

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) McGuire Nuclear Station, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 6 9	PAGE (3) 1 OF 0 2
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TITLE (4)
Diesel Generator 1A and 1B starts due to Distribution System Disturbance

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	5	23	8	4	8	4	0	1	7	0	0	0	6	2	2	8	4			
									DOCKET NUMBER(S)											
									0 5 0 0 0											
									0 5 0 0 0											

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)									
POWER LEVEL (10) 0 5 0	20.402(b)	<input checked="" type="checkbox"/>	20.408(a)	<input type="checkbox"/>	90.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)	<input type="checkbox"/>		
	20.408(a)(1)(i)	<input type="checkbox"/>	90.36(a)(1)	<input type="checkbox"/>	90.73(a)(2)(v)	<input type="checkbox"/>	73.71(a)	<input type="checkbox"/>		
	20.408(a)(1)(ii)	<input type="checkbox"/>	90.36(a)(2)	<input type="checkbox"/>	90.73(a)(2)(vi)	<input type="checkbox"/>	OTHER (Specify in Abstract below and in Text, NRC Form 308A)	<input type="checkbox"/>		
	20.408(a)(1)(iii)	<input type="checkbox"/>	90.73(a)(2)(i)	<input type="checkbox"/>	90.73(a)(2)(vii)(A)	<input type="checkbox"/>		<input type="checkbox"/>		
	20.408(a)(1)(iv)	<input type="checkbox"/>	90.73(a)(2)(ii)	<input type="checkbox"/>	90.73(a)(2)(vii)(B)	<input type="checkbox"/>		<input type="checkbox"/>		
	20.408(a)(1)(v)	<input type="checkbox"/>	90.73(a)(2)(iii)	<input type="checkbox"/>	90.73(a)(2)(ix)	<input type="checkbox"/>		<input type="checkbox"/>		

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME Phillip B. Nardoci, Licensing Engineer		AREA CODE 7 0 4	NUMBER 3 7 3 - 7 4 3 2

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
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifty (50) single-space typewritten lines) (16)

Diesel generators (D/Gs) 1A and 1B experienced an invalid automatic start on May 23, 1984 at 1655. The D/Gs started on a unit 1 blackout signal generated by a momentary power distribution system disturbance caused by an electrical storm in the service area.

Unit 1 was in Mode 1 at 50% power at the time of the occurrence. This incident is attributed to an Unusual Service Condition, due to the power distribution system disturbance caused by the electrical storm. This event is similar to previous LER's 369/84-10 and 369/84-06.

The blackout signal cleared in less than 1 second, therefore, the D/G's did not load. The D/G's were shutdown after operating for approximately 22 minutes. The D/G's performed as designed during this incident. Duke Power is pursuing installing a time delay on the UV relay to aid in prevention of spurious starts.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) McGuire Nuclear Station, Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 6 9 8 4 - 0 1 7 - 0 0	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8 4	0 1 7	0 0	0 2	OF 0 2

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

Diesel generators (D/Gs) [EIIS:GEN] 1A and 1B experienced an invalid automatic start on May 23, 1984 at 1655. The D/Gs started on a unit 1 blackout signal generated by a momentary power distribution system [EIIS:FK] disturbance caused by an electrical storm in the service area.

Unit 1 was in Mode 1 at 50% power at the time of the occurrence. This incident is attributed to an Unusual Service Condition, due to the power distribution system disturbance caused by the electrical storm. This event is similar to previous LER's 369/84-10 and 369/84-06.

The D/Gs ensure that sufficient power will be available to supply the safety-related equipment for safe shutdown and for the mitigation and control of accident conditions within the facility. Therefore, in the event of a loss of offsite power or a blackout, the D/Gs will automatically start and subsequently load.

The blackout signal (Train A and B) was generated (at 1655) by an undervoltage condition on Unit 1 4160 volt essential switchgear due to line voltage fluctuations when an electrical storm passed through the Duke Service Area. The D/Gs started when the load sequencers [EIIS:JE] received signals from two out of three 4160 volt, instantaneous, undervoltage relays [EIIS:RLY]. The nominal setpoint of the undervoltage relays is 3500 volts. Unit 1 was being supplied by offsite power so that 4160 volt essential switchgear were sensitive to system fluctuations.

The load sequencer has an eight second time delay after starting the D/G before beginning a load shed and subsequent reloading of the D/G. The time delay confirms the validity of the blackout signal. The system disturbance cleared after 3 cycles (.050 seconds); clearing the blackout signal; therefore load shedding was not started and the D/Gs did not load.

D/G sequencers 1A and 1B were reset, and D/Gs 1A and 1B were shutdown after operating for approximately twenty two minutes. Duke Power is pursuing installing a time delay on the UV relay to aid in the prevention of spurious starts.

D/Gs 1A and 1B performed as designed during this incident and would have subsequently loaded had this been a valid blackout. The health and safety of the public were not affected by this incident.

DUKE POWER COMPANY

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VICE PRESIDENT
NUCLEAR PRODUCTION

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June 22, 1984

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

Subject: McGuire Nuclear Station, Unit 1
Docket No. 50-369
LER 369/84-17

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), attached is Licensee Event Report 369/84-17 concerning an automatic start of Diesel Generators 1A and 1B due to a power distribution system disturbance 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 May 23, 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
Hal B. Tucker

PBN:glb
Attachment

cc: Mr. James P. O'Reilly, Regional Administrator
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101 Marietta Street, NW
Atlanta, GA 30323

Records Center
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

Mr. W. T. Orders
NRC Resident Inspector
McGuire Nuclear Station

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