

FORD 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9105070010 DOC.DATE: 91/04/30 NOTARIZED: NO DOCKET #
 FACIL:50-263 Monticello Nuclear Generating Plant, Northern States 05000263
 AUTH.NAME AUTHOR AFFILIATION
 WARD,A. Northern States Power Co.
 PARKER,T.M. Northern States Power Co.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 91-002-01:on 910109,120Vac control power circuit breaker
 for "A" Emergency Filtration Treatment Sys filter heater in
 "OFF" position.Control power circuit breaker returned to
 "ON" position.W/910430 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 6
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:NRR/LONG,W.

05000263

RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
PD3-1 LA	1 1	PD3-1 PD	1 1
LONG,B.	1 1		
INTERNAL: ACNW	2 2	AEOD/DOA	1 1
AEOD/DSP/TPAB	1 1	AEOD/ROAB/DSP	2 2
NRR/DET/ECMB 9H	1 1	NRR/DET/EMEB 7E	1 1
NRR/DLPQ/LHFB11	1 1	NRR/DLPQ/LPEB10	1 1
NRR/DOEA/OEAB	1 1	NRR/DREP/PRPB11	2 2
NRR/DST/SELB 8D	1 1	NRR/DST/SICB 7E	1 1
NRR/DST/SPLB8D1	1 1	NRR/DST/SRXB 8E	1 1
<u>REG FILE</u> 02	1 1	RES/DSIR/EIB	1 1
RGN3 FILE 01	1 1		
EXTERNAL: EG&G BRYCE,J.H	3 3	L ST LOBBY WARD	1 1
NRC PDR	1 1	NSIC MURPHY,G.A	1 1
NSIC POORE,W.	1 1	NUDOCS FULL TXT	1 1

A04 sub



Northern States Power Company

414 Nicollet Mall
Minneapolis, Minnesota 55401-1927
Telephone (612) 330-5500

April 30, 1991

Report Required by
10 CFR Part 50, Section 50.73

Director of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

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

Control Power Circuit Breaker for Filtration Unit Heater Found Open
Resulting in Inoperability of Control Room Emergency Filtration System

An updated Licensee Event Report for this occurrence is attached.

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

Thomas M Parker
Manager
Nuclear Support Services

c: Regional Administrator - III NRC
Sr Resident Inspector, NRC
NRR Project Manager, NRC
MPCA
Attn: Dr J W Ferman

Attachment

9105070010 910430
PDR ADCCK 05000263
S PDR

601 59

IE 22
11
AOF-4

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 MRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (IP-520), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

ABSTRACT (Limit to 1400 words, i.e., approximately fifteen single-space typewritten lines) (16)

On January 9, 1991 with the plant operating at 97% power, engineering personnel discovered the 120Vac control power circuit breaker for the "A" Emergency Filtration Treatment System filter heater in the "OFF" position. This event was reportable since it resulted in operation in a condition prohibited by the Technical Specifications, which require the Emergency Filtration System be operable whenever reactor water temperature is greater than 212 degrees Fahrenheit. The control power circuit breaker was returned to the "ON" position and the Control Room Emergency Filtration Treatment system returned to normal operation following successful completion of the monthly surveillance test. The plant work control process will be revised to require that following work in a safety-related power panel or lighting panel a verification of all breaker positions in that panel be completed.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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)

LER NUMBER (6)

PAGE (3)

Monticello Nuclear Generating Plant

0 5 0 0 0 2 6 3

YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
91	002	01

02 OF 05

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

DESCRIPTION

On January 9, 1991 with the plant operating at 97% power, engineering personnel discovered the 120Vac control power circuit breaker (EIIIS Component Identifier: 52) for the "A" Emergency Filtration Treatment System (EIIIS System Identifier: VI) filter heater (EIIIS Component Identifier: EHTR) in the "OFF" position. This condition was discovered by inspection during an investigation into the loss of power to the "A" Radiation Monitor (EIIIS Component Identifier: MON) (reference LER 91-001). This event was reportable since it resulted in operation in a condition prohibited by Technical Specification 3.17.B., which requires that the Control Room Emergency Filtration Treatment System be operable whenever reactor water temperature is greater than 212 degrees Fahrenheit. The filter heater is required to be operable to ensure that the charcoal filter (EIIIS Component Identifier: FLT) functions as designed. The control power circuit breaker was returned to the "ON" position and the Control Room Emergency Filtration Treatment System returned to normal operation following successful completion of the monthly surveillance test.

