James A. FitzPatrick
Nuclear Power Plant
P.O. Box 41
Lycoming, New York 13093
315 342-3840

NewYork Power Authority

Radford J. Converse
Resident Manager

April 1, 1992
JAFP-92-0289

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

SUBJECT: DOCKET NO. 50-333
LICENSEE EVENT REPORT: 92-014-00 - Spurious Trip of Drywell High Range Radiation Monitor

Dear Sir:

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

Questions concerning this report may be addressed to Mr. W. Verne Childs at (315) 349-6071.

Very truly yours,

R. Lezers by direction

RADFORD J. CONVERSE

RJC:WVC:lar

Enclosure

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

Cert No P064705495

IE22
1/1

NRC FORM 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92
ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1): James A. FitzPatrick Nuclear rower Plant

DOCKET NUMBER (2): 0 5 0 0 0 3 3 3

PAGE (3): 1 OF 0 4

TITLE (4): Primary Containment Vent and Purge Isolation Caused by Spurious Trip of Drywell High Range Radiation Monitor Due to Electromagnetic Interference

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 3	0 2	9 2	9 2	0 1 4	0 0	0 4	0 1	9 2		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)		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	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
W. Verne Childs, Senior Licensing Engineer	AREA CODE: 3 1 5 — 3 4 9 - 6 0 7 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	

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 fifteen single-space typewritten lines) (16)

EIIS Codes are in []

The plant was shutdown and in the cold condition for maintenance and refuel. On 3/2/92 primary containment [NH] drywell high range radiation monitor 27RM-104B [IL] trip signal caused automatic closure of two primary containment vent and purge system isolation valves. Personnel were performing baseline inspections of fire barrier penetration seals in the base of the panel containing the radiation monitor at the time of the event. This activity apparently caused the spurious (false) high radiation signal as a result of electromagnetic interference (EMI). Operators reset the radiation monitor trip and isolation logic following investigation and determination that the trip was spurious. A temporary modification was installed to block additional spurious trips while the monitors are not required to be operable by Technical Specification Table 3.2-8 and/or until the EMI problem is corrected. LERs 91-001, 91-018, 91-022, 91-029, and 91-030 are related.

EIIS Codes are in [ ]

Description

The plant was shutdown and in the cold condition for maintenance and refuel.

On March 2, 1992 at 1411 hours a spurious trip signal from primary containment [NH] drywell high range radiation monitor 27RM-104B [IL] caused automatic isolation (closure) of primary containment vent and purge system valves 27AOV-116 and -117.

The primary containment drywell high range radiation monitors, which are listed in Technical Specification Table 3.2-8, are part of the accident monitoring instrumentation [IP] and are designed to initiate isolation of the primary containment to prevent the spread of highly radioactive materials during and following postulated accidents which damage reactor fuel [AC]. The instrumentation was not required to be operable at the time of the event because the plant had been shutdown since November 28, 1991. The reactor fuel had all been moved to the spent fuel pool and no work activities which could result in radiation levels within the range of the high range radiation monitors were in progress.

At the time of the event personnel were in the process of inspecting fire barrier penetration seals in the base of the panel containing the high range radiation monitors as part of a base line inspection of all fire barrier seals (see LER-91-024). This activity (apparently) had an adverse effect on the electromagnetic interference (EMI) susceptibility of 27RM-104B causing a spurious trip signal. Both drywell high range radiation monitors have experienced a number of spurious trips due to EMI within the past two years (see LERs 91-001, 91-018, 91-022, and 91-029). During December 1991, an evaluation was performed to determine the cause of the spurious trips. This evaluation recommended corrective actions (see LER-91-030) to mitigate the effects of EMI. These corrective actions have not yet been fully implemented due to outage work schedule constraints.

Immediately following the spurious trip signal, operating personnel verified proper isolation (closure) of the appropriate valves, verified that the trip signal was apparently spurious as indicated by normal indication on both drywell high range radiation monitors and then reset the tripped monitor and isolation logic [JM].

On March 19, 1992 both drywell high range radiation monitors were temporarily modified in accordance with plant procedures to prevent the generation of isolation signals during the time period when the radiation monitors are not required to be operable. This action will prevent further engineered safety feature actuation system [JE] signals which are not necessary.

Cause

The event was caused by the unusually high susceptibility of the drywell high range radiation monitors to EMI. As noted in LER-91-030, investigation and correction of the spurious trips due to EMI is in progress.

Analysis

While the drywell high range radiation monitors 27RM-104A and -104B were not required to be operable by Technical Specifications, the instruments had not been removed from service to prevent the generation of spurious trip signals. As a result, the event was a condition that resulted in automatic actuation of an engineered safety feature, that is, automatic isolation of the primary containment vent and purge system and is thus a reportable event under 10 CFR 50.73(a)(2)(iv).

Corrective Action

1. Operating personnel immediately investigated and determined that the drywell high range radiation monitor trip signal was spurious (false) and reset the monitor and isolation logic.

2. Trip signals from drywell high range radiation monitors 27RM-104A and -104B were blocked (in accordance with approved plant procedures for temporary modifications) to prevent additional isolations due to spurious signals during the time period that the monitors are not required to be operable. Completed on March 19, 1992. Reference Temporary Modification 92-087.

3. Corrective actions (which are stated in greater detail in LER-91-030) to reduce the undesirable effects of EMI and to restore the drywell high range radiation monitors to the design configuration will be completed prior to start-up following the 1992 Refuel Outage. Due date May 15, 1992.

Additional Information

Failed components: None

Related Events: LERs 91-001, 91-018, 91-022, 91-029, and 91-030 describe additional spurious drywell high range radiation monitor trips and EMI problems.