Northern States Power Company

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March 1, 1993

Report required by
10 CFR Part 50, Section 50.73

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Potential Single Failure of
Standby Gas Treatment Room Heater Could Cause Temperatures
Above Equipment Ratings for Both Standby Gas Treatment Trains

The Licensee Event Report for this occurrence is attached.

This report contains the following new commitment:

A modification will be completed to eliminate the potential single failure of the room heater.

Please contact us if you require additional information related to this event.

Thomas M Parker
Director
Nuclear Licensing

c: Regional Administrator - III NRC
Sr Resident Inspector, NRC
NRR Project Manager, NRC
State of Minnesota,
Attn: Kris Sanda

Attachment

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NRC FORM 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104

EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Monticello Nuclear Generating Plant	0 5 0 0 0 2 6 3	1 OF 0 4

TITLE (4): Potential Single Failure of Standby Gas Treatment Room Heater Could Cause Temperatures Above Equipment Ratings for Both Standby Gas Treatment Trains

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 NAMES	DOCKET NUMBER(S)
											0 5 0 0 0
0 1 2	9 9	3	9 3	-	0 0 1	- 0 0	0 2	0 1 9	3		0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	XX 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
	AREA CODE
Dave Scott, System Engineer	6 1 2 2 1 9 5 - 1 1 3 4 1

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, comp... EXPECTED SUBMISSION DATE)	XX NO			

ABSTRACT (Limit to 1... spaces, i.e., approximately fifteen single-space typewritten lines) (16)

During the performance of a design bases review, a potential single failure was identified that could affect both trains of the Standby Gas Treatment System. A failure of an electric room heater to de-energize would cause elevated room temperatures. The cause of this event was design error. Operating procedures were modified to detect and cope with a malfunctioning Standby Gas Treatment room heater during accident conditions. The "A" train room heater was disabled to prevent a failure of the heater to de-energize and the "A" train thermostat was set to provide remote indication of a Standby Gas Treatment room over temperature condition. A Safety Evaluation was completed for operation of Standby Gas Treatment with the above corrective action in place. A modification will be completed to eliminate the potential single failure of the room heater.

DESCRIPTION

On January 29, 1993 at 2000 hours with the plant in cold shutdown, during a Design Bases Document Review, a postulated single failure was identified which could affect both trains of the Standby Gas Treatment System (EIIS System: BH). The postulated event is a failure of an electric room heater (EIIS Component: EHTR) to de-energize which could cause Standby Gas Treatment room temperatures to be elevated above equipment ratings. The heater could fail in the energized state by a malfunction of the main heater contactor or thermostat (EIIS Component: TH) controlling the room heater.

At the time of discovery the plant was in cold shutdown and the Standby Gas Treatment System was not required to be operable. To insure operability during subsequent fuel movement, procedures were revised to provide steps to detect and mitigate the affects of a heater failure.

This was a condition outside the design bases of the plant and is reportable per 10 CFR Part 50, Section 73(a)(2)(ii).

CAUSE

The cause of this event was original design deficiency. This was not a cognitive error by the design engineer and to the best of our knowledge there were no unusual characteristic of the work location.

ANALYSIS

There have been no failures of the heaters or the thermostat resulting in excessive room temperatures since original installation. Therefore, there were no direct consequences to the health and safety of the public.

Based on the history of reliability of the thermostat and heater contactors, the probability of occurrence of the postulated scenario was very low. If a heater had failed during an accident condition it could have caused elevated temperatures in the Standby Gas Treatment rooms. Elevated temperatures would not result in immediate failure of the system, but would result in a long term degradation and reduce the expected life of the electrical components. Therefore the Standby Gas Treatment System may have functioned for an extended period of time following this postulated event.

CORRECTIVE ACTIONS

The following action were taken:

1. Operating procedures were modified to detect and cope with a malfunctioning Standby Gas Treatment room heater during accident conditions.

2. The "A" train room heater was disabled to prevent a failure of the heater to de-energize.

3. The "A" train thermostat was modified to provide remote indication of a Standby Gas Treatment room over temperature condition.

4. A Safety Evaluation was completed for operation of Standby Gas Treatment with the above corrective action in place.

The following action will be taken:

A modification will be completed to eliminate the potential single failure of the room heater.

ADDITIONAL INFORMATION

Failed Component Identification:

None

Previous Similar Events:

There have been four similar events. The corrective actions for these events and the continuing Design Bases Document Review program lead to the discovery of this event. The previous similar events were;

Licensee Event Reports 89-028, Modification Review Identified Potential for Degraded ECCS Capability,

89-040, Failure to Meet Secondary Containment Performance Requirements Due to Design Deficiencies,

91-020, Inadequate Design and Procedures Related to Ventilation Systems Could Cause a Potential Failure of Safety Related Electrical Equipment and

90-013, Discovery of Non-Conservative Assumptions in Original Plant Flooding Analysis.