

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) McGuire Nuclear Station, Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 3 7 0	PAGE (3) 1 OF 0 2
--	--------------------------------------	----------------------

TITLE (4)

Automatic ESF Actuation-Inadvertant Closure of MSIV

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 7	0 3	8 4	8 4	0 1 5	0 0 0	0 8	0 2	8 4			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) 1 1 0 1 0			20.4(c)(b)			20.406(c)			<input checked="" type="checkbox"/> 50.73(a)(2)(iv)			73.71(b)
			20.406(a)(1)(i)			50.36(c)(1)			<input type="checkbox"/> 50.73(a)(2)(v)			73.71(c)
			20.406(a)(1)(ii)			50.36(c)(2)			<input type="checkbox"/> 50.73(a)(2)(vii)			OTHER (Specify in Abstract below and in Text, NRC Form 366A)
			20.406(a)(1)(iii)			50.73(a)(2)(i)			<input type="checkbox"/> 50.73(a)(2)(viii)(A)			
			20.406(a)(1)(iv)			50.73(a)(2)(ii)			<input type="checkbox"/> 50.73(a)(2)(viii)(B)			
20.406(a)(1)(v)			50.73(a)(2)(iii)			<input type="checkbox"/> 50.73(a)(2)(ix)						

LICENSEE CONTACT FOR THIS LER (12)

NAME Scott Gewehr, Licensing	TELEPHONE NUMBER AREA CODE 7 0 4 3 7 3 - 7 5 8 1
---------------------------------	---

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
---	--	-------------------------------	-------	-----	------

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

In the performance of a quarterly test, a test indicator lamp on a main steam isolation valve (MSIV) failed to light. While troubleshooting this problem, a technician erroneously lifted a lead in the normal current path for the solenoid valve which controls the MSIV. The solenoid deenergized, causing the MSIV to close. The Unit 2 tripped from 100% power on lo-lo level in Steam Generator "C". The resultant transient behaved as expected, with reactor coolant temperature stabilizing after about 15 minutes. With the Steam Generator "C" PORVs unavailable as a result of the test, two S/G code safety valves lifted briefly. As S/G levels dropped, all three auxiliary feedwater pumps started. Main feedwater (MFW) was isolated and the MFW Pumps tripped. All instrumentation personnel have reviewed this event,

8408090274 840802
PDR ADOCK 05000370
S PDR

IE22
1/1

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

On July 3, 1984, at about 1400 hours with the Unit in Mode 1 at 100% power, technicians began a periodic test procedure involving a blocking circuit for a Steam Generator ("C") Main Steam [EIIS:SB] Isolation Valve (MSIV) [EIIS:V]. When a test lamp failed to illuminate, a technician began troubleshooting the cause in the appropriate circuit cabinet. The technician assumed that the problem was caused by a faulty diode or diode connection. At about 1545 hours, he erroneously lifted the lead from a diode in the normal current path to the solenoid valve which controlled the MSIV. The resultant power interruption to the solenoid caused a loss of control air [EIIS:LD] to the MSIV, which then closed. The reactor tripped almost immediately on 10-10 Steam Generator level.

Reactivity was promptly controlled by the reactor trip as the control rods [EIIS:ROD] inserted into the core. Pressurizer pressure responded as designed, reaching a minimum value of 1993 psig before recovering. Neither the pressurizer PORVs or code safety valves lifted. Pressurizer level control was normal; the minimum indicated level during the transient was 23.5%. Letdown was not isolated.

Reactor coolant temperatures responded as designed. Average temperature decreased abruptly to approximately 559°F following reactor trip, then settled out at ~555°F fifteen minutes later.

For approximately two minutes after reactor trip, the steam generator PORVs were unavailable for secondary steam relief because the PORV isolation valves had been previously closed as part of the test. During this time, S/G C code safety valves 2SV8 and 2SV9 lifted to relieve steam pressure. 2SV8 lifted for 44 seconds and 2SV9 lifted for 19 seconds.

Following reactor trip, steam generator [EIIS:GEN] levels dropped sharply to approximately 32% narrow range. The single turbine-driven and both motor-driven auxiliary feedwater [EIIS:BA] pumps [EIIS:P] started automatically. Main feedwater [EIIS:SJ] was isolated shortly after reactor trip on low Tave. The main feedwater pumps then tripped on high discharge pressure. Minimum steam generator level encountered during the transient was 8.6% in S/G B, which was slightly below the post-trip low low level setpoint of 12%.

No safety injection actuation occurred during this event. The pressurizer PORVs and code safety valves were not challenged. Indicated pressurizer and steam generator levels remained on scale. The primary cooldown rate was approximately 30°F/hr. No abnormal release of radioactivity occurred during this event and there was no abnormal reactor coolant leakage.

The basic cause of the personnel error was that the technician: (1) Assumed that he knew the cause of the problem, and (2) Did not have enough information (drawings, etc.) to identify potential consequences of his actions. All personnel who have responsibilities involving work on instrumentation and electronics have reviewed the incident with their supervision.

DUKE POWER COMPANY

P.O. BOX 33189

CHARLOTTE, N.C. 28242

HAL B. TUCKER

VICE PRESIDENT
NUCLEAR PRODUCTION

TELEPHONE
(704) 373-4531

August 2, 1984

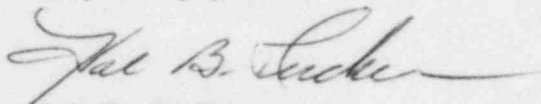
Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: McGuire Nuclear Station, Unit 2
Docket No. 50-370
LER 370-84-15

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), attached is Licensee Event Report 370/84-15 concerning an automatic actuation of engineered safeguards features 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 July 3, 1984. This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,



Hal B. Tucker

SAG:glb
Attachment

cc: Mr. James P. O'Reilly
Regional Administrator
U. S. Nuclear Regulatory Commission
Suite 2900
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

American Nuclear Insurers
c/o Dottie Sherman, ANI Library
The Exchange, Suite 245
270 Farmington Avenue
Farmington, CT 06032

IE22
11