



**Northeast  
Nuclear Energy**

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The Northeast Utilities System

**APR 19 1996**

Docket No. 50-336  
B15665

Re: 10 CFR 50.73

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

This letter forwards Licensee Event Report (LER) 96-018-00 documenting an event that occurred at Millstone Nuclear Power Station, Unit No. 2 on March 19, 1996. This LER is being submitted pursuant to 10 CFR 50.73(a)(2)(v).

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

P. M. Richardson  
Director - Millstone Unit No. 2

Attachment: LER 96-018-00

cc: T. T. Martin, Region I Administrator  
P. D. Swetland, Senior Resident Inspector, Millstone Unit No. 2  
G. S. Vissing, NRC Project Manager, Millstone Unit No. 2

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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 MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), 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.

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TITLE (4)  
Gaps Discovered in Enclosure Door Seals for Motor Control Centers B51 and B61

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	19	96	96	018	00	04	18	96	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9) 5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)									
POWER LEVEL (10) 0%	20.2201(b)	20.2203(a)(2)(v)	50.73(a)(2)(i)	50.73(a)(2)(viii)						
	20.2203(a)(1)	20.2203(a)(3)(i)	50.73(a)(2)(ii)	50.73(a)(2)(x)						
	20.2203(a)(2)(ii)	20.2203(a)(3)(ii)	50.73(a)(2)(iii)	73.71						
	20.2203(a)(2)(ii)	20.2203(a)(4)	50.73(a)(2)(iv)	OTHER						
	20.2203(a)(2)(iii)	50.36(c)(1)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A						
20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)								

LICENSEE CONTACT FOR THIS LER (12)	
NAME G. P. van Noordennen, Nuclear Licensing Supervisor	TELEPHONE NUMBER (include Area Code) (860)440-2084

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	

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION		
<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE).	NO			MONTH	DAY	YEAR
				10	01	96

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On March 16, 1996 at 1445 hours, with the plant in mode 5, at 0% power, it was discovered that there were inadequate door seals for motor control centers (MCCs) B51 and B61. It was noted that up to 1/2 inch gaps were identified in the seal areas and a piece of a gasket was missing. These seals are required for the enclosures to protect the MCCs from conditions postulated by the high energy line break (HELB) analysis. This event is being reported pursuant to the requirements of 10 CFR 50.73(a)(2)(v)(B) and 10 CFR 50.73(a)(2)(v)(D), "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to," remove residual heat and mitigate the consequences of an accident.

The cause of this event is a weakness in the existing program to inspect and verify the integrity of environmental protective barriers.

Repairs or a modification will be implemented on the enclosure doors for MCC B51 and MCC B61 to ensure they are capable of performing their protective function. The environmental barrier inspection program will be improved so that the protective function of environmental protective barriers will be verified periodically.

There were no automatic or manually initiated safety systems activated as a result of this event.

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

I. Description of Event

On March 16, 1996 at 1445 hours, with the plant in mode 5, at 0% power, it was discovered that a piece of the lower enclosure door seal, for motor control center (MCC) B51, was missing. Additionally, the door latches for both MCC B51 and B61 were inadequate and did not ensure a tight closure of the door seals. It was noted that up to 1/2 inch gaps were identified in the seal areas. These seals are required for the enclosures to protect the MCCs from conditions postulated by the high energy line break (HELB) analysis.

On March 19, 1996 at 2000 hours, an investigation of the degraded condition concluded that the enclosures for MCC B51 and B61 were potentially unable to perform their safety function to protect the MCCs from potential adverse environmental conditions.

On March 19, 1996 at 2035 hours, since MCC B61 is the redundant train for MCC B51, a report was submitted pursuant to the requirements of 10 CFR 50.72(b)(2)(iii)(B), "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat," and 10 CFR 50.72(b)(2)(iii)(D), "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident."

There were no automatic or manually initiated safety systems activated as a result of this event. Additionally no operator action was taken in response to this event.

II. Cause of Event

The cause of this event is a weakness in the existing program to inspect and verify the integrity of environmental protective barriers.

