



Northern States Power Company

Monticello Nuclear Generating Plant
2807 West Hwy 75
Monticello, Minnesota 55362-9677

June 27, 1996

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

LER 96-005

Unexpected Voltage Transient During Maintenance Causes Partial Containment Isolation

The Licensee Event Report for this occurrence is attached. This report contains a new NRC commitment:

When it is anticipated that actions, i.e., maintenance or testing, could potentially generate a trip signal on either the Fuel Pool Radiation Monitor or the Reactor Building Exhaust Plenum Radiation Monitor, the upscale trips associated with the division being worked on will be bypassed.

This commitment will also prevent events similar to LER 94-006 and therefore, the knob on the "Power Supply" control switch for the common power supply will be reinstalled (a commitment in LER 94-006).

Please contact Tom Parker at (612) 295-1014 if you require further information.

William J Hill

William J Hill
Plant Manager
Monticello Nuclear Generating Plant

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

Attachment

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PDR ADOCK 05000263
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NRC FORM 366 (5-92)						U.S. NUCLEAR REGULATORY COMMISSION						APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95																							
<h2 style="margin: 0;">LICENSEE EVENT REPORT (LER)</h2> <p style="font-size: small; margin: 5px 0;">(See reverse for required number of digits/characters for each block)</p>																		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) MONTICELLO NUCLEAR GENERATING PLANT												DOCKET NUMBER (2) 05000 - 263						PAGE (3) 1 OF 5																	
TITLE (4) Unexpected Voltage Transient During Maintenance Causes Partial Containment Isolation																																			
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																										
05	30	96	96	005	00	06	27	96	FACILITY NAME																										
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OPERATING MODE (9)		N		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)																															
				20.402(b)				20.405(c)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)				73.71(b)																			
POWER LEVEL (10)		100 %		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																			
				20.405(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(viii)(A)				(Specify in Abstract below and in Text, NRC Form 366A)																			
				20.405(a)(1)(iv)				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 Tom Parker												TELEPHONE NUMBER (Include Area Code) 612-295-1014																							
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)												<input checked="" type="checkbox"/> NO						EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR													

ABSTRACT LIMIT TO 1400 SPACES, I.E., APPROXIMATELY 15 SINGLE-SPACED TYPEWRITTEN LINES) (16)
NCR FORM 366 (5-91)

During corrective maintenance on the Reactor Building Exhaust Plenum Radiation Monitor, an unplanned partial containment isolation occurred. In the process of deenergizing the monitor, another monitor, the Fuel Pool Radiation Monitor, fed from the same power supply, produced a false high radiation signal. This false high radiation signal was not expected and therefore, the Fuel Pool Radiation Monitor had not been bypassed. The false high radiation signal caused the partial containment isolation.

The containment isolation was reset and the Reactor Building Exhaust Plenum Radiation Monitor was repaired.

In the future when it is anticipated that actions, i.e., maintenance or testing, could potentially generate a trip signal on either the Fuel Pool Radiation Monitor or the Reactor Building Exhaust Plenum Radiation Monitor, the upscale trips associated with the division being worked on will be bypassed.

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TEXT CONTINUATION

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Description

During operation at 100% power, a normal monthly surveillance test (Number 0439b) was being performed on the Reactor Building Exhaust Plenum Radiation Monitor (EIS Component Code: MON). During the surveillance, a broken wire (EIS Component Code: CBL) was discovered on Division I Reactor Building Exhaust Plenum Sensor & Converter Unit. The surveillance procedure was stopped in order to fix the broken wire in a connector. A Work Order (Number 9601759) was prepared.

Operations personnel bypassed the high radiation signal from the Division I Reactor Building Exhaust Plenum Radiation Monitor. This would prevent a partial containment isolation from a high radiation signal from Division I Reactor Building Exhaust Plenum Radiation Monitor. The I&C (Instrument and Control) Specialist assigned to the Work Order, then proceeded to deenergize the Division I Reactor Building Exhaust Plenum Radiation Monitor. One power supply feeds both the Division I Reactor Building Exhaust Plenum Radiation Monitor and the Division I Fuel Pool Radiation Monitor (See Figure 1). Each monitor is fused separately. The I&C Specialist properly proceeded to pull the positive and negative 24VDC fuses associated with the Division I Reactor Building Exhaust Plenum Radiation Monitor. When the positive fuse was removed from the Division I Reactor Building Exhaust Plenum Unit, the Division I Fuel Pool Radiation Unit produced a false high radiation signal. Since this had not been expected, the Division I Fuel Pool High Radiation trip had not been bypassed. The following actions resulted from the trip:

The closure of the Primary Containment Atmospheric Sample Valves (EIS System Code: JM)(EIS Component Code: ISV).

The closure of the Nitrogen make up valves (EIS System Code: LK.)

Initiation of the Standby Gas Treatment System (EIS System Code: BK).

Isolation of the Reactor Building Ventilation (Reactor Building Supply and Exhaust Fans tripped and dampers closed)(EIS System Code: VA).

Cause

The isolation occurred at the time the Reactor Building Exhaust Plenum Sensor & Converter Unit fuse was pulled. This reduced the load on the power supply feeding the Fuel Pool Radiation Monitor, which caused a voltage change in the power supply output. Bench testing

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determined that a short, 5 volt drop in the power supply output occurs when the fuse is pulled on one of the monitor units.

After both Division I Reactor Building Exhaust Plenum and the Fuel Pool high radiation trips were bypassed, the Reactor Building Exhaust Plenum Radiation Monitor fuses were reinstalled and again removed to attempt to cause another high radiation trip of the Fuel Pool Radiation Monitor. No trip occurred this time. Further testing was done on the bench, and the trip could not be reproduced. The trip is believed to be associated with the broken wire and the voltage transient produced by the fuse removal.

Analysis of Reportability

This event is reportable per 10 CFR Part 50, Section 50.73(a)(2)(iv) since an automatic actuation of an Engineered Safety Feature occurred. The signal was invalid; no high radiation condition existed. Actuation of certain systems are exempted from reporting. However, the Primary Containment Atmospheric Sample Valves and Nitrogen Makeup Valves closed which are not part of the systems exempted by Section 50.73(a)(2)(iv).

Safety Significance

There are no consequences associated with the closing of the Primary Containment Atmospheric Sample Valves. Containment sampling was interrupted for less than one hour. The interruption in Nitrogen makeup was not significant as Nitrogen concentration was within specifications and was being slowly increased over several days.

Actions

Immediate Actions

The +24 VDC fuse was reinstalled.

Following determination that the signal was invalid, the partial containment isolation was reset.

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Corrective Actions

The Division I Fuel Pool Radiation Monitor was bypassed (in addition to the already bypassed Reactor Building Exhaust Plenum Radiation Monitor), the Reactor Building Exhaust Plenum Radiation Monitor was deenergized and the broken wire was repaired.

Preventative Actions

When it is anticipated that actions, i.e., maintenance or testing, could potentially generate a trip signal on either the Fuel Pool Radiation Monitor or the Reactor Building Exhaust Plenum Radiation Monitor, the upscale trips associated with the division being worked on will be bypassed. Each radiation monitor has a redundant monitor in the other division that will be functional, and not bypassed. A high radiation signal being sensed by either of these monitors in the other division will cause the partial containment isolation.

Failed Component Identification -

None.

Previous Similar Events

There have been other partial containment isolations, but there are no reportable events with similar causes.

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Figure 1 - Simplified Drawing of Division I Radiation Monitors

