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March 9, 1990
JAFF 90-0226

United States Nuclear Regulatory Commission
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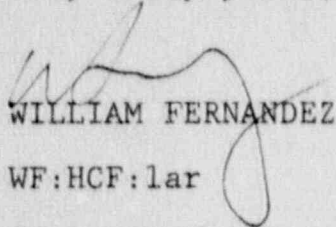
SUBJECT: DOCKET NO. 50-333
LICENSEE EVENT REPORT: 90-004-00
Reactor Core Isolation Cooling
System Spurious Isolation

Dear Sir:

This Licensee Event Report is submitted in accordance with
10 CFR 50.73(a)(2)(iv) and (v).

Questions concerning this report may be addressed to
Mr. Hamilton Fish at (315) 349-6013.

Very truly yours,


WILLIAM FERNANDEZ

WF:HCF:lar

Enclosure

cc: USNRC, Region I
USNRC Resident Inspector
INPO Records Center
American Nuclear Insurers

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) **JAMES A. FITZPATRICK NUCLEAR POWER PLANT** DOCKET NUMBER (2) **0 5 0 0 0 3 3 3 1** PAGE (3) **1** OF **0 4**

TITLE (4) **Reactor Core Isolation Cooling System Isolation Due to False Area High Ambient Temperature Signal Due to Failed Master Trip Unit**

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	2	07	9	0	9	0	0	0	0		0 5 0 0 0
				0	0	4	0	0	0	3	0 5 0 0 0

OPERATING MODE (9) **N** THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50. (Check one or more of the following) (11)

20.402(b)	<input type="checkbox"/>	20.409(e)	<input checked="" type="checkbox"/>	60.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)	<input type="checkbox"/>
20.409(a)(1)(i)	<input type="checkbox"/>	60.30(a)(1)	<input checked="" type="checkbox"/>	60.73(a)(2)(v)	<input type="checkbox"/>	73.71(e)	<input type="checkbox"/>
20.409(a)(1)(ii)	<input type="checkbox"/>	60.30(a)(2)	<input type="checkbox"/>	60.73(a)(2)(vi)	<input type="checkbox"/>	OTHER (Specify in Abstract below and in Text, NRC Form 305A)	
20.409(a)(1)(iii)	<input type="checkbox"/>	60.73(a)(2)(i)	<input type="checkbox"/>	60.73(a)(2)(vii)(A)	<input type="checkbox"/>		
20.409(a)(1)(iv)	<input type="checkbox"/>	60.73(a)(2)(ii)	<input type="checkbox"/>	60.73(a)(2)(vii)(B)	<input type="checkbox"/>		
20.409(a)(1)(v)	<input type="checkbox"/>	60.73(a)(2)(iii)	<input type="checkbox"/>	60.73(a)(2)(viii)	<input type="checkbox"/>		

LICENSEE CONTACT FOR THIS LER (12)

NAME **Hamilton C. Fish** TELEPHONE NUMBER **3 1 5 3 4 9 - 6 0 1 3**

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
B	BN	T I S	R 3 6 9	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO X

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

Abstract

EIIS Codes are in []

On 2/7/90 at 0120 with the reactor operating at full power, an isolation of the Reactor Core Isolation Cooling (RCIC) system [BN] occurred. This initiated a 7-day LCO. The isolation was caused by the failure of a Master Trip Unit (MTU) which generated a high area temperature isolation signal. The MTU was replaced. RCIC was declared to be operable at 1820 ending the LCO approximately 17 hours after it started.