III. Analysis of Event

On March 19, 1996 it was concluded that the gaps in the enclosures resulting from the degraded seals or door misalignment were significant enough to challenge the enclosures capability to protect the MCCs. This event is being reported pursuant to the requirements of 10 CFR 50.73(a)(2)(v)(B), "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to remove residual heat," and 10 CFR 50.73(a)(2)(v)(D), "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident."

Following an auxiliary building heating steam line break on the 14' 6" elevation of the auxiliary building, the enclosures for MCCs B51 (MCC-22-1E) and B61 (MCC-22-1F) will be exposed to a steam environment with a peak pressure of approximately 0.6 psig and a peak temperature of approximately 148 °F. This area can also be impacted by a main steam line break (MSLB) in the auxiliary building. However the environmental consequences to this area resulting from a MSLB are bounded by that of the auxiliary building heating steam line break.

Because the enclosures for MCCs B51 and B61 can be exposed to a steam environment, and there are gaps in the enclosures doors, the pressurized air/steam mixture outside the MCC enclosures will enter inside the MCC enclosures. With this ingress of steam and air into the MCC enclosure, the potential exists for condensation to form on the surfaces of the MCCs. With condensation forming on the surfaces of the MCCs, electrical shorts

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

may occur. MCCs B51 and B61 provide the power for all three charging pumps, both trains of the HPSI and LPSI suction and injection valves, and many other loads.

In July of 1995, the enclosure doors for MCC B51 and B61 were added to station form SF-248-2, "Unit 2 Door Attributes." SF 248-2 contains a list of Unit 2 doors and designates what functions the doors provide (i.e., HELB, Fire, or Security). In SF 248-2, MCC B51 is designated as a HELB door, and MCC B61 is designated as both a fire door and a HELB door. There is currently a weakness in the existing program to inspect and verify the integrity of HELB enclosures that protect their respective safety related equipment. This program includes a fire door inspection program with procedures that ensure the integrity of the fire doors. The enclosure door for MCC B61 was designated as a fire door, therefore the gaskets and other attributes for the enclosure door were inspected. The ongoing investigation will evaluate the cause for the 1/2" gaps in the MCC B61 enclosure not being discovered and corrected. Since MCC B51 is not designated as a fire door, it was not inspected within any program. Our current HELB program takes credit for fire door inspections. However, the program is deficient, in that it does not include the few HELB doors that are not also fire doors.

The actual safety significance is low since the MCCs and their enclosures have never been subjected to a harsh environment. The worst case potential safety significance is high. This is based on a postulated failure of both MCCs if electrical shorts were to occur as a result of a potential harsh environment. It can then be postulated that all the MCC loads will fail in the most adverse position. Following an auxiliary building heating steam line break, the reactor coolant system (RCS) inventory control safety function will be jeopardized due to the potential for the loss of all three charging pumps. Without a RCS inventory makeup capability, the reactor coolant pump controlled bleed-off and any RCS leakage within the Technical Specification limits will result in a slow reduction in pressurizer level and pressure, eventually resulting in the pressurizer emptying. Following a MSLB in the auxiliary building, the RCS inventory control safety function will be jeopardized due to the potential for the loss of all three charging pumps and the potential closure of the high pressure safety injection (HPSI) suction and injection valves due to shorts. Without the capability of HPSI injection, the existing steam line break presented in Final Safety Analysis Report Section 14.1.5 may no longer be bounding.

Further investigation is continuing to assess the potential for the harsh environment to affect the MCCs capability to perform their safety function following a HELB. The results of this investigation will be reported in a supplement to this LER.

IV. Corrective Action

The following corrective actions will be completed prior to entry into mode 4.

Repairs or a modification will be implemented on the enclosure doors for MCC B51 and MCC B61 to ensure they are capable of performing their protective function.

The environmental barrier inspection program will be improved so that the protective function of environmental protective barriers will be verified periodically. Utilizing the above program an inspection procedure will be developed and implemented so that doors and enclosures serving as a protective barrier for safety related equipment will be inspected and maintained.

Additional corrective actions will be assessed following completion of the ongoing investigation.

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

V. Additional Information

Similar Events

LER 95-026-00: 120 VAC buses VA10 and VA20, the hydrogen analyzer supply circuit, were inoperable due to postulated exposure to HELB from the auxiliary steam lines located in the same room.

Manufacturer Data

None