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



Redford 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,

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RADFORD J. CONVERSE

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Enclosure

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

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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

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Description

The plant was shutdown and in the cold condition for maintenince 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 evant 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 t. 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 c 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 wor': 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].

NRC FORM 386A (6-89)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED OMB NO. 3150-0104 EXPIRES 4/30/92						
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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 spurjous 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 purga system and is thus a reportable event under 10 CFR 50.73(a)(2)(iv).

Corrective Action

- 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 d ywell 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 dry.ell 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.

NRC FORM 366A 16-821	U.S. NUCLEAR REGULATOR* COMMISSION	APPROVED 05-8 NO. 3160-0104 EXPIRES: 4/30/92					
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Additional Information

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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.