

LICENSEE EVENT REPORT (LER)

Supplement to report dated 3/14/85

FACILITY NAME (1)
Dresden Nuclear Power Station, Unit 2DOCKET NUMBER (2)
0 5 0 0 0 2 3 7PAGE (3)
1 OF 0 2TITLE (4)
Reactor Scram During Undervoltage Tests (DOS 6600-6)

| 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 | 2 | 1 | 7 | 8 | 5 | 8 | 5 | 0 | 0 | 6 | 0 | 1 | 0 | 4 | 2 | 3 | 8 | 5 | N/A | 0 5 0 0 0 |
| N/A | | | | | | | | | | 0 5 0 0 0 | | | | | | | | | | |

| OPERATING MODE (9) | | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|------------------|---|----------------------|--|--|--|--|--|--|--|--|-----------|-----------|---|-----------------|----------|-----------------|-------------|--|----------------|----------|------------------|-------------|--|------------------|--|-------------------|----------------|--|----------------------|--|------------------|-----------------|--|----------------------|--|-----------------|------------------|--|-----------------|--|
| N | | <table border="1"><tr><td>20.402(b)</td><td>20.405(c)</td><td>X</td><td>50.73(a)(2)(iv)</td><td>73.71(b)</td></tr><tr><td>20.405(a)(1)(i)</td><td>50.38(c)(1)</td><td></td><td>50.73(a)(2)(v)</td><td>73.71(c)</td></tr><tr><td>20.405(a)(1)(ii)</td><td>50.38(c)(2)</td><td></td><td>50.73(a)(2)(vii)</td><td>OTHER (Specify in Abstract below and in Text, NRC Form 366A)</td></tr><tr><td>20.405(a)(1)(iii)</td><td>50.73(a)(2)(i)</td><td></td><td>50.73(a)(2)(viii)(A)</td><td></td></tr><tr><td>20.405(a)(1)(iv)</td><td>50.73(a)(2)(ii)</td><td></td><td>50.73(a)(2)(viii)(B)</td><td></td></tr><tr><td>20.405(a)(1)(v)</td><td>50.73(a)(2)(iii)</td><td></td><td>50.73(a)(2)(ix)</td><td></td></tr></table> | | | | | | | | | | 20.402(b) | 20.405(c) | X | 50.73(a