Northeast
Nuclear Energy

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The Northeast Utilities System

Donald B. Miller Jr.,
Senior Vice President - Millstone

Re: 10CFR50.73(a)(2)(v)
May 18, 1995
MP-95-161

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 95-015-00

This letter forwards Licensee Event Report 95-015-00 required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(v).

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

Donald B. Miller, Jr.
Senior Vice President - Millstone Station

DBM/PB:ljs

Attachment: LER 95-015-00

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

IE22

NRC Form 366 (5-92)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

APPROVED BY OMB NO. 3150-0104
EXPIRES: 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), 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.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Millstone Nuclear Power Station Unit 2	05000336	1 OF 3

TITLE (4)
Crane Operation Over Spent Fuel Pool With Emergency Ventilation Inoperable due to Maintenance

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 NAME	DOCKET NUMBER
04	18	95	95	- 015 -	00	05	18	95	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	N	THIS REPORT IS BEING SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
		20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)	
POWER LEVEL (10)	0	20.405(a)(1)(i)		50.36(c)(1)	X	50.73(a)(2)(v)		73.71(c)	
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER	
		20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract below and in Text, NRC Form 366A)	
		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 (Include Area Code)
Philip J. Lutzi, Nuclear Licensing	(203) 440-2072

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 DATE (15)	MONTH	DAY	YEAR
	YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO				

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

On April 18, 1995, at 1600 hours, with the plant defueled, it was identified that crane operations with loads over the Spent Fuel Pool had occurred when Spent Fuel Pool Emergency Ventilation was inoperable.

It was discovered that the Spent Fuel Pool (SFP) area was not at a negative pressure with respect to the Main Exhaust Room adjacent to the Spent Fuel Pool area. This was a result of maintenance activities that were being performed in the Main Exhaust Room that opened up the Main Exhaust plenum to the room. Even though the isolation damper for the fan was closed, a significant amount of leakage was being drawn from the room through the open ductwork, through the damper, and into the Main Exhaust suction plenum. The emergency SFP filtration system was OPERABLE with respect to fan, damper and automatic initiation capabilities.

The root cause of the event was the disassembly of the main exhaust fan which resulted in the suction damper leaking by. This leak by allowed the main exhaust plenum to take a suction on the room which caused a negative pressure of the Main Exhaust Room with respect to the spent fuel pool area.

A bypass jumper was installed to blank off the opening in the ductwork for the duration of the fuel movement. Once the ductwork blank was installed, the SFP area was verified to have a negative pressure with respect to the Main Exhaust room and the SFP emergency filtration system was returned to operable status.

This event is reportable under the criteria of 10CFR50.73(a)(2)(v), "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to: (c) "Control the release of radioactive material," and (d) "Mitigate the consequences of an accident."

I. Description of Event

On April 18, 1995, at 1600 hours, with the plant defueled, it was identified that crane operations with loads over the Spent Fuel Pool (SFP) had occurred when SFP Emergency Ventilation (AEAS) was inoperable.

While investigating an Adverse Condition Report (ACR) regarding a wall expansion joint separation between the Main Exhaust Room and the Spent Fuel Pool region, it was identified that there was air flow from the SFP region into the Main Exhaust Room. Further investigation identified that the negative pressure in the Main Exhaust Room was caused by maintenance activities on one of the Main Exhaust Fans which was disassembled for overhaul. As a result of this overhaul combined with the closed suction damper leaking by, the main exhaust plenum was taking a suction on the room causing it to be at a negative pressure with respect to the SFP region. However, based upon the location of the Emergency Fuel Handling Ventilation system suction ductwork, adjacent to the SFP, Engineering concluded that had a fuel handling accident occurred, contaminants would be drawn into the suction ductwork and not into the Main Exhaust Room. This is due to the location of the ductwork openings and the high flow rate of the ventilation system across the surface of the SFP compared to the flow rate into the Main Exhaust Room through the wall joint and door gaps. The EBFS airflow (in the AEAS mode) was 8,516 CFM, as tested on April 18, 1995. Conservatively evaluating this condition with respect to the design documents resulted in the decision that with Main Exhaust Room at a lower pressure than the SFP area, the system was not operating in accordance with the FSAR. This information was conveyed to management and it was discovered that loads were moved over the SFP and one fuel assembly was moved in the spent fuel pool during the suspect time frame since the fan overhaul had started. Together, these items are in conflict with Technical Specification Limiting Condition for Operation 3.9.15. ". . . suspend all operations involving movement of fuel within the storage pool or crane operation with loads over the storage pool until at least one spent fuel storage pool ventilation system is restored to OPERABLE status." It is important to note that the Operations Department believed that the unit was in full compliance with the LCO requirements due to normal system operation and configuration.

