NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

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.

LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Millstone Nuclear Power Station Unit 3	05000423	1 of 4

TITLE (4)

"A" Emergency Diesel Generator Inoperable Due To Ventilation Alignment Prohibiting Tornado Recovery

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
11	13	97	97	--	057	-- 00	12	18	97	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	5	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)	[X] 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)(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	TELEPHONE NUMBER (Include Area Code)
David A. Smith, MP3 Nuclear Licensing Manager	(860)437-5340

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 November 13, 1997, with the unit in Mode 5, it was identified that the "A" Emergency Diesel Generator (EDG) may have been inoperable from October 11, 1997. On October 11, 1997, the air intake damper for the Emergency Ventilation System serving the "A" EDG cubicle failed open. The exhaust dampers had been failed in the full open position as part of temporary modifications to provide cooling to support EDG operation in the event of an emergency because replacement parts could not be readily obtained. A review on November 13, 1997, of the associated safety and engineering evaluations, identified that credit had been taken for placing the EDG Emergency Ventilation System in full recirculation in order to be able to re-open the exhaust tornado dampers. This condition was determined reportable on November 18, 1997.

The cause of this event was an inadequate development and review of the safety and technical evaluations associated with a temporary modification to fail open the 'A' EDG Cubicle ventilation dampers. Actions to alert personnel that a failure of the air intake damper could result in invalidating the tornado recovery actions specified within AOP 3569 'Severe Weather Conditions' were not explicitly identified and compensatory actions were not put in place.

The ability of the EDG to provide emergency power in order to mitigate the consequences of an accident was not challenged during this time period. There were no safety consequences as result of this condition. However, the failure to recognize and prevent the circumstances leading to this degraded condition is safety significant.

The actuator for the "A" Emergency Ventilation System air intake damper has been replaced with a functional actuator.

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

I. Description of Event

On November 13, 1997, with the unit in Mode 5, it was identified that the "A" Emergency Diesel Generator (EDG) may have been inoperable from October 11, 1997. On October 11, 1997, the air intake damper for the Emergency Ventilation System serving the "A" EDG cubicle failed open. The exhaust dampers had been failed in the full open position as part of temporary modifications to provide the necessary cooling to support EDG operation in the event of an emergency because replacement parts (replacement actuators / Hydromotors) could not be obtained from the vendor (or rebuilt) in a ready fashion. A review on November 13, 1997, of the safety and engineering evaluations associated with these temporary modifications, identified that credit had been taken for placing the EDG Emergency Ventilation System in full recirculation in order to be able to re-open the exhaust tornado dampers. These tornado recovery steps were included in Abnormal Operating Procedure (AOP) 3569 "Severe Weather Conditions." This condition was determined reportable on November 18, 1997.

Technical Specification (TS) 3.8.1.2, "Electrical Power Systems, A. C. Sources - Shutdown," requires that two "... A. C. electrical power sources shall be OPERABLE ... One [of which is a] diesel generator..." The definition of OPERABLE states, "A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s) and when all necessary attendant ... auxiliary equipment that are required ... to perform its function(s) are also capable of performing their related support function(s)." The "A" EDG was inoperable because its Emergency Ventilation System intake ventilation damper failed in the full open position. This failure, coupled with the temporary modifications which repositioned the exhaust dampers to the fully open position, would have prevented the reopening of the exhaust tornado dampers had they been closed due to a tornado. Additionally, due to the pressure buildup within the EDG cubicle with the Emergency Ventilation System running, access to the fan breakers located within the cubicle would have been restricted since it is highly unlikely the doors could be opened. Consequently, this may have inhibited the capability to provide adequate cooling to the "A" EDG, thereby resulting in the EDG not being able to perform its safety function.

On November 13, 1997, the "A" EDG was declared inoperable until a fully functional actuator could be installed at the intake damper assembly. A temporary modification was prepared to remove a functional actuator from one of the two exhaust path dampers and install it at the intake damper assembly (the exhaust dampers were gagged open pending completion of installation of other rebuilt actuators).

This event is reportable pursuant to 10 CFR 50.73(a)(2)(ii)(B), as a condition outside the units design basis. This condition was identified and documented in accordance with the Millstone Corrective Action Program.

II. Cause of Event

The cause of this event was an inadequate development and review of the safety and technical evaluations associated with installation of Temporary Modification 3-97-049 "Fail Open 'A' EDG Cubicle Ventilation Dampers 3HVP*MOD20A/C." The safety evaluation for the temporary modification recognized that there existed a reliance on being able to re-open the exhaust tornado dampers by putting the system into the recirculation mode. However, actions to alert personnel that a failure of the air intake damper could result in invalidating the tornado recovery actions specified within AOP 3569 'Severe Weather Conditions' were not explicitly identified and compensatory actions were not put in place.

A contributing factor is that the tornado recovery actions referenced in the AOP have never been used by plant personnel during normal work activities. The effect that temporary modification had on these procedure steps was therefore not given adequate review when the modification was implemented.

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

III. Analysis of Event

Because the unit has not experienced a Loss of Offsite Power (or other event requiring operation of the diesel) coincident with a tornado during the time period when the dampers were inoperable, the need to access the EDG building was not necessary and the ability of the equipment to provide emergency power in order to mitigate the consequences of an accident was not challenged. Consequently, there were no safety consequences as result of this condition. However, the failure to recognize and prevent the circumstances leading to this degraded condition is safety significant.

IV. Corrective Action

The following corrective action has been completed:

1. The actuator for the "A" Emergency Ventilation System air intake damper has been replaced with a functional actuator.

The following corrective actions will be completed:

1. Safety evaluation procedures and training are being revised to improve the quality and detail within the Safety Evaluations. This will be completed by March 1, 1998.

2. A briefing will be provided to Technical Support personnel on this event by January 31, 1998.

V. Additional Information

None

Similar Events

Listed below are other historical LERs which reported a potential loss of safety function and/or conditions outside of the design basis of the unit. A majority of these events were identified as a result of the Configuration Management Review Process.

LER 96-026-02	Non-Conservative Primary Grade Water Flow Rates Used in Boron Dilution Safety Analysis
LER 97-031-00	RHR Valve Low Pressure Open Permissive Bistable Setting Set Non-Conservatively
LER 97-041-00	Voluntary Report: Operation of Service Water System With Only One Pump Operable
LER 97-046-00	Containment Recirculation Spray System Cubicle Flood Potential
LER 97-048-00	Oversized PGS Impeller Could Potentially Result in Non-Conservative Boron Dilution Event

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

Manufacturer Data

EIIS System Code

Emergency Onsite Power Supply Building Environmental Control System ..... VJ
Emergency Onsite Power Supply Building ..... NB
Emergency Onsite Power Supply System ..... EK

EIIS Component Code

Damper ..... DMP
Damper, Control ..... CDMP