance procedures, bench stroking prior to installation, and inclusion of lessons learned in the valve training program.

3CVS*V20 has experienced leakage in the past. Slag and foreign particles were found during maintenance following high "as found" leakage in March of 1987. Wedge reassembly and seating surface reconditioning were performed following high "as found" leakage in November of 1987. The corrective actions for LER 87-043 could not have prevented the poor wedge-to-seat fit on 3CVS*V20. 3CVS*V20 is a Walworth model N226SP 8 inch gate valve.

The techniques employed from the lessons learned from LER 87-043 led to the identification of the root cause of 3CDS*CTV40B leakage. The addition of mandatory bench stroking prior to valve reinstallation led to effective maintenance actions being taken. 3CDS*CTV40B is a 10 inch Fisher 9220 series butterfly valve.

EIIS Codes

Systems	Components
Containment Vacuum System (Isolation) - JM	Isolation Valve - ISV
Chilled Water System - KM	

Vendors
Walworth Valves - W030
Fisher Controls - F130

Attachment A

Containment Unfiltered Leakage Data

Valve	As Found Leakage (sccm)	As Left Leakage (sccm)
3CVS*V201	12,040	633
3CDS*CTV40B2	17,980	20
Subtotal, all other valves (20)	3,137	2,192
Total	33,157	2,845
Tech Spec Limit	13,690	13,690

Notes: Containment integrity maintained by the following valve:

1 3CVS*AOV23	55	55
(Containment Isolation Valve associated with 3CVS*V20)		
2 3CDS*CTV39B	74	74
(Outside Containment Isolation Valve Associated with 3CDS*CTV40B)		

*U.S. GPO: 1986-0-624-538/455