

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) EDWIN I. HATCH, UNIT 2	DOCKET NUMBER (2) 0 5 0 0 0 3 6 6	PAGE (3) 1 OF 0 2
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TITLE (4)
Failure Of Diesel Generators' Emergency Bus Loading Timers

EVENT DATE (5)			LER NUMBER (8)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
0 8	1 1	8 4	8 4	0 2 3	0 1	1 0	2 3	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	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.406(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)		
	<input type="checkbox"/> 20.406(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)		
	<input type="checkbox"/> 20.406(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
	<input type="checkbox"/> 20.406(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)			
	<input type="checkbox"/> 20.406(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)			
<input type="checkbox"/> 20.406(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)				

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME T. L. Elton, Acting Superintendent of Regulatory Compliance		AREA CODE 9 1 2	3 6 7 + 7 8 5 1

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
X	E K	T M R E O	2 1 0	Y					

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 fifteen single-space typewritten lines) (16)

On 08/01/84, plant personnel determined that the LOCA (loss of coolant accident) loading timers' reset clutch coils for "2F" emergency bus were burned out. On 08/11/84, plant personnel determined that the LOCA loading timers' reset clutch coils for the "2E" and "2G" emergency busses were also burned out. These events are reportable per 10CFR 50.73 (a)(2)(v)(A) because they affect a system which is designed to support shutting down the reactor and maintaining it in a safe condition.

The LOCA loading timers' coils for the "2F" and the "2E" and "2G" busses were replaced and the LOCA timers were satisfactorily functionally tested per a specially written functional test and returned to service on 08/13/84 and 08/14/84, respectively.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) EDWIN I. HATCH, UNIT 2	DOCKET NUMBER (2) 0 5 0 0 0 3 6 6	LER NUMBER (6)			PAGE (3)	
		YEAR 8 4	SEQUENTIAL NUMBER 0 2 3	REVISION NUMBER 0 1	0 2	0 2
					OF	

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

On 08/01/84 and 08/11/84, Unit 2 was in cold shutdown for the recirculation pipe replacement outage.

On 08/01/84, during a cable walkdown, plant personnel noted that the LOCA (loss of coolant accident) loading timers' (2R43-N781B) reset clutch coils for the "2F" emergency bus were burned out. Bus "2F" is powered by the "1B" diesel generator during a LOSP (loss of off site power). On 08/09/84, this event was initially reviewed by the PRB (plant review board) and was determined as being non-reportable due to its not meeting any reporting criteria of 10CFR 50.73. At the time of the initial review by the PRB, the LOCA loading timer for the "2F" emergency bus was the only known failure.

On 08/11/84, during a pre-logic system functional test walkdown, plant personnel determined that the LOCA loading timers' (2R43-N781A and 2R43-N781C) reset clutch coils for emergency busses "2E" and "2G", respectively, were also burned out. The LOCA & LOSP timers are manufactured by Eagle Signal division of Gulf & Western Industries. The timers are multiple contact motor driven mechanically operated devices set up with automatic reset logic.

The LOCA timer reset clutch coils were suspected to have failed since the LOCA timer was discovered to have at some previous time cycled and failed to automatically reset. It is suspected that one time testing associated with restoration of certain ECCS equipment following the Recirc Pipe replacement may have repeatedly cycled the timers causing excessive duty on the reset clutch coils although the exact time of the failures cannot be identified. The LOCA & LOSP timers had been satisfactorily tested just prior to June, 84 and had been demonstrated operable per HNP-2-3834.

The effect on plant response to an accident condition would have been minimal due to the limited significance of the LOCA timer logic and the excess capacity of the Diesel generator. The contacts on the LOCA timers cycle to a conservative configuration so that a failure to reset would only disable load shedding of the PSW pumps, CRD pumps, and the 600v busses if a LOCA were to occur following a LOSP event. If a LOCA did occur following a LOSP and the LOCA timer had previously cycled and failed to reset, the consequences would be that the core spray & RHR pumps would sequence onto a bus that had not sufficiently load shed the PSW, CRD & 600v loads as per our design basis. This would put an extra duty on the Diesel generator and its associated switchgear; however, the Diesel generator has demonstrated its ability to perform such duty in past plant events during testing.

On 08/30/84, during the initial review of the second event, PRB acknowledged that the event of 8/11/84 coupled with the 8/1/84 event is reportable. Thus, both the first and second event were deemed as being reportable per 10CFR 50.73 (a)(2)(v)(A).

These events had no impact on any other Unit 2 system or on Unit 1. The health and safety of the public were not affected by these non-repetitive events. No actual or potential safety consequences or implications resulted from these events.

The probable cause of these failures is as described above.

The coils for 2R43-N781B were replaced, functionally tested satisfactorily, and returned to service on 08/13/84. The coils for 2R43-N781A and 2R43-N781C were replaced, functionally tested satisfactorily, and returned to service on 08/14/84.

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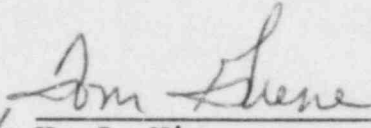
Edwin I. Hatch Nuclear Plant

October 23, 1984
GM-84-893

PLANT E. I. HATCH
Licensee Event Report
Docket No. 50-366

United States Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Attached is Licensee Event Report No. 50-366/1984-023, Rev. 1. This report is required by 10CFR 50.73(a)(2)(v).



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