NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
McGuire Nuclear Station, Unit 1	0 5 0 0 0 3 6 9	1 OF 0 3

TITLE (4)
Inadvertent Blackout Signal Generated Resulting in Diesel Generator 1B Starting

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)
0 3	0 2	8 4	8 4	0 0 5	0 0	0 4	0 2	8 4		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)					
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	X	50.73(a)(2)(iv)		73.71(b)
		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
Phillip B. Nardoci, Licensing Engineer	AREA CODE 7 0 4 — 3 7 3 - 7 4 3 2

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 March 2, 1984 at approximately 1115, while drilling a hole on the Diesel Generator 1B Load Sequencer Panel for a Modification, the drill bit struck some wires inside the cabinet, causing a short circuit. This short circuit caused a blackout signal to be generated. The blackout signal started Diesel Generator (D/G) 1B which was subsequently loaded by the load sequencer. The short circuited wires were separated. Two fuses were replaced, and the blackout signal was cleared at 1625.

This incident is attributed to Personnel Error, due to the electrician not taking the necessary precautions when drilling holes in the cabinet. Unit 1 was in Mode 5 at the time of the incident.

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

On March 2, 1984 at approximately 1115, while drilling a hole on the Diesel Generator 1B Load Sequencer Panel [EIIS:EA] for a Modification, the drill bit struck some wires inside the cabinet, causing a short circuit. This short circuit caused a blackout signal to be generated. The blackout singal started Diesel Generator (D/G) [EIIS:GEN] 1B which was subsequently loaded by the load sequencer. The short circuited wires were seperated. Two fuses [EIIS:BRK] were replaced, and the blackout signal was cleared at 1625.

This incident is attributed to Personnel Error, due to the electrician not taking the necessary precautions when drilling holes in the cabinet. Unit 1 was in Mode 5 at the time of the incident.

Although D/G 1A was inoperable due to maintenance being performed on the diesel, permission to perform the modification on the D/G 1B Load Sequencer Panel was given after the electricians assured the shift supervisor that the work could be done with no problems. The modification required that the electricians cut holes in the door of the D/G 1B Load Sequencer Panel so that test blocks for undervoltage could be installed. The electricians stated that before they started work, they looked into the cabinet to verify they had sufficient room and determined there was enough room to drill the holes. After the last hole was drilled, the hole had to be elongated so the saw blade could be inserted for cutting. To elongate the hole, the electrician moved the drill from side to side. While moving the drill from side to side, the drill bit grabbed, forcing the drill and drill bit farther to one side. The drill bit hit the wiring harness inside the cabinet, cutting the insulation off several several wires and causing a short circuit.

The short circuit caused two fuses on the secondary side of the transformer to the undervoltage relay to open. This tripped the undervoltage relays [EIIS:RLY], resulting in a blackout signal. The blackout signal caused D/G 1B to start and load.

It should be noted that the same electricians did this modification on the D/G 1A Load Sequencer Panel with no problems. The electrician stated that when he was elongating the hole, he felt he stell had enough clearance. He had not anticipated that the drill might grab, therefore; he did not take any action to move or protect the wiring harness.

When D/G 1B loaded, Centrifugal Charging (NV) [EIIS:CB] Pump [EIIS:P] 1B started without a suction flow path. The Volume Control Tank Outlet Isolation valve [EIIS:V] had been closed earlier in the day to prevent water from the Volume Control Tank from entering the Reactor Coolant System [EIIS:AB]. The pump ran approximately three minutes without suction before a Control Operator remembered the valve in the suction flow path was closed. The Control Operator had been systematically going over the control board verifying the diesel had started and was loading correctly when he realized that the valve was closed. He opened the valve supplying water to the suction side of NV Pump 1B, and the pump was apparently undamaged.

Later the Control Operators tried to stop the NV Pump 1B so they could resume core cooling with Residual Heat Removal (ND) [EIIS:BP] Pump 1B. The NV pump could not be stopped due to the continuous blackout signal present, caused by the open fuses. The pump was stopped by removing the control power fuses and tripping the breaker locally. The breaker [EIIS:BRK] was racked out as a further precaution, though it was not necessary, and NV Pump 1B was declared inoperable. The pump was returned to service, after being retested, when the blackout signal was cleared. (The pump retest was performed

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

to ensure that no damage had been done to the pump internals).

After the blackout singal was cleared, ND Pump 1B was returned to service for core cooling. NV Pump 1B and D/G 1B were returned to standby readiness.

A checkout of the wiring and fuses for the undervoltage relays will be performed by April 24, 1984. This report will be covered with all appropriate personnel.

Although D/G 1A was inoperable due to maintenance being performed on it, D/G 1B and the D/G 1B Load Sequencer performed as designed. Even though the NV Pump was declared inoperable by opening its breaker, the pump could have been returned to service if needed. It should be noted that ND Pump 1B was started within three minutes after the start of the blackout. Core cooling was only absent for three minutes. Since Unit 1 was in Mode 5, and the systems performed as designed, the health and safety of the public was not affected.

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HAL B. TUCKER
VICE PRESIDENT
NUCLEAR PRODUCTION

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April 2, 1984

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: McGuire Nuclear Station, Unit 1
Docket No. 50-369
LER 369/84-05

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), attached is Licensee Event Report 369/84-05 concerning an inadvertent blackout signal being generated resulting in Diesel Generator 1B starting which is submitted in accordance with §50.73(a)(2)(iv). Initial notification of this event was made (pursuant to §50.72 Section (b)(2)(ii)) with the NRC Operations Center via the ENS on March 2, 1984. This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

H. B. Tucker /lbs

Hal B. Tucker

PBN:glb
Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
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Atlanta, Georgia 30303

Records Center
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1100 Circle 75 Parkway, Suite 1500
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Mr. W. T. Orders
NRC REsident Inspector
McGuire Nuclear Station

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