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 FACIL: 50-263 Monticello Nuclear Generating Plant, Northern States 05000263
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SUBJECT: LER 89-034-00: on 891030, control room ventilation toxic
 chemical mode initiations caused by voltage transients.
 W/8 ltr.

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	AEOD/DSP/TPAB	1 1	AEOD/ROAB/DSP	2 2
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	NRR/DET/EMEB9H3	1 1	NRR/DET/ESGB 8D	1 1
	NRR/DLPQ/LHFB11	1 1	NRR/DLPQ/LPEB10	1 1
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EXTERNAL:	EG&G WILLIAMS, S	4 4	L ST LOBBY WARD	1 1
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November 29, 1989

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 Room Ventilation Toxic Chemical
Mode Initiations Caused by Voltage Transients

The Licensee Event Report for these occurrences is attached.

These events were reported via the Emergency Notification System in accordance with 10 CFR Part 50 Section 50.72 on October 30, 1989 and November 4, 1989.

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

8912130378 891129
PDR ADDCK 05000263
S FDC

LICENSEE EVENT REPORT (LER)

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 1 OF 0 3										PAGE (3) 1 OF 0 3					
TITLE (4) Control Room Ventilation Toxic Chemical Mode Initiations Caused By Voltage Transients																									
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)										
1	0	3	0	8	9	8	9	0	3	4	0	0	1	1	2	9	8	9	0 5 0 0 0						
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)																							
N		20.402(b)						20.405(c)						XX 50.73(a)(2)(iv)						73.71(b)					
POWER LEVEL (10)		0 0 0						20.405(a)(1)(i)						50.73(a)(2)(v)						73.71(c)					
		20.405(a)(1)(ii)						50.73(a)(2)(ii)						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)						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)(ix)											
LICENSEE CONTACT FOR THIS LER (12)																									
NAME Anna K Peterson, Engineer II										TELEPHONE NUMBER 6 1 1 2 2 9 1 5 - 1 1 2 1 3 3															
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	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)

On October 30 and November 4, 1989 with the reactor in cold shutdown, the Toxic Chemical mode of the Control Room Ventilation system initiated as a result of voltage transients. The initiations were verified to be spurious and the system was reset and returned to normal. The logic has been bypassed to prevent future spurious actuations.

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 8 9	SEQUENTIAL NUMBER - 0 3 4	REVISION NUMBER - 0 0			

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

DESCRIPTION

On October 30, 1989 at 1300 with the reactor in cold shutdown, the B train Control Room Ventilation System (EIIS System Code: VI) automatically transferred to the Toxic Chemical mode. Upon receipt of a common alarm, operations personnel determined that the B train Control Room ventilation was in the toxic chemical mode of operation and that the actuation was spurious. They subsequently reset the toxic chemical trip on the B train and returned the system to normal operation. This was an unplanned actuation of a safety system.

On November 4, 1989 at 2215 with the reactor in cold shutdown, while performing a special test of the #12 Emergency Diesel Generator (EIIS System Code: EK), the A train Control Room Ventilation automatically transferred to the toxic chemical mode. The special test was an approved procedure which had been reviewed in accordance with 10CFR50.59. It was determined that initiation of the Toxic Chemical mode had not been caused by a valid signal, and the Control Room Ventilation system was returned to the normal mode. This event is also reportable because it is an unplanned actuation of a safety system.

CAUSE

It is believed that the October 30 event was caused by a momentary voltage transient to the Division II control Room Ventilation trip logic which resulted in the de-energization of some or all of the relays necessary to actuate the toxic chemical mode of operation. Review of operations logs and active work documents showed that no work was in progress which could have actuated the ventilation system toxic chemical mode. The November 4 event was also caused by a voltage transient which occurred because of a special test of the Division II diesel dead load pickup capability. The voltage transient was within the expected range. However, the effect on the toxic chemical trip logic was unexpected.

In both events, a contributing cause of the unplanned actuations can be traced to toxic chemical detector (EIIS System Code: DET) trip logic which is still energized, although the detectors themselves have been bypassed. The intake structure chlorine, hydrogen chloride, hydrogen sulfide, and ammonia detectors have been bypassed since 1986 when a revised toxic chemical analysis determined that the detectors were unnecessary. The bypass of these detectors was prompted by a number of spurious toxic chemical detector actuations.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1) Monticello Nuclear Generating Plant	DOCKET NUMBER (2) 0500026389	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		89	034	00	03	OF	03

TEXT (If more space is required, use additional NRC Form 356A's) (17)

ANALYSIS

The safety significance of these events is that they involved an unplanned challenge to a safety related system. The events could have occurred under more severe conditions but the consequences would not have been worse since the system functioned as designed. There was no effect on the health and safety of the public.

CORRECTIVE ACTION

1. In both events, the trip was verified to be spurious and reset.
2. The intake structure chlorine detector and the hydrogen sulfide, hydrogen chloride, and ammonia detector trip logic has been bypassed to prevent spurious trips as a result of voltage transients or relay failure.

ADDITIONAL INFORMATIONFailed Component Identification:

None

Previous Similar Events:

None