Northeast
Nuclear Energy

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Millstone Nuclear Power Station
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The Northeast Utilities System

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

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

December 28, 1994
MP-94-684

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 94-040-00

This letter forwards Licensee Event Report 94-040-00 required to be submitted within thirty (30) days pursuant to 10CFR50.73(a)(2)(v).

Very truly yours,

NORTHEAST NUCLEAR ENERGY COMPANY

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

BY: Harry F. Haynes
Millstone Unit 1 Director

DBM/PHB:ljs

Attachment: LER 94-040-00

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
1/1

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)
Ventilation Design Deficiency Affecting Enclosure Building Integrity

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
										05000
12	6	94	94	- 040 -	00	12	28	94	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	*	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 December 6, 1994, at 2223 hours, with the plant defueled, it was determined that a release path existed from the Enclosure Building that would allow for a direct discharge to atmosphere following a Loss of Coolant Accident (LOCA) that would not receive charcoal filtration.

The root cause is a deficiency in the original design.

I. Description of Event

On December 6, 1994, at 2223 hours, with the plant at 0% power with the core offloaded, it was determined that a release path existed from the Enclosure Building that would allow a direct discharge to the atmosphere during a Loss of Coolant Accident (LOCA) that would not receive charcoal filtration. The cause of this event has been determined to be an oversight in the original design of the discharge flow path for the Hydrogen analyzers. With the establishment of the system engineering program, the engineer reviewing a work package immediately identified the discrepancy in this non-safety related system and initiated an investigation.

The design basis of the Enclosure Building Filtration System is to collect any leakage from the Containment Structure during a LOCA and process the leakage through a High Efficiency Particulate (HEPA) and Charcoal Filtration system. This method of discharge minimizes the publics exposure to Iodine and maintains off site dose less than 10CFR100 limits.

A hydrogen analyzer cabinet and sample hood exhaust fan was found to take a suction on the enclosure building and discharge approximately 1000 cfm out the Unit 2 Main Exhaust stack. This flow path has HEPA filters but does not have any Charcoal Adsorber filtration. This non-safety related exhaust fan normally runs to maintain a negative pressure on the sample hood to prevent technicians from being exposed to gas while obtaining routine chemistry samples. The fan has no automatic shut off feature and there are no isolation dampers in the line to prevent a release during an event that would actuate the Enclosure Building Filtration System.

The Radiological Assessment branch performed an evaluation to determine the effects of this condition. Their analysis was based upon a major accident assuming a substantial meltdown of the core with subsequent release of appreciable quantities of fission products as identified in 10CFR100.11 and concluded that the calculated site boundary thyroid dose would exceed 10CFR100.11 limits.

Following the discovery of this condition on December 6, 1994, immediate corrective action was to declare the enclosure building integrity inoperable. The plant was in an undefined mode due to the core being off loaded when the discrepancy was found and declared inoperable. Enclosure Building integrity is not required in Mode 5 or 6, therefore, no additional operator actions were required.

There were no automatic or manually initiated safety systems actuated as a result of the event.

II. Cause of Event

The root cause of this event is the design and installation of the hydrogen analyzer cabinet ventilation system.

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 Mitigate the consequences of an accident."

The Radiological Assessment branch performed an evaluation to determine the effects of this condition. Their analysis was based upon a major accident assuming a substantial meltdown of the core with subsequent release of appreciable quantities of fission products as identified in 10CFR100.11 and concluded that the calculated site boundary thyroid dose would exceed 10CFR100.11 limits. This has been a configuration that has been in service since initial installation.

IV. Corrective Action

Following the event discovery on December 6, 1994, immediate corrective action was to declare the Enclosure Building integrity inoperable. Since the plant was defueled when the discrepancy was found and declared inoperable and Enclosure Building integrity is not required in Mode 5 or 6, no additional immediate actions were required.

Work is in progress to redesign the hydrogen analyzer and sample sink ventilation systems to correct this deficiency prior to Mode 4 when enclosure building integrity is required.

V. Additional Information

Similar LERs: None

EIIS Codes

Enclosure Building	BD
Hydrogen Analyzer Cabinet	IK-CAB
Hydrogen Analyzer Cabinet Fan	IK-FAN