NRC FORM 366
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: ① (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 LICENSEE CODE: N Y J A F 1 ② LICENSE NUMBER: 0 0 - 0 0 0 0 - 0 0 0 ③ LICENSE TYPE: 4 1 1 1 1 ④ CAT ⑤

CON'T 0 1 REPORT SOURCE: L ⑥ DOCKET NUMBER: 0 5 0 0 0 3 3 3 ⑦ EVENT DATE: 1 1 1 8 8 0 ⑧ REPORT DATE: 0 3 0 9 8 1 ⑨

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES ⑩

0 2 During normal operation, APRM System was operated with less than minimum
0 3 allowed channels operable due to LPRM System wiring error. APRM D was inoperable
0 4 and APRM B or F was bypassed when not allowed by TS Table 3.1-1 for periods
0 5 totaling approximately nine (9) hours over an eighteen (18) day period prior
0 6 to finding the LPRM wiring problem. See attachment for additional details.
0 7
0 8

0 9 SYSTEM CODE: I B ⑪ CAUSE CODE: A ⑫ CAUSE SUBCODE: C ⑬ COMPONENT CODE: Z Z Z Z Z Z ⑭ COMP. SUBCODE: Z ⑮ VALVE SUBCODE: Z ⑯

⑰ LER/RO REPORT NUMBER: EVENT YEAR: 8 0 — SEQUENTIAL REPORT NO.: 0 8 3 / OCCURRENCE CODE: 0 1 REPORT TYPE: X — REVISION NO.: 1

ACTION TAKEN: X ⑱ FUTURE ACTION: X ⑲ EFFECT ON PLANT: Z ⑳ SHUTDOWN METHOD: Z ㉑ HOURS ㉒: 0 0 0 0 ATTACHMENT SUBMITTED: Y ㉓ NPRD-4 FORM SUB.: N ㉔ PRIME COMP. SUPPLIER: Z ㉕ COMPONENT MANUFACTURER: Z 9 9 9 ㉖

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS ㉗

1 0 Inadvertent wiring error inside primary containment when replacing LPRM strings,
1 1 during 1980 refuel outage, is believed to be the cause. During next primary
1 2 containment entry problem will be corrected. See attachment for additional
1 3 details.
1 4

1 5 FACILITY STATUS: E ㉘ % POWER: 1 0 0 ㉙ OTHER STATUS ㉚: NA METHOD OF DISCOVERY: A ㉛ DISCOVERY DESCRIPTION ㉜: Management Review

1 6 ACTIVITY RELEASED: Z ㉝ CONTENT OF RELEASE: Z ㉞ AMOUNT OF ACTIVITY ㉟: NA LOCATION OF RELEASE ㊱: NA

PERSONNEL EXPOSURES
1 7 NUMBER: 0 0 0 ㊲ TYPE: Z ㊳ DESCRIPTION ㊴: NA

PERSONNEL INJURIES
1 8 NUMBER: 0 0 0 ㊵ DESCRIPTION (41): NA

LOSS OF OR DAMAGE TO FACILITY (43)
1 9 TYPE: Z (42) DESCRIPTION: NA

PUBLICITY
2 0 ISSUED: N (44) DESCRIPTION (45): NA

NRC USE ONLY

8103160729

NAME OF PREPARER W. Verne Childs

PHONE 315-342-3840

POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET NO. 50-333

ATTACHMENT TO LER 81-083/01X-1 Page 1 of 3

During normal operation, while conducting Local Power Range Monitor (LPRM) response tests, it was discovered that LPRM detectors 44-37B and 44-37C were cross-wired. As a result of this cross-wiring, Average Power Range Monitor (APRM) Channel "D" was determined inoperable because only one "B Level" LPRM input was present which is contrary to the requirements of Technical Specifications Table 3.1-1, Note 10. APRM "D" was bypassed and tagged until the instrument was made operable. This action was accomplished by restoring LPRM 12-37B (which had been bypassed at an earlier time) to the operating mode.

As a result of these findings and discussions in a Plant Operations Review Committee (PORC) meeting held on November 18, 1980, additional investigation into the event was initiated. This investigation revealed that on a number of occassions during the time period between 1058 on October 8, 1980 and 0228 on October 25, 1980 the minimum requirements of Technical Specification Table 3.1-1 were not met for a total of approximately nine hours. Shown below is a summary of the occassions in which APRM "B" or "F" was bypassed while APRM "D" was inoperable (but not known to the plant staff) due to an inadequate number of "B Level" inputs:

	DATE	TIME	REMARKS
1.	10/8/80	1058	LPRM 12-37B bypassed due to drift. This action made APRM "D" inoperable because the 44-37B LPRM input was actually an input from LPRM 44-37C. Periods of time during which the requirements of Technical Specification Table 3.1-1 were not met began at this point.
2.	10/ 8 - 10/13	Various	APRM "B" or "F" was bypassed on a number of occasions for the routine conduct of surveillance. Each time APRM "B" or "F" was bypassed the minimum requirements of Technical Specification Table 3.1-1 was not met due to the inoperable condition of APRM "D". The total time of these events was approximately 127 minutes.
3.	10/13/80	1321	Reactor scram due to Reactor Protection System (RPS) MG problem. No change in APRM status.

	DATE	TIME	REMARKS
4.	10/13 - 10/16	Various	APRM "B" or "F" bypassed on a number of occasions totaling approximately 359 minutes while the plant was shutdown following reactor scram on October 13, 1980.
5.	10/16/80	1904	Commenced plant startup.
6.	10/17 - 10/25	Various	APRM "B" or "F" bypassed for a total of approximately 42 minutes for routine APRM surveillance.
7.	10/25/80	0228	LPRM 44-37B and 44-37C cross-wiring problem found. APRM "D" bypassed and tagged. This action ended those periods of time when the requirements of Technical Specifications Table 3.1-1 were not met.
8.	10/25/80	1700	LPRM 12-37B was removed from bypass and placed in "operate" restoring APRM "D" to a fully operable condiiton.
9.	11/18/80	N/A	PORC reviewed the event described in Item 7, above and initiated the investigation described in this LER resulting in the determination that the plant had been operating for varying periods of time between October 8, 1980 and October 25, 1980 in a condition less conservative than the least conservative aspect of LCO permitted by Table 3.1-1. The total time during which Technical Specification Table 3.1-1 limits were not met was approximately nine (9) hours or approximately 2.3% of the time.

Placing APRM "D" in bypass until it was restored to a fully operable condition by placing LPRM 12-37B in operate brought the plant in full compliance with the requirements of Technical Specification Table 3.1-1. In addition, LPRM response tests results and other data which might provide an indication of other LPRM wiring errors has been evaluated to provide assurance that the remaining LPRM detectors are properly wired. The cross-wiring of the detectors is believed to have occurred within primary containment when LPRM detectors were replaced during the 1980 refueling outage. Following a plant shutdown on January 17, 1981 a primary containment entry was made and the existance of a wiring error at the connection between plant wiring and LPRM string connectors was confirmed.

The wiring error was corrected and a review of administrative controls associated with the installation and testing of LPRM strings was conducted. As a result of this review the following actions will be taken to prevent recurrence:

POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT

DOCKET NO. 50-333

ATTACHMENT TO LER 81-083/01X-1 Page 3 of 3

1. Permanent labels will be affixed to the plant wiring that connects to the LPRM string connectors. These labels will allow rapid and positive verification that each detector is connected to the proper signal cable.

2. Procurement and installation of the labels and revision of the administrative controls associated with installation of LPRM strings is expected to be complete prior to the next LPRM replacement.

A review of the possible effect on core performance calculations indicates that since the cross-wiring was associated with a LPRM string near the core periphery (not in a high power region) other higher power fuel bundles were at all times more limiting with respect to Minimum Critical Power Ratio, Limiting Heat Generation Rate and Maximum Fraction of Limiting Power Density parameters. As a result, the FitzPatrick plant does not consider a significant hazard to have existed.

NOTE: Vertical lines in right-hand margin indicate those portions of the attachment changed by Revision 1.