



Northern States Power Company

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

April 8, 1993

Report Required by  
10 CFR Part 50, Section 50.73

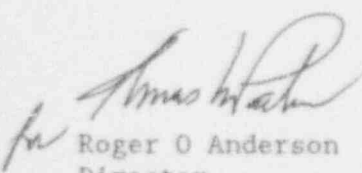
US Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

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

Primary Containment Isolation Caused by Blown Fuse

The Licensee Event Report for this occurrence is attached. This letter contains no new NRC commitments, nor does it modify any prior commitments.

Please contact Marv Engen, Sr Licensing Engineer, at (612) 295-1291 if you require further information.

  
for Roger O Anderson  
Director  
Licensing and Management Issues

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

Attachment

120103

9304130217 930408  
PDR ADOCK 05000263  
S PDR

*Handwritten signature/initials*

## LICENSEE EVENT REPORT (LER)

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

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 (MNRB 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)

Monticello Nuclear Generating Plant

DOCKET NUMBER (2)

05000 263

PAGE (3)

1 OF 4

TITLE (4)

Primary Containment Isolation Caused by Blown Fuse

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	10	93	93	004	00	04	08	93		05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)
N	20.402(b) <input type="checkbox"/> 20.405(c) <input checked="" type="checkbox"/> 50.73(a)(2)(iv) <input checked="" type="checkbox"/> 73.71(b) <input type="checkbox"/>
POWER LEVEL (10) 0.00%	20.405(a)(1)(i) <input type="checkbox"/> 50.36(c)(1) <input type="checkbox"/> 50.73(a)(2)(iv) <input type="checkbox"/> 73.71(c) <input type="checkbox"/>
	20.405(a)(1)(ii) <input type="checkbox"/> 50.36(c)(2) <input type="checkbox"/> 50.73(a)(2)(vii) <input type="checkbox"/> OTHER <input type="checkbox"/>
	20.405(a)(1)(iii) <input type="checkbox"/> 50.73(a)(2)(i) <input type="checkbox"/> 50.73(a)(2)(viii)(A) <input type="checkbox"/> (Specify in Abstract below and in Text, NRC Form 369A)
	20.405(a)(1)(iv) <input type="checkbox"/> 50.73(a)(2)(ii) <input type="checkbox"/> 50.73(a)(2)(viii)(B) <input type="checkbox"/>
	20.405(a)(1)(v) <input type="checkbox"/> 50.73(a)(2)(iii) <input type="checkbox"/> 50.73(a)(2)(k) <input type="checkbox"/>

## LICENSEE CONTACT FOR THIS LER (12)

NAME

Steve Engelke, Supt Electrical &amp; IC Engineering

TELEPHONE NUMBER (include Area Code)

612-295-1329

## COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS
X	JE	FU	B569	Yes					

## 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)

## ABSTRACT

On March 10, 1993, several Primary Containment isolation valves closed during the performance of post modification testing. The cause was a blown fuse in the isolation logic. The blown fuse was most likely caused by modification activities conducted during the outage. The test was stopped, the cabinet was inspected, the fuse replaced, the isolation reset and Shutdown Cooling returned to service.

REQUIRED NUMBER OF DIGITS/CHARACTERS  
FOR EACH BLOCK

BLOCK NUMBER	NUMBER OF DIGITS/CHARACTERS	TITLE
1	UP TO 46	FACILITY NAME
2	8 TOTAL 3 IN ADDITION TO 05000	DOCKET NUMBER
3	VARIES	PAGE NUMBER
4	UP TO 76	TITLE
5	6 TOTAL 2 PER BLOCK	EVENT DATE
6	7 TOTAL 2 FOR YEAR 3 FOR SEQUENTIAL NUMBER 2 FOR REVISION NUMBER	LER NUMBER
7	6 TOTAL 2 PER BLOCK	REPORT DATE
8	UP TO 18 -- FACILITY NAME 8 TOTAL -- DOCKET NUMBER 3 IN ADDITION TO 05000	OTHER FACILITIES INVOLVED
9	1	OPERATING MODE
10	3	POWER LEVEL
11	1 CHECK BOX THAT APPLIES	REQUIREMENTS OF 10 CFR
12	UP TO 50 FOR NAME 14 FOR TELEPHONE	LICENSEE CONTACT
13	CAUSE VARIES 2 FOR SYSTEM 4 FOR COMPONENT 4 FOR MANUFACTURER NPRDS VARIES	EACH COMPONENT FAILURE
14	1 CHECK BOX THAT APPLIES	SUPPLEMENTAL REPORT EXPECTED
15	6 TOTAL 2 PER BLOCK	EXPECTED SUBMISSION DATE

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 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)		LER NUMBER (6)			PAGE (3)
Monticello Nuclear Generating Plant		05000 263		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 4
				93	004	00	

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

Description

On March 10, 1993, at 0527 hours, with the plant in cold shutdown a Group 2 and Group 3 Primary Containment (EHS System: JM) isolation was received from an invalid signal while performing a test.

The Reactor Protection System Channel Time Response Test (0084) was being performed to satisfy Technical Specification surveillance and post modification test requirements. This test simulates trip signals into each scram and isolation logic train and results in half scram and half isolation signals. When the simulated high drywell pressure was inserted in the "B" logic train a Group 2 and Group 3 isolation occurred.

The following primary containment valves closed due to the Group 2 isolation signal:

MO-2015 Residual Heat Removal Inboard Injection Valve  
MO-2029 Inboard Shutdown Cooling Supply  
MO-2030 Outboard Shutdown Cooling Supply  
AO-2561A Drywell Equipment Drain Sump Inner Isolation  
AO-2561B Drywell Equipment Drain Sump Outer Isolation  
AO-2541A Drywell Floor Drain Inner Isolation  
AO-2541B Drywell Floor Drain Outer Isolation

The remaining Group 2 isolation valves were already in the closed position.

The following primary containment valves closed due to the Group 3 isolation signal:

MO-2397 Reactor Water Cleanup Inlet Inboard  
MO-2398 Reactor Water Cleanup Inlet Outboard  
CV-2790 Recirculation Sample Line Inner Isolation  
CV-2791 Recirculation Sample Line Outer Isolation

**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 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)		LER NUMBER (6)			PAGE (3)
Monticello Nuclear Generating Plant		05000 263		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 4
				93	004	00	

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

The test was stopped and an investigation determined that fuse (EIIS Component: FU) 16A-F5A, in panel C-15, was blown in the "A" channel isolation Logic resulting in a trip of the "A" logic train for Groups 2 and 3. The operating staff did not have indication of the half isolation prior to the event. Instrument channel trips are annunciated, but logic train trips without any instrument channel trip are not. The fuse was replaced, isolation reset and Reactor Water Cleanup (EIIS System: CE) was placed in service at 0540 hours. The Residual Heat Removal (EIIS System: BO) system was placed in the shutdown cooling mode of operation at 0545 hours. There was no measurable increase in reactor coolant temperature during the event.

This event is reportable as an Engineered Safety Feature actuation per 10 CFR 50.73(a)(2)(iv).

Cause

The cause of this event was a fuse that had blown because it had been subjected to a high fault current. There had been several construction activities in the panel prior to the event and it is believed that the fuse was blown during one of these activities. All of the activities required post modification testing and the discovery of the open fuse occurred during the performance of the post modification testing.

Analysis

At the time of the event Reactor Water Cleanup was in service and the Residual Heat Removal System was in the Shutdown Cooling mode of operation. The isolation resulted in a temporary loss of both Shutdown Cooling and Reactor Water Cleanup. There was no measurable increase in reactor coolant temperature during the time of the event.

With reactor temperature less than 212 degrees F the Primary Containment Isolation system is not required to be operable by Technical Specification. However, plant administrative controls require the Shutdown Cooling isolation to remain operable during shutdown conditions to prevent reactor drain down events. All systems functioned as required. This event could have had more significant consequences if it had occurred with higher decay heat.

There were no consequences to the health and safety of the public.

**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 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)		LER NUMBER (6)			PAGE (3)
Monticello Nuclear Generating Plant		05000 263		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 4
				93	004	00	

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

Corrective Actions

The following actions have been completed:

1. The fuse was replaced, the isolation reset and systems returned to service.
2. The blown fuse was sent to the manufacture for analysis which confirmed that the fuse was subjected to a high fault current.
3. The circuit was visually inspected to determine if other damage or failures existed. No degradation was found.

Failed Component Identification

Manufacturer: Bussmann

Fuse-5 amp

Previous Similar Events

There has been one other related event. Licensee Event Report 89-002, Inadequate Work Controls Causes Undetected Loss of Power to Remote Alarm Panel. The corrective actions for that event resulted in improved policies for work activities including post modification test requirements. This event was discovered during the post modification testing.