Related LERs: 85-028, 86-005, 86-015, 87-013

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) JAMES A. FITZPATRICK NUCLEAR POWER PLANT	DOCKET NUMBER (2) 0 5 0 0 0 3 3 3	LER NUMBER (3)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 0	- 0 0 4	- 0 0	0 2	OF 0 4

TEXT (if more space is required, use additional NRC Form 200A's) (17)

EIIS Codes are in []

Description

On February 7, 1990 at 1:20 A.M. with the reactor operating at 100% power, alarms were received for "Division 2 Ambient Temperature High", "RCIC Isolation Trip Logic Initiated", and "RCIC Tripped". The steam supply isolation valve (13MOV-15) to the Reactor Core Isolation Cooling (RCIC) system [BN] was verified to have moved to the closed position. The RCIC area was inspected. No steam leaks were found. This established that the isolation signal was false. The temperature indicator needle on the Master Trip Unit (MTU) 13MTU-276B was observed to be moving erratically indicating initiation of be false trip signals. RCIC was declared inoperable initiating a 7-day Limiting Condition for Operation (LCO). The High Pressure Coolant Injection (HPCI) system [BJ] was verified to be operable as required by Technical Specification 4.5.E.2 by performance of Surveillance Test ST-24F.

The MTU was tested and found to be defective. It was removed and replaced with a new unit. The new MTU was aligned in accordance with Instrument Surveillance Procedure ISP-151B and checked for operability and calibration using ISP-150B.

The LCO was ended and RCIC declared operable at 6:40 P.M. on the same day. RCIC was inoperable due to the false isolation for 17 hours and 20 minutes.

Cause

The isolation of RCIC was initiated by a false high area temperature signal from a failed master trip unit. Testing determined the resistance temperature detection (RTD) unit was providing accurate signals corresponding to normal area temperature to the MTU. When calibrated test signals were supplied to the MTU, false trip signals were initiated. The MTU had been in service for 5 years. The false signal is the result of a random component failure within the MTU.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) JAMES A. FITZPATRICK NUCLEAR POWER PLANT	DOCKET NUMBER (2) 0 5 0 0 0 3 3 3	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		9 0	0 0 4	2 0 0	0 3	OF 0 4

TEXT IF more space is required, use additional NRC Form 306A's (17)

Analysis

Technical Specifications require that the RCIC system be operable whenever the reactor pressure is greater than 150 psig. A 7-day LCO is provided for repair if HPCI is operable. HPCI was operable during this event. The RCIC system was returned to operable status within approximately 17 hours. During this time period when RCIC was not operable, adequate protection of the reactor core continued to be provided by the availability of the HPCI system and the automatic depressurization system [AD] together with the low pressure Emergency Core Cooling Systems (ECCS). The available low pressure ECCS included the two core spray system [BM] and two Low Pressure Coolant Injection subsystems [BO].

This event was initiated by activation of a containment isolation signal which is an engineered safety feature. Accordingly, it is reported under Section 10 CFR 50.73(a)(2)(iv).

Although RCIC is required to be operable by the Technical Specifications, the Final Safety Analysis Report (FSAR) does not take credit for the availability of RCIC for mitigation of any of the design basis accidents.

Corrective Action

The master trip unit which failed in service was replaced with the vendor's current model which contains upgraded features.

Additional Information:

Failed Component Identification:

Plant Component Number: 13MTU-276B
 Type: Master Trip Unit
 Manufacturer: Rosemount
 NPRDS Code: R369
 Model: 510 DU
 Indication Range: 0-350 Degrees Fahrenheit
 Setpoint: 133 Degrees Fahrenheit

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) JAMES A. FITZPATRICK NUCLEAR POWER PLANT	DOCKET NUMBER (2) 0 5 0 0 0 3 3 3	LER NUMBER (8)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT IF more space is required, use additional NRC Form 286A's (17)

Related IERs:

- 85-028 HPCI Isolation (False High Area Temperature) Due to MTU (Rosemount) Failure
- 86-005 RCIC Isolation (False High Area Temperature) MTU 13MTU-207A (Rosemount)
- 86-015 RCIC Isolation (False High Steam Flow) 13DPT-83 (Rosemount)
- 87-013 RCIC Isolation (False High Steam Flow) 13MTU-283 (Rosemount) and 13DPT-83 (Rosemount)