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Radford J. Converse  
Resident Manager

October 17, 1991  
JAFP-91-0679

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

SUBJECT: LOCKET NO. 50-333  
LICENSEE EVENT REPORT: 91-019-00 - HPCI Declared  
Inoperable Due to Instrument  
Line Failure

Dear Sir:

This report is submitted in accordance with 10 CFR 50.73(a)(2)(v).

Questions concerning this report may be addressed to  
Mr. Doug Murphy at (315) 349-6519.

Very truly yours,

A handwritten signature in cursive script, appearing to read 'R. Converse'.

RADFORD J. CONVERSE

RJC:DM:lar

Enclosure

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

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) **JAMES A. FITZPATRICK NUCLEAR POWER PLANT** DOCKET NUMBER (2) **050003333** PAGE (3) **1 OF 03**

TITLE (4) **High Pressure Coolant Injection Instrument Line Failure**

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(S)	DOCKET NUMBER(S)	
09	17	91	91	019	00	10	17	91		05000	
										05000	

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

30.402(a)	30.405(a)	30.73(a)(1)(v)	73.71(b)
30.405(a)(1)(b)	30.36(a)(1)	<input checked="" type="checkbox"/> 30.73(a)(2)(v)	73.71(a)
30.405(a)(1)(c)	30.36(a)(2)	30.73(a)(2)(v)	OTHER (Specify in Abstract below and in Text, NRC Form 305A)
30.425(a)(1)(b)	30.73(a)(2)(i)	30.73(a)(2)(v)(A)	
30.405(a)(1)(d)	30.73(a)(2)(ii)	30.73(a)(2)(v)(B)	
30.405(a)(1)(e)	30.73(a)(2)(iii)	30.73(a)(2)(v)(C)	
30.405(a)(1)(f)	30.73(a)(2)(iv)	30.73(a)(2)(v)(D)	

LICENSEE CONTACT FOR THIS LER (12)

NAME **Douglas Murphy** TELEPHONE NUMBER **315 349-6519**

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	R	J P S F	B 3 4 5	Y					

SUPPLEMENTAL REPORT EXPECTED (14)  YES (If yes, complete EXPECTED SUBMISSION DATE)  NO

EXPECTED SUBMISSION DATE (15) MONTH **02** DAY **01** YEAR **92**

ABSTRACT (Limit to 1400 spaces, i.e., approximately 11 lines single-space typewritten lines) (16)

IIIS Codes are in []

Quarterly flow rate surveillance of the High Pressure Coolant Injection System (HPCI) [BJ] was performed on 09/17/91 in accordance with Technical Specification 4.5.C.1. The Local Leak Rate Test (LLRT) line on the HPCI turbine exhaust line check valve (23HPI-65) failed at a socket weld. Manual valve 23HPI-11 was shut in order to isolate the exhaust line from the primary containment [NH] torus. HPCI was declared inoperable initiating a 7-day Limiting Condition for Operation (LCO). Preliminary evaluation of cause of this failure indicated poor weld quality during installation. Corrective actions include modification of the piping to reduce the bending moment of the LLRT connection. HPCI was declared operable on 09/19/91. HPCI was inoperable for 64.3 hours.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) <b>JAMES A. FITZPATRICK NUCLEAR POWER PLANT</b>	DOCKET NUMBER (2)  0   5   0   0   0   3   3   3	LER NUMBER (8)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9   1	-   0   1   9	-   0   0	0   2	OF	0   3

TEXT (If more space is required, use additional NRC Form 388A's) (17)

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Description

The quarterly Surveillance Test, ST-4N, "HPCI Flow Rate and Inservice Injection (ISI)", was performed on September 17, 1991 at approximately 5:07 A.M. to verify proper High Pressure Coolant Injection (HPCI) [BJ] system operation in accordance with Technical Specification 4.5.C.1. During performance of the test, the Local Leak Rate Test (LLRT) line on the HPCI turbine exhaust check valve (23HPI-65) failed at a socket weld. The line was isolated from the primary containment [NH] torus by shutting manual isolation valve 23HPI-11. The HPCI system was declared inoperable due to isolation of turbine exhaust line-up.

The installed LLRT piping configuration consisted of two isolation valves and a pressure gauge. The pressure gauge and one of the isolation valves are no longer used and were removed. The socket weld was repaired and the modified piping configuration was installed. This action was taken as a conservative measure to reduce the cantilevered weight on the LLRT piping.

ST-4N was performed successfully on September 19, 1991 demonstrating operability. The HPCI system was inoperable for 64.3 hours.

Cause

Preliminary evaluation of the root cause of this failure indicated poor weld quality during installation of the LLRT line in October 1988. A calculation using the original piping configuration was performed which verified the piping stress at the failed joint was below the material endurance limit. A supplemental report will be submitted following completion of the root cause analysis.

Analysis

Because the HPCI system was inoperable due to failure of an LLRT line on the turbine exhaust line, it qualifies as an event reportable under 10 CFR 50.73(a)(2)(v) as an event or condition that alone could have prevented the fulfillment of the safety function of a system needed to remove residual heat or mitigate the consequences of an accident.

Surveillance tests verified that the backup emergency core cooling system were operable. When HPCI was not available, core coverage was assured by the Automatic Depressurization System [AD], together with the Low Pressure Emergency Core Injection Systems (Low Pressure Core Spray [BM] and Residual Heat Removal/Low Pressure Coolant Injection [RO]).

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) <b>JAMES A. FITZPATRICK NUCLEAR POWER PLANT</b>	DOCKET NUMBER (2)  0   5   0   0   0   3   3   3	LER NUMBER (5)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9   1	— 0   1   9	— 0   0	0   3	OF	0   3

TEXT (If more space is required, use additional NRC Form 305A's) (17)

Corrective Actions

1. The socket weld was repaired and the modified piping configuration was installed. This action was taken as a conservative measure to reduce the cantilevered weight on the LLRT piping.
2. Further corrective actions will be based on results of the final root cause failure analysis.