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NewYork Power Authority

Michael J. Colomb
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June 7, 1996
JAFP-96-0238

United States Nuclear Regulatory Commission
Document Control Desk
Mail Station P1-137
Washington, D.C. 20555

SUBJECT: DOCKET NO. 50-333
LICENSEE EVENT REPORT: LER-96-006

Reactor Core Isolation Cooling System Isolation Due to False Area High Ambient Temperature Isolation Signal Due to Failed Master Trip Unit

Dear Sir:

This report was submitted in accordance with 10CFR50.73(a)(2)(iv).

There are no commitments contained in this report.

Questions concerning this report may be addressed to Mr. John Hoddy at (315) 349-6079.

Very truly yours,

MICHAEL J. COLOMB

MJC:JRH:las

cc: USNRC, Region I
USNRC Resident Inspector
INPO Records Center

IE22

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

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TITLE (4)

Reactor Core Isolation Cooling System Isolation Due to False Area High Ambient Temperature Isolation 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 NAME	DOCKET NUMBER
05	11	96	96	-- 006 --	00	06	07	96	N/A	05000
									FACILITY NAME: N/A	DOCKET NUMBER: 05000

OPERATING MODE (9)	N
POWER LEVEL (10)	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)
	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
	20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
	20.2203(a)(2)(ii)		20.2203(a)(4)	X	50.73(a)(2)(iv)		OTHER
	20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Mr. John R. Hoddy, Senior Licensing Engineer	(315) 349-6079

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
B	BN	TIS	R369	Y						

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 15 single-spaced typewritten lines) (16)

On 5/11/96 at 1800 hours, with the plant operating at full power, an isolation of the Reactor Core Isolation Cooling (RCIC) system [BN] occurred. This initiated a 7-day Limiting Condition for Operation (LCO). The isolation was caused by the failure of a Master Trip Unit (MTU) which generated a false high area temperature isolation signal. The MTU was replaced. RCIC was declared to be operable at 2337 ending the LCO approximately five and one-half hours after it started.

Related LERs: 85-028, 86-005, 86-015, 87-013, 90-004

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

EIIS Codes are in []

EVENT DESCRIPTION

On May 11, 1996, at 1800 hours, with the reactor operating at full power, alarms were received for "Division 2 Ambient Temperature High", "RCIC Isolation Trip Logic Initiated", and "RCIC Tripped". The inboard Primary Containment [NH] 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 turbine trip/throttle valve (13HOV-1) was verified to have closed.

The RCIC steam line and RCIC turbine areas were inspected. No evidence of a cause for high temperature was found. Master Trip Unit (MTU) 13MTU-289B was observed to have its alarm light lit, although the associated meter and Emergency and Plant Information Computer (EPIC) point indicated a normal temperature of approximately 70 Degrees Fahrenheit. The trip unit could not be reset. RCIC was declared inoperable. A 7-day Limiting Condition for Operation (LCO) for RCIC inoperability was entered, effective at 1800, the time of the RCIC isolation. 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. A four hour notification was made in accordance with 10 CFR 50.72(b)(2)(ii) at 1950 hours on May 11, 1996.

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. 13MTU-289B was returned to service at 2325 hours.

The RCIC isolation was reset and RCIC returned to a stand-by lineup at 2330 hours. RCIC was declared operable and the 7-day LCO exited at 2337 hours on May 11, 1996. RCIC was inoperable due to the false isolation resulting from the failed MTU for 5 hours and 37 minutes.

EVENT CAUSE

The isolation of RCIC was initiated by a false high area temperature trip signal from a failed master trip unit. Testing determined that a transistor in the MTU had degraded, causing a lowered setpoint to be sent to the trip output voltage comparator. This resulted in lowering the trip setpoint to lower than the actual normal area temperature. When this occurred, the trip unit tripped as designed. The MTU had been in service for approximately 11 years. The false trip was the result of a random component failure within the MTU (cause code B).

EVENT 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 in approximately five and one-half 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 Systems [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 Updated Final Safety Analysis Report (UFSAR) does not take credit for the availability of RCIC for mitigation of any of the design basis accidents.

CORRECTIVE ACTIONS

The master trip unit which failed in service was replaced with the vendor's current model. (Completed)

ADDITIONAL INFORMATION

A. Failed Component Identification:

Plant Component Number:	13MTU-289B
Type:	Master Trip Unit
Manufacturer:	Rosemount
NPRDS Code:	R369
Model:	510 DU
Indication Range:	0-350 Degrees Fahrenheit
Setpoint:	</= 140 Degrees Fahrenheit

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TEXT CONTINUATION

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TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

Related LERs:

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)

90-004 Reactor Core Isolation Cooling System Isolation Due to False Area High Ambient Temperature Signal Due to Failed Master Trip Unit