CAUSE

The root cause of this event is personnel error. This circuit breaker was checked and verified to be in the "ON" position in November 1989 following the last refueling outage. Personnel who had access to this power panel (EIIIS Component Identifier: PL) in the recent past were interviewed; however, none remembered any activities which would have isolated power to the filter heater. All applicable modification isolations and work request authorizations performed in the intervening time were reviewed to determine if work was done which could have resulted in isolation of this circuit breaker. None of these documents required isolation of this breaker. A modification on the Toxic Chemical Detector Logic performed in June 1990, isolated several other nearby circuit breakers in this panel. This is the most likely time during which the filter heater circuit breaker could have been isolated. The type of personnel involved in this event is unknown. This was a cognitive error. There were no unusual characteristics of the work location that directly contributed to the error.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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)

LER NUMBER (6)

PAGE (3)

Monticello Nuclear Generating Plant

0 | 5 | 0 | 0 | 0 | 2 | 6 | 3

YEAR

SEQUENTIAL
NUMBERREVISION
NUMBER

9 | 1

- | 0 | 0 | 2

- | 0 | 1

0 | 3 OF 0 | 5

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

An intermediate cause contributing to this event was an inadequate surveillance test procedure. Technical Specification 4.17.B.2.b(2) requires that heater operability be verified once per cycle. Technical Specification 4.17.B.1 requires that the filter trains be operated for at least 10 hours per month with the heaters operable. Rather than assuming heater operability during the monthly surveillance test, performance criteria were provided in the procedure. However, the performance measurement was not accurate since there was no inlet temperature instrumentation (EIS Component Identifier: TI) provided on the filter train and the inlet temperature recorded on the surveillance test was taken to be outside air temperature. In addition, the performance criterion provided was not adequate in that only a minimum performance level was specified. No maximum performance criterion was provided. Therefore, a non-operating heater would not have been detected with this procedure.

ANALYSIS

The purpose of the filter heater is to reduce the relative humidity of the incoming air to less than 70%. The charcoal adsorbers (EIS Component Identifier: ADS) are designed for 99.5% methyl iodide removal efficiency at 70% relative humidity. An increase in the relative humidity of the incoming air as a result of an inoperable filter heater will result in a decrease in filter efficiency. Testing and analysis have shown that the Control Room operator dose, assuming a reduced charcoal filter efficiency, would not exceed 10CFR Part 50, Appendix A, General Design Criterion 19 limits during a design basis accident. The charcoal adsorber methyl iodide removal efficiency was tested in December 1990 per Technical Specification 4.17.B.2.a.(3) and shown to still have an efficiency of 99.3%.

Division II of the Control Room Emergency Filtration System was operable during this event. It was approximately 1 hour from the time the open circuit breaker was discovered until it was placed in the "ON" position. The length of time the train was inoperable prior to discovery is unknown. It is known that the circuit breaker was in the correct position in November 1989. Technical Specification 4.17.B.2.b(2), issued in July 1990, requires heater operability be verified once per cycle. This verification was scheduled to be completed in March 1991.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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) Monticello Nuclear Generating Plant	DOCKET NUMBER (2) 0 5 0 0 0 2 6 3	LER NUMBER (6)			PAGE (3)	
		YEAR 9 1	SEQUENTIAL NUMBER 0 0 2	REVISION NUMBER 0 1	0 4	OF 0 5

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

CORRECTIVE ACTIONS

1. Upon discovery, the control power circuit breaker was returned to the "ON" position and the heater verified to be energized.
2. The circuit breakers in similar applications on Division II of the Control Room Emergency Filtration System were immediately inspected and found to be in their proper positions.
3. An investigation was initiated to determine cause of the circuit breaker being in the "OFF" position. Personnel were interviewed and applicable modification and work authorization records were reviewed.
4. All safety related power panels and lighting panels were checked for proper circuit breaker position using the plant pre-start checklists. No additional mispositioned breakers were identified.
5. The monthly surveillance test procedure was revised to ensure that the heater control power circuit breaker is closed.
6. This event will be reviewed by the plant's Human Performance Task Force. Recommendations to prevent future similar events will be implemented as necessary.
7. The plant work control process will be revised to require that following work in a safety-related power panel or lighting panel a verification of all breaker positions in that panel be completed.
8. Guidance will be added to the plant document controlling procedure content to ensure adequate direction exists for personnel when determining operability acceptance criteria. This will include a requirement to evaluate the need for including both minimum and maximum acceptance criteria.
9. A review of other surveillance test procedures for adequate acceptance criteria will be conducted during the next biennial review cycle.
10. This event will be reviewed in Engineering and Technical Staff continuing training and in the operator training program.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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) Monticello Nuclear Generating Plant	DOCKET NUMBER (2) 0 5 0 0 0 2 6 3	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 1	— 0 0 2	— 0 1	0 5	OF	0 5

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

11. A modification to add a light indicating filter heater operation will be evaluated for feasibility.
12. A more detailed evaluation of the Control Room Operator dose was performed and has shown that 10CFR Part 50, Appendix A, General Design Criteria 19 limits would not have been exceeded during a design basis accident.

FAILED COMPONENT IDENTIFICATION

None.

PREVIOUS SIMILAR EVENTS

LER 89-002 Inadequate Work Controls Causes Undetected Loss of Power to Remote Alarm Panel. A recommendation for prevention of similar events stated that a plant policy controlling work activities in areas containing sensitive equipment will be established and communicated to appropriate personnel. This policy did not prevent this event since it did not implement physical controls over work areas. The corrective action listed above to inspect panels following work will ensure correct positioning of breakers and prevent future events.