The design basis of the Emergency Fuel Handling Ventilation System is to maintain a negative pressure within the fuel handling building and channel any radioactive gaseous release through equipment to ensure that accident doses at the site boundary are below the 10 CFR 100 Guidelines. This is accomplished by starting the Enclosure Building Filtration fans, isolating the Enclosure Building and aligning the ductwork to take a suction off of the SFP region. These actions create a negative pressure in the fuel handling area and exhaust the air through the Unit 2 charcoal filters and discharge through the Unit 1 stack.

Following the discovery of this condition in the SFP region on April 18, 1995, all fuel movement in the spent fuel pool was terminated. A bypass jumper was processed to close up the ductwork on the Main Exhaust plenum. Once the bypass jumper was installed, the SFP area was verified to have a negative pressure with respect to the Main Exhaust room and operations in the SFP region recommenced.

No automatic or manually initiated safety systems actuated as a result of the event.

II. Cause of Event

The root cause of the event was the disassembly of the main exhaust fan which resulted in the suction damper leaking by. This leak by allowed the main exhaust plenum to take a suction on the room which caused a negative pressure of the Main Exhaust Room with respect to the spent fuel pool area.

III. Analysis of Event

Based on event investigation, this event is reportable under the criteria of 10CFR50.73(a)(2)(v), "Any event or condition that alone could have prevented the fulfillment of the safety function of structures or systems that are needed to: (c) "Control the release of radioactive material." and (d) "Mitigate the consequences of an accident."

In evaluating the safety consequences of this event, it was determined that based upon the location of the Emergency Fuel Handling Ventilation system suction ductwork, adjacent to the SFP, had a fuel handling accident occurred, contaminants would be drawn into the suction ductwork and not into the Main Exhaust Room. This is due to the location of the ductwork openings and the high flow rate of the ventilation system across the surface of the SFP compared to the flow rate into the Main Exhaust Room through the wall joint and door gaps. The EBFS airflow (in the AEAS mode) was 8,516 CFM, as tested on April 18, 1995. Thus, the event had minimal/no safety consequences. The concern with the negative pressure was for a fuel handling accident, and contaminants entering the Main Exhaust Room, which could result in an unmonitored release path. However, as stated above this would not have occurred.

IV. Corrective Action

A bypass jumper was installed to blank off the opening in the ductwork for the duration of the fuel movement. Once the ductwork blank was installed, the SFP area was verified to have a negative pressure with respect to the Main Exhaust Room and the SFP emergency filtration system was returned to operable status.

A note will be added to the PMMS system for the Main Exhaust fans, stating "Removal of the main exhaust fans or opening the duct work may result in a negative pressure of the Main Exhaust Room with respect to the Spent Fuel Pool area. Contact the system engineer for additional information."

Additionally, a memo has been issued to the Work Planning Group, the Operations Work Control Group and Outage Management to discuss the effects that ventilation system maintenance can have on adjacent rooms that are controlled by Technical Specifications and have FSAR requirements.

V. Additional Information

Similar LERs: None

EIIS Codes

Fuel Building	ND
Fuel Building Environmental Control System	VG
Emergency/Standby Gas Treatment System	BH