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ACCESSION NBR:8902220020 DOC.DATE: 89/02/14 NOTARIZED: NO DOCKET #
 FACIL:50-263 Monticello Nuclear Generating Plant, Northern States 05000263
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 SUNAHARA,K.K. Northern States Power Co.
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 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-002-00:on 890115,inadequate work controls cause
 undetected loss of power to remote alarm panel.W/890214 ltr.
 W/8 ltr.

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INTERNAL:	ACRS MICHELSON		1	1		ACRS MOELLER		2	2
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Monticello Nuclear Generating Plant										DOCKET NUMBER (2) 0 5 0 0 0 2 6 3				PAGE (3) 1 OF 0 4	
TITLE (4) Inadequate Work Controls Causes Undetected Loss of Power to Remote Alarm Panel															
EVENT DATE (5)			LER NUMBER (8)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)					
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)		
0 1	1 5	8 9	8 9	0 0 2	0 0	0 2	1 4	8 9					0 5 0 0 0		
OPERATING MODE (6) N		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)													
POWER LEVEL (10) 1 0 0		20.402(b)				20.406(c)				60.73(a)(2)(iv)				73.71(b)	
		20.406(a)(1)(i)				60.36(a)(1)				60.73(a)(2)(v)				73.71(c)	
		20.406(a)(1)(ii)				60.36(a)(2)				60.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
		20.406(a)(1)(iii)				X 60.73(a)(2)(i)				60.73(a)(2)(vii)(A)					
		20.406(a)(1)(iv)				60.73(a)(2)(ii)				60.73(a)(2)(vii)(B)					
		20.406(a)(1)(v)				60.73(a)(2)(iii)				60.73(a)(2)(x)					
LICENSEE CONTACT FOR THIS LER (12)															
NAME Keith K. Sunahara, Production Engineer										TELEPHONE NUMBER 6 1 2 2 9 5 - 1 3 9 4					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)															
CAUSE	SYSTEM	COMPONENT	MANUFAC- Turer	REPORTABLE TO NPROS		CAUSE	SYSTEM	COMPONENT	MANUFAC- Turer	REPORTABLE TO NPROS					
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 fifteen single-space typewritten lines) (16)

ABSTRACT

For approximately 60 hours, the Fire Detection System Annunciator Panel in the Control Room was inoperable without a patrolling fire watch in the plant. This condition is contrary to Technical Specifications section 3.13.A. The annunciator panel was inadvertently deenergized during a modification activity.

Upon discovery of the deenergized annunciator panel, the control room operators immediately energized the annunciator panel and verified system operability.

The root cause of this event was inadequate work controls.

To reduce the probability of future occurrences, personnel involved in the preparation of the work procedure have been counseled on the proper considerations for controlling work activities around sensitive equipment. This LER will also be presented to plant engineering personnel as part of the regular quarterly engineering staff training. A plant policy controlling work activities in areas containing sensitive equipment will be established and communicated to appropriate personnel. Also, the status of control room fire annunciator panel will be checked hourly.

8902220020 890214
PDR ADOCK 05000263
B PNU

ITEM

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1) Monticello Nuclear Generating Plant	DOCKET NUMBER (2) 05000263	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		89	002	00	02	OF	04

TEXT (If more space is required, use additional NRC Form 368A's) (17)

DESCRIPTION

On January 15, 1989, at 1505 CST, with the plant operating at 100% power, a control room operator discovered the main control room fire detection system annunciator panel (FRA)(IC) deenergized (inoperable). The control room operators immediately energized the annunciator panel and verified system operability.

A modification was in progress to install a new local fire zone alarm panel. On January 10, 1989 the control room annunciator panel was verified to be operable under a post maintenance test procedure unrelated to the modification. On January 13, 1989 a new cable was terminated in the annunciator panel cabinet. Since no other activities were conducted in the annunciator panel cabinet between January 10 and January 15, and accessibility to the power switch for the annunciator panel is very limited, it is inferred that the power switch was accidentally bumped to the "Off" position on January 13, 1989 during the cable terminations. The control room was therefore without indication of the status of the local fire zone alarm panels for approximately 60 hours, ie. from January 13 to January 15. The control room operators were unaware that the annunciator panel was deenergized and had therefore not established a patrolling fire watch.

This condition is contrary to Technical Specifications section 3.13.A.

CAUSE

The root cause of this event was inadequate work controls. The work procedure neither identified specific precautions to take to prevent unintentionally manipulating the annunciator panel power switch nor addressed the detection and correction of work errors which could result in disabling equipment located in the work area. A contributing cause is that the status of this panel is not routinely checked.

ANALYSIS

Fire protection is based on the concept of defense in depth which provides multiple levels of fire protection. The objectives are to: 1) prevent fires from starting, 2) rapidly detect, control and extinguish promptly those fires that do occur, and 3) provide separation of equipment needed to ensure safe shutdown in the event the fire is not promptly extinguished. The loss of remote fire alarm panel degraded the ability to rapidly detect a fire.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
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Monticello Nuclear Generating Plant	0500026389	—	002	—00	03	OF	04

TEXT (If more space is required, use additional NRC Form 368A's) (17)

It is estimated that the fire detection system remote annunciation was inoperable for approximately 60 hours. If a fire occurred with the control room fire detector system annunciators disabled, identification of a fire would have been delayed until detected by other means, eg. local observation or other system alarms. Local fire zone alarm panels were operable for the duration of the event.

The conditions under which this event occurred are identified in the 10 CFR 50 Appendix R Safe Shutdown Analysis as those initial conditions which would have resulted in the most severe consequences had a fire occurred. Operability of safe shutdown systems required per 10 CFR 50 Appendix R is assured by establishing fire barriers between redundant trains of safe shutdown equipment. Fire barriers in only one area, the torus area, rely on remote fire detection. Even without remote detection capability in the torus area, remaining features provided defense in depth against fire. These features include:

1. Fixed combustibles are essentially non-existent; consisting mainly of instruction pamphlets hung next to certain equipment. Transient combustibles are not allowed.
2. Fire ignition sources are minimal. All electrical components are within conduit or enclosures.
3. The local fire alarm for the torus room can be heard from the main access control airlock inside the reactor building. All site personnel are trained in the identification and reporting of fires. Review of records shows only one instance during the event in which someone did not pass through the airlock within time limits established by administrative controls for hourly fire watch patrols.
4. The redundant trains for safe shutdown equipment are horizontally separated by at least 100 feet with no intervening combustibles.

In conclusion, the health and safety of the public was not affected by this event because:

1. A fire did not occur during this event.
2. The likelihood of disabling dual trains of safe shutdown systems was minimal.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Monticello Nuclear Generating Plant	0 5 0 0 0 2 6 3	8 9	— 0 0 2	— 0 0	0 4	OF	0 4

TEXT (If more space is required, use additional NRC Form 368A's) (17)

CORRECTIVE ACTIONS

The control room operators immediately energized the annunciator panel and verified system operability.

To reduce the probability of future occurrences:

1. Personnel involved in the preparation of the work procedure have been counseled on the proper considerations for controlling work activities around sensitive equipment.
2. This LER will be presented to plant engineering personnel as part of the regular quarterly engineering staff training.
3. A plant policy controlling work activities in areas containing sensitive equipment will be established and communicated to appropriate personnel.
4. Status of control room fire annunciator panel will be checked hourly.

ADDITIONAL INFORMATION

1. Failed Component Identification
None
2. Previous Similar Events
None



Northern States Power Company

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

February 14, 1989

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

Inadequate Work Controls Causes
Undetected Loss of Power to Remote Alarm Panel

The Licensee Event Report for this occurrence is attached.

Monica Vik

for David Musolf
Manager - Nuclear Support Services

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

Attachment

IEP2
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