

EXPIRES 04/30/98

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 P33), 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)

Millstone Nuclear Power Station Unit 2

DOCKET NUMBER (2)

05000336

PAGE (3)

1 OF 3

TITLE (4)

Damper 2-HV-210 Cannot be Manually Operated within ten minutes as Required in the Accident Analysis

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
01	08	97	97	-- 002 --	00	02	07	97	FACILITY NAME	DOCKET NUMBER
OPERATING MODE (9)		6	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)		000	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)		X 50.73(a)(2)(ii)		50.73(a)(2)(x)	
			20.2203(a)(2)(i)		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)		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

R. T. Laudenat, MP2 Nuclear Licensing Manager

TELEPHONE NUMBER (Include Area Code)

(860) 444-5248

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)

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

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

On January 8, 1997, at 1230 Hours, it was postulated that the Control Room Emergency Filtration System (CREFS) common inlet damper, 2-HV-210, could become stuck closed, causing a single failure that disables both CREFS Facilities. There is no 'hand operator' and the damper is located about 9 feet above the floor, so operations personnel would not be able to open the damper within the 10 minutes required by the control room habitability analysis. The Millstone Unit 2 (MP2) accident analysis requires the CREFS to be operating in the recirculation/filtration mode within 10 minutes of the accident initiation, and takes credit for manually opening the damper if it does not go to the 'fail open' position. The FSAR TABLE 9.9-17 "Control Room Air Conditioning System Failure Mode Analysis" shows the damper (2-HV-210) does not meet the single failure criterion, but that it can be manually opened within 10 minutes, using the 'hand operator'. Emergency operating procedures and annunciator response procedures direct operations to align one Facility of CREFS for operation. The plant was in Mode 6 at 0 percent power at the time of discovery.

The cause of this event was inadequate evaluation of mechanical binding when the single failure was first discovered and the FSAR revision was prepared in June 1994. Additionally, the ability to manually open the damper was not validated.

The immediate corrective action was to place the damper in the 'fail open' position. An evaluation of 2-HV-210 and associated procedures will be performed. Other operator actions which are included in the safety analyses will be reviewed and validated, as necessary. Design changes and validations which result will be completed before entering Mode 4.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
Millstone Nuclear Power Station Unit 2	05000336	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		97	-- 002 --	00	

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

I. Description of Event

On January 8, 1997, at 1230 Hours, it was postulated that the Control Room Emergency Filtration System (CREFS) [VI] common inlet damper, 2-HV-210, could become stuck closed, causing a single failure that would disable both CREFS Facilities. There is no 'hand operator' and the damper is located about 9 feet above the floor, so operations personnel would not be able to open the damper within the 10 minutes required by the control room habitability analysis. The Millstone Unit 2 (MP2) accident analysis requires the CREFS to be operating in the recirculation/filtration mode within 10 minutes of the accident initiation. The analysis takes credit for operations personnel manually opening the normally closed damper, if it fails to go to the 'fail open' position. The FSAR TABLE 9.9-17 "Control Room Air Conditioning System Failure Mode Analysis" shows the damper (2-HV-210) does not meet the single failure criterion, but that it can be manually opened by operations personnel within 10 minutes using the 'hand operator'. Emergency Operating Procedures (EOP) and Annunciator Response Procedures (ARP) contain steps which direct operations to align one complete Facility of CREFS for operation. At the time of discovery the damper was placed in the 'fail open' position. The plant was in Mode 6 at 0 percent power at the time of discovery.

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

II. Cause of Event

The cause of this event was inadequate evaluation of mechanical binding when the single failure was first discovered and the FSAR revision was prepared in June 1994. Additionally, the ability of operations personnel to manually open the damper, when required, was not validated.

III. Analysis of Event

This event is being reported in accordance with 10 CFR 50.73(a)(2)(ii)(B) as a condition that is outside the design basis of the plant.

The most critical need for the CREFS is to protect MP2 control room personnel from exceeding General Design Criterion 19 dose limits following a Millstone Unit 1(MP1) Main Steam Line Break (MSLB). The two fresh air inlet radiation monitors initiate CREFS isolation of outside air, places the system in the recirculation/filtration mode, and initiates a control room alarm. The ARP directs operations personnel to align one complete Facility of CREFS for operation upon receipt of the alarm. The limiting accident being a MP1 MSLB, MP2 personnel's primary concern would be verification and restoration of CREFS. If 2-HV-210 failed to open, the loss of the filtration function could result in increased dose or extended time for control room personnel to wear respiratory protection. Additionally, the damper is required to close in order to purge the control room with fresh air when outside air activity decreases to acceptable levels. Failure of 2-HV-210 to open would not affect the ability to purge.

In the event of a LOCA in MP2, an Engineered Safety Actuation Signal (ESAS) signal would initiate CREFS and a control room alarm. The damper 2-HV-210 could fail to open requiring operations personnel action to restore filtration. Operation of the filtration portion of the system within 10 minutes is less critical since the LOCA analysis uses long term in-leakage as the most limiting dose input for control room personnel.

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Technical Specification Surveillance Requirement 4.7.6.1b requires flow through each filter train every 31 days, on a staggered test basis. To perform the tests on the A and B filter trains, 2-HV-210 is stroked opened and closed twice each month. A search of the damper maintenance records identified no instance of damper failure. Failure of 2-HV-210 to open would disable the filtration portion of CREFS, which filters a 15 percent slip stream flow off of the main flow path. The isolation from outside air and the recirculation portion of CREFS, which provides heating and air conditioning of 100 percent of total flow, would not be affected.

The damper receives an open signal from both Facility 1 and Facility 2 and has dual solenoids such that loss of AC or DC power, or loss of air will cause it to go to the 'fail open' accident position.

Based on the above, this event is not considered to be safety significant.

IV. Corrective Action

The immediate corrective action was to place the damper in the 'fail open' position.

An evaluation of 2-HV-210 and associated procedures will be performed. Other operator actions which are included in the safety analyses will be reviewed and validated, as necessary. Design changes and validations which result from this review will be completed before entering Mode 4.

V. Additional InformationSimilar Events

LER 94-006-00 The A and B Control Room Air Conditioning filter fans share a common suction plenum. Opening either filter housing door effectively breaches the CRAC filtration boundary, rendering both CRAC system trains inoperable.

LER 94-018-00 The CRAC filter fans were feeding the opposite supply trains. A fan fed the B train, and B fan fed the A train, an original design error.

Energy Industry Identification System (EIIIS) codes are identified in the text as [XX].