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)
January 25, 1995
MP-95-032

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--043-00

This letter forwards Licensee Event Report 94-043-00 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/PHB:ljs

Attachment: LER 94-043-00

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

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 4

TITLE (4)
Charcoal Filter Iodine Removal Efficiency Failure Associated With Enclosure Building Filtration and Control Room Air Conditioning

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	30	94	94	- 043 -	00	01	25	95	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
X	BH	ADS	0000	N						
X	VI	ADS	0000	N						

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X	YES (If yes, complete EXPECTED SUBMISSION DATE)		NO		02	24	95

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

On December 2, 1994, with the plant defueled, charcoal samples from both the Facility 1 and Facility 2 Enclosure Building Filtration System were sent to an independent laboratory to be analyzed for Iodine removal efficiency. The laboratory test report, which identified unsatisfactory results was reported to the utility on December 30, 1994. In a similar event on December 17, 1994, with the plant defueled, charcoal samples for the Facility 1 Control room emergency filtration system were sent to the same laboratory to be analyzed for its Iodine removal efficiency. The laboratory test report which identified unsatisfactory results was reported to the utility on January 9, 1995. Previously, in April of 1994, samples from these filtration systems had been tested with satisfactory results.

The root cause is unknown at this time and a supplemental report will be submitted.

I. Description of Event

On December 2, 1994, with the plant defueled, charcoal samples from both the Facility 1 and Facility 2 Enclosure Building Filtration System were sent to an independent laboratory to be analyzed for iodine removal efficiency. The laboratory test report which identified unsatisfactory results was reported to the utility on December 30, 1994. In a similar event, on December 17, 1994, with the plant defueled, charcoal samples for the Facility 1 Control Room emergency filtration system were sent to the same laboratory to be analyzed for its iodine removal efficiency. The laboratory test report which identified unsatisfactory results was reported to the utility on January 9, 1995.

The results of the laboratory testing are depicted in the following chart. The Technical Specification limit for charcoal efficiency is 95%. The test used to determine the efficiency of the Charcoal Adsorbers is ASTM D3803-1989, which is the most stringent and rigorous test for charcoal efficiency. Charcoal was tested to this standard in April when Millstone Unit 2 submitted a Technical Specifications change, approving the use of this ASTM standard.

System	New Charcoal Installed	April 94 % Eff	December 94 % Eff	April Equipment Hours	December Equipment Hours	Total Run Hours	Percent Drop
Facility 1 CRAC	November 92	99.54	91.54	22.2	390.2	368	8
Facility 2 CRAC	January 93	98.97	Scheduled	40.2	314.1	273.9	N/A
Facility 1 EBFS	November 92	98.67	82.04 83.37	0.75	26	25.25	16.63
Facility 2 EBFS	July 92 Dec 94	95.68 99.69	83.05 Lot M3444	6.60	255.2	348.6	12.63
Lot M 3444	Warehouse Sample	99.69	98.95 98.90				0.74 0.79
Lot M 3410	Warehouse Sample	98.92					
Lot M 3839	Warehouse Sample	99.19	98.47				0.72

A review of the charcoal laboratory results has led to additional questions pertaining to the sampling effectiveness as it relates to charcoal bed representation. Additional samples from within the charcoal housings are presently being removed and will be analyzed to determine a comparative sampling efficiency. The results were not available prior to the submittal of this report. Therefore, a supplemental report will be submitted.

The design basis of the Enclosure Building Filtration System (EBFS) is to collect leakage from the Containment structure during a Loss of Coolant Accident (LOCA), and process the leakage through the charcoal system to minimize the public's exposure to iodine and maintain the off site dose less than 10CFR100 limits.

The design basis of the Control Room Emergency Filtration System (CREFS) is to protect the operators from a release originating from any of the three on site units. The basis for this requirement is to protect the operators from iodine exposure so that they may function to place Millstone Unit 2 in a safe and stable condition without putting the operators at risk, either physically or mentally. Radiation protection is provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 5 rem whole body, or its equivalent to any part of the body, for the duration of the accident.

Following the discovery of this condition in the EBFS on December 30, 1994, the Enclosure Building and Auxiliary Building charcoal filtration systems were declared inoperable. All fuel movement in the spent fuel pool was terminated and will resume when the charcoal adsorber beds are declared operable.

Following the discovery of the condition of the Facility 1 Control Room Filtration System on January 9, 1995, the Facility 1 Control Room Emergency Filtration system was declared inoperable.

The Facility 2 EBFS was changed out in December as part of a routine changeout recommended by the System Engineer as a result of his review of the April test results. Therefore, with new charcoal installed, the Facility 2 EBFS is considered operable with respect to charcoal efficiency. Batch test results are available for the charcoal installed in the Facility 2 EBFS.

The Facility 2 Control Room Emergency Filtration system will be tested in conjunction with the other Control Room work currently in progress.

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 unknown at this time. Sampling canister bed depths and significant degradation in charcoal efficiencies with no apparent correlation has led to additional questions pertaining to the sampling effectiveness as it relates to charcoal bed representation. Additional samples from within the charcoal housings are presently being removed and will be analyzed to determine a comparative sampling efficiency. The results will not be available prior to the submittal of this letter. Therefore, a supplemental report will be submitted.

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."

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 and concluded that the off site dose would not have exceeded 10CFR100 limits.

The Control Room Emergency Filtration charcoal efficiency is assumed to be 90%, however, the Technical Specifications are more conservatively set at 95% efficiency. The reported efficiency of 91.54% is above the efficiency assumed by the Radiological assessment branch. Therefore, the affect on the operators would be negligible

IV. Corrective Action

At this time corrective action has not been determined pending the cause of this event. Until the cause is known, a corrective action plan can not be completed. Therefore, a supplemental report will be submitted.

V. Additional Information

Similar LERs: None

EIIS Codes

Enclosure Building Filtration	BH-FLT
Enclosure Building Adsorber	BH-ADS
Control Room Filtration	VI-FLT
Control Room Adsorber	VI-ADS