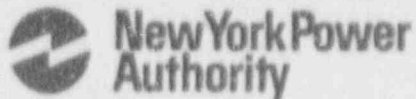


James A. FitzPatrick
Nuclear Power Plant
P.O. Box 41
Lycoming, New York 13093
315 342-3840



Harry P. Salmon, Jr.
Resident Manager

November 9, 1992
JAFP-92-0784

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

SUBJECT: DOCKET NO. 50-333
LICENSEE EVENT REPORT: 92-044-00 - IDENTIFICATION
OF NON-CONFORMANCE TO THE
FSAR DESIGN CRITERIA FOR
ELECTRICAL CABLE SEPARATION

Dear Sir:

This interim report is submitted in accordance with 10 CFR
50.73(a)(2)(ii)(B).

Questions concerning this report may be addressed to
Mr. David Holliday at (315) 349-6359.

Very truly yours,

A handwritten signature of Harry P. Salmon, Jr. in cursive script.

HARRY P. SALMON, JR.

~~DA~~
HPS:DAH:tld
Enclosure

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

130044

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S PDR

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JKR

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 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 Power Plant

DOCKET NUMBER (2)

0 5 0 0 0 3 3 3 1 OF 0 4

PAGE (3)

TITLE (4) Identification of Non-Conformance to the FSAR Design Criteria For Electrical Cable Separation

| 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) | | | | | | | | | | | | | |
| 1 | 0 | 1 | 0 | 9 | 2 | 9 | 2 | 0 | 4 | 4 | 0 | 0 | 1 | 1 | 0 | 9 | 9 | 2 | 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) | | | | | | | | | | | | | | | | | | | | | |
| N | | | | | | | | | | | | | | | | | | | | | | | |
| POWER LEVEL (10) | | 0 0 0 | | | | | | | | | | | | | | | | | | | | | |
| | | 20.402(b) | | | | | | | | | | | | | | | | | | | | | |
| | | 20.405(a)(1)(i) | | | | | | | | | | | | | | | | | | | | | |
| | | 20.405(a)(1)(ii) | | | | | | | | | | | | | | | | | | | | | |
| | | 20.405(a)(1)(iii) | | | | | | | | | | | | | | | | | | | | | |
| | | 20.405(a)(1)(iv) | | | | | | | | | | | | | | | | | | | | | |
| | | 20.405(a)(1)(v) | | | | | | | | | | | | | | | | | | | | | |
| | | 20.405(c) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.36(c)(1) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.36(c)(2) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.73(a)(2)(i) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.73(a)(2)(ii) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.73(a)(2)(iii) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.73(a)(2)(iv) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.73(a)(2)(v) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.73(a)(2)(vi) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.73(a)(2)(vii) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.73(a)(2)(viii) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.73(a)(2)(ix) | | | | | | | | | | | | | | | | | | | | | |
| | | 50.73(a)(2)(x) | | | | | | | | | | | | | | | | | | | | | |

LICENSEE CONTACT FOR THIS LER (12)

NAME

David Holliday, Senior Licensing Engineer

TELEPHONE NUMBER

AREA CODE 3 1 5 TELEPHONE NUMBER 3 4 9 - 6 3 5 9

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 |
|-------|--------|-----------|--------------|-------------------|-------|--------|-----------|--------------|-------------------|
| | | | | | | | | | |
| | | | | | | | | | |
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SUPPLEMENTAL REPORT / EXPECTED (14)

☒ YES (If yes, complete EXPECTED SUBMISSION DATE)☐ NO

EXPECTED SUBMISSION DATE

MONTH DAY YEAR

0 2 2 10 9 2

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (15)

INTERIM REPORT

EIIIS Codes are in []

The plant was shutdown and in the cold condition for maintenance and refuel. On 10/10/92, during a walkdown with an NRC Inspector, examples of apparent deviations from the Electrical Cable Separation Criteria were noted in the Cable Spreading Room [NA], the Relay Room [NA], and in Control Room [NA] panels. The Final Safety Analysis Report requires a minimum horizontal distance of three feet, or a minimum vertical distance of seven feet, be maintained between cable trays, conduits, and armor cables not in trays, which carry redundant circuits with exceptions allowed in certain protected areas. Subsequent review found one non-conformance associated with the Analog Trip/Transmitter System Panel where an electrical conduit installed in 1986 ended approximately three feet short of the ceiling penetration. On 10/10/92, the ECCS were declared inoperable due to the conduit not meeting the approved design. An ENS call was made. A team was assembled to look for any additional deviations and to develop an Electrical Cable Separation Assessment Program.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 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.

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| FACILITY NAME (1) James A. FitzPatrick Nuclear Power Plant | DOCKET NUMBER (2) 0 5 0 0 0 3 3 3 | LER NUMBER (6) | | | PAGE (3) | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | |
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

INTERIM REPORT

EIIIS Codes are in []

Description

The plant was shutdown and in the cold condition for maintenance and refuel. On October 10, 1992, during a walkdown with an NRC Inspector, examples of apparent deviations from the Electrical Cable Separation Criteria were noted in the Cable Spreading Room [NA], the Relay Room [NA], and in Control Room [NA] panels.

The Final Safety Analysis Report, Section 7.1.9, Section A, states: The separation criteria, at the time of construction for all areas of the plant, required that a minimum horizontal distance of three feet or a minimum vertical distance of seven feet be maintained between cable trays, conduits, and armor cables not in trays which carry redundant circuits if a reinforced concrete wall or floor slab does not exist between these raceways which carry redundant circuits.

These requirements apply in all areas of the plant, with specific deviations allowed in certain protected areas, such as the Relay Room, Cable Spreading Room, and others.

Subsequent review found one non-conformance associated with the Analog Trip/ Transmitter System (ATTS) Panel which could potentially affect Emergency Core Cooling System (ECCS) Actuation Logic Circuit operability. The non-conformance consisted of a set of cables which by design should have been entirely enclosed by conduit due to their proximity to a redundant cable tray. However, the conduit actually ended approximately three feet short of the ceiling penetration. The conduit and cables were installed in 1986.

At 1600 hours on October 10, 1992, Emergency Core Cooling Systems were declared inoperable because the electrical conduit was not installed in accordance with approved design. Secondary Containment [NG] was verified to be operable. An Emergency Notification System (ENS) call was made to the NRC at 1657 hours.

A team was assembled to develop an Electrical Cable Separation Assessment Program in conjunction with GE (the Nuclear Steam Supply System vendor) and Stone & Webster Engineering Corporation (the original Architect Engineer).

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

James A. FitzPatrick Nuclear
Power Plant

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

This assessment program will cover: walkdown and identification of separation discrepancies; evaluation and review of discrepancies; determination of operability; determination of acceptance or corrective action; determination of reportability; root cause evaluation; and preparation of updated criteria for future use.

An update to this LER will elaborate further on the number and characteristics of these discrepancies.

Cause

The causes of this event will be fully evaluated using one or more root cause evaluation techniques. An update to this LER will include the results of the root cause evaluations.

Analysis

This event is reportable under the provisions of 10CFR50.73 (a)(2)(vi) since raceway installations did not conform to approved design potentially making ECCS subsystems vulnerable to single failures during design basis events.

The plant had been shutdown for more than 320 days and was in the cold condition with irradiated fuel in the reactor.

Although there are cables which do not conform to the separation criteria and are, therefore, not fully qualified, the present plant condition (as well as the ability to take manual actions) offsets the adverse safety impact these non-conformances may have.

An update to this LER will include a more detailed assessment.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 7.00 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.

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| FACILITY NAME (1) James A. FitzPatrick Nuclear Power Plant | DOCKET NUMBER (2) 0 5 0 0 0 3 3 3 9 2 — 0 4 4 — 0 0 0 4 OF 0 4 | LER NUMBER (6) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Corrective Actions

1. Currently, the Authority is concentrating on identifying and evaluating deviations to the separation criteria. The Authority is developing inspection, evaluation, and review methodologies in concert with GE and SWEC in order to consistently characterize and classify deviations. Generic resolutions are being developed to quickly resolve deviations.
2. Deviations will be evaluated and accepted as-is or corrected through approved plant modifications. A schedule for resolution of these deviations will be completed prior to plant start-up.
3. An update to this LER will be prepared after the scope of this condition has been clarified and evaluated, a root cause has been performed, and resolutions are better known. Completion date - 90 days after plant start-up.

Additional Information

Failed Components: None

Previous Similar Events: LER-79-056, HPCI/ADS Cabling Doesn't Meet Separation Criteria, Dated October 9, 1979

Related Industry Experience:

1. NRC Information Notice 85-11, Licensee Programs for Inspection of Electrical Raceway and Cable Installations
2. NRC Information Notice 84-09, Lessons Learned from NRC Inspections of Fire Protection Safe Shutdown Systems
3. NRC Information Notice 79-32, Separation of Electrical Cables for HPCI and ADS