NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Nine Mile Point Unit 2	0 5 0 0 0 4 1 0	1 OF 0 4

TITLE (4)

Standby Gas Treatment Initiation

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)
									N/A	0 5 0 0 0
1 1	2 4	8 6	8 6	0 0 9	0 1	0 7	0 7	8 7	N/A	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)			
5		20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 0 0	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 (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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Robert G. Randall, Supervisor Technical Support	3 1 5 3 4 9 - 2 4 4 5

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)

		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 November 24, 1986 Nine Mile Point Unit 2 was at 0% power with the mode switch in refuel. Procedures N2-RSP-RMS-M108(107), "Channel Functional Test of the Reactor Building Above (Below) the Refuel Floor Process Radiation Monitors", were performed to comply with Technical Specifications. In accordance with procedure, jumpers were installed to prevent Reactor Building intake/exhaust dampers from closing during the test. At approximately 0852 hours, a single jumper fell off and shorted to ground causing reactor building ventilation exhaust damper 2HVR*AOD9B to close. The closed damper prohibited flow, initiating standby gas treatment (SBGTS) "A" train and 2HVR*UC413A on low reactor building exhaust flow. Reactor building ventilation was returned to normal and SBGTS secured at approximately 1015 hours.

CORRECTIVE ACTION

Alternative methods to facilitate a more secure jumper installation are currently under review.

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

I. DESCRIPTION OF EVENT

On November 24, 1986 Nine Mile Point Unit 2 was at 0% power with the mode switch in refuel. Procedures N2-RSP-RMS-M108(107), "Channel Functional Test of the reactor building Above (Below) the Refuel Floor Process Radiation Monitors", were performed to comply with Technical Specifications. The tests perform a channel functional test of reactor building process radiation monitors by verifying the energizing/deenergizing of primary relays for the automatic trip functions. (N2-RSP-RMS-M108 and N2-RSP-RMS-M107 require similar jumper placement so they are usually run at the same time).

Per procedure, three jumpers were placed across specified terminals at panel 2CEC*PNL861, terminal block MM. Soon afterwards, the jumper placed from TBMM-29 to TBMM-31 fell off, shorted to ground and deenergized 2HVR*SOVX9B and 2HVR*SOVY9B. Deenergize-to-close damper 2HVR*AOD9B then shut interrupting reactor building below refueling floor ventilation exhaust flow. As designed, the standby gas treatment system train "A" and 2HVR*UC413A received initiation signals due to low reactor building ventilation exhaust flow. (2200CFM)

Standby gas treatment discharge fan 2GTS*FN1B and unit cooler fan 2HVR*UC413B had been placed in pull to lock so did not start. No fuses were blown during the event.

At approximately 1015 hours reactor building ventilation was returned to normal and standby gas treatment was secured.

II. CAUSE OF EVENT

Difficulty in obtaining a tight "grip" with the jumper alligator clip on the head of a termination screw is considered the primary cause of the event. Procedures N2-RSP-RMS-M107 and N2-RSP-RMS-M108 do contain specific statements cautioning that "accidently shorting a terminal to ground will cause the associated system to trip. The procedures, therefore, included adequate warning to these consequences. A secondary cause is technician error. The Instrument and Control technician, cognizant of this and the difficulty in obtaining a tight grip, should have executed more caution in affecting a secure jumper attachment.

III. ANALYSIS OF EVENT

An undesireable challenge to a plant emergency safety feature system occurred due to a shorted jumper. There were, however, no adverse safety consequences as a result of LER 86-09.

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

A shorted or open jumper can be postulated to occur during any surveillance procedure and plant condition. This can lead to one of two situations described below:

a. A shorted or open jumper can render a single safety system inoperable. In accordance with 10CFR50 Appendix A, Nine Mile Point Unit 2 is designed to withstand a single component or system failure. Hence, this fault would not place the plant in an unanalyzed condition.

B. A shorted or open jumper can lead to a spurious initiation of a plant safety system. In FSAR chapter 15 the effects of anticipated process disturbances and postulated component failures are examined to determine their consequences and to evaluate the capability built into the plant to control or accommodate such failures and events.

FSAR chapter 15, section 15.0.3.2.1 specifically addresses the consequences of single failures or operator errors.

IV. CORRECTIVE ACTIONS

1. A copy of this LER has been transmitted to the I&C training department for discussion during training. (TMR #I86.28)

2. Currently being evaluated are the following alternative methods of jumper installation.

A) Addition of stake-ons (ring-hole lugs) to terminal blocks for a better jumper connection. The additions would be documented via a Work Request (WR) and meet the requirements of SWEC Electrical Installation Specification NMP2-E061A.

B) Replace the use of jumper alligator clips with spaded lug connectors in specified cases. This will allow a more secure attachment by tightening them under the terminal block screw.

C) Replacing some terminal screws with special screws. These have a threaded hole in the head allowing a threaded connection style jumper to be attached.

Implementation of the above method(s) will depend on evaluation feedback.

V. ADDITIONAL INFORMATION

Identification of Components Referred to in this LER

Component	IEEE 803 EIIS Funct	IEEE 805 System ID
Reactor Building Ventilation Dampers (HVR)	DMP	VA
Reactor Building Unit Cooler (HVR)	CLR	VA
Standby Gas Treatment (GTS)	FAN	BH
Reactor Building Radiation Monitor (HVR)	MON	IK
Relay Room Terminal Block	MRED	EI