

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Nine Mile Point Unit 2	DOCKET NUMBER (2) 0   5   0   0   0   4   1   1   0	PAGE (3) 1 OF 0   3
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TITLE (4)  
Engineered Safety Features Actuation due to Electrician Bumping a Relay

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		
0	2	0	2	8	7	8	7	-	N/A		
0	2	0	2	8	7	8	7	-	N/A		

OPERATING MODE (9) 4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) 0   0   1   0	20.402(b)	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	73.71(b)					
	20.405(a)(1)(i)	50.38(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	73.71(c)					
	20.405(a)(1)(ii)	50.38(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vii)	OTHER (Specify in Abstract Show and in Text, NRC Form 366A)					
	20.405(a)(1)(iii)	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(viii)(A)						
	20.405(a)(1)(iv)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)						
	20.405(a)(1)(v)	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(ix)						

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME Robert G. Randall, Supervisor Technical Support	AREA CODE 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 NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	

SUPPLEMENTAL REPORT EXPECTED (14) <input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

While in cold shutdown on February 2, 1987 a secondary containment isolation and subsequent standby gas treatment system (GTS) and emergency recirculation system initiation (signal only) occurred due to personnel error. Niagara Mohawk (NMPC) electricians were repairing a defective control switch at the local reactor building ventilation (HVR) panel when an electrician accidentally bumped a relay. The bumped relay caused both running HVR supply fans to trip on a momentary false reactor building high Differential Pressure (DP) signal (+3.0 inches water gauge). With one standby supply fan auto starting and both exhaust fans running, reactor building pressure decreased to the point of tripping both exhaust fans on an actual low differential pressure signal (-3.0 inches water gauge). Subsequently, secondary containment isolation with emergency recirculation and GTS initiation signals followed. However, no automatic emergency recirculation and GTS initiations occurred because Operations had secured the systems due to painting in the reactor building (GTS operability not required in Mode 4). To restore and control reactor building DP, NMPC operators allowed emergency recirculation and GTS to auto initiate (painting had not commenced yet). Approximately 25 minutes later, reactor building DP was restored, emergency recirculation and GTS were secured and normal HVR was returned to service.

Corrective actions will be to remind NMPC electricians and Instrument and Control personnel via training of their responsibility to handle plant equipment with proper care and attention to safety and plant impact.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		87	007	01	02	03

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

I. DESCRIPTION OF EVENT

While in cold shutdown on February 2, 1987 a secondary containment isolation and subsequent standby gas treatment system (GTS) and emergency recirculation system initiations occurred due to personnel error. Niagara Mohawk (NMPC) electrical maintenance personnel were in the process of repairing a defective reactor building unit heater control switch at the local reactor building ventilation (HVR) panel. Upon entering the HVR panel to inspect the damaged switch, an electrician accidentally bumped the trip button on a relay, causing both running HVR supply fans to trip at 08:43:34. Investigation revealed the most probable cause for the supply fans trip is bumping the relay associated with reactor building high differential pressure trip (+3.0 inches water gauge).

Despite the standby HVR supply fan automatically starting on the running fans trip signal, reactor building differential pressure began decreasing (two exhaust fans and one supply fan running). At 08:44:17 both running exhaust fans automatically tripped on reactor building low differential pressure (-3.0 inches water gauge), bringing in the Division I and II secondary containment isolation and emergency recirculation and GTS initiation signals at 08:44:19 and 08:44:21 (low air flow above and below refuel floor). Emergency recirculation and GTS did not automatically initiate, however, because the systems had been secured by Operations due to painting inside the reactor building. These actions were in accordance with plant Technical Specifications, which do not require GTS to be operable in Mode 4 (cold shutdown).

NMPC licensed operators discovered the GTS initiating signals sealed in by observation of control room annunciation and computer alarms. Immediate corrective actions taken were to restore and control the reactor building differential pressure by allowing emergency recirculation and GTS to automatically initiate at 08:49:19 (painting had not commenced yet). Once the reactor building differential pressure began to normalize, both systems were manually secured at 09:10:36. At that time, normal reactor building ventilation was returned to service.

II. CAUSE OF EVENT

A special test was conducted to determine if personnel error (accidental bumping of a supply fan relay) was the cause of Engineered Safety Features (ESF) actuation. The scenario that perpetrated the sequence of events was duplicated for the special test. Results proved that momentarily bumping the trip button on the relay associated with high differential pressure led to secondary containment isolation and emergency recirculation and GTS automatic initiation signals.

Therefore, the root cause of this event is cognitive personnel error. The NMPC electrician did not exercise sufficient care when entering the panel. The area of the panel he was entering was relatively small and the switch to be inspected could only be physically reached by bending over or kneeling. However, sufficient caution would have prevented accidental bumping of equipment inside the panel. In addition, no unusual characteristics of the work location (e.g., heat, noise, etc.) directly contributed to the personnel error.



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

III. ANALYSIS OF EVENT

This event has no adverse safety consequences for the following reasons:

1. The unit is in cold shutdown and has never gone critical.
2. The secondary containment isolated and, when enabled, standby gas treatment and emergency recirculation systems initiated as designed. However, they are not required to be operable in Mode 4 per Technical Specifications.

Although initiation of these ESF systems was an operational challenge, the safety of the unit was never jeopardized. During operating conditions other than cold shutdown, these ESF systems will assist in controlling the reactor building differential pressure and minimize the release of radioactive material during certain postulated accidents.

IV. CORRECTIVE ACTIONS

NMPC plant personnel are trained to exercise proper care when working on or handling plant equipment. To prevent recurrence of a similar event, the details of this incident will be discussed with all electrical maintenance and Instrument and Control personnel via training. Training Modification Recommendations have been submitted to the appropriate training departments so that personnel will be reminded of their responsibility to perform their duties with proper care and attention to safety and plant impact.

V. ADDITIONAL INFORMATION

A. Identification of Components Referred to in this LER

Component	IEEE 803 EIIIS Funct	IEEE 805 System ID
Standby Gas Treatment System (GTS)	N/A	BH
Secondary Containment Isolation	N/A	VC
Emergency Recirculation System	N/A	VC
Normal Reactor Building Ventilation (HVR)	N/A	VC

B. Previous Similar Events

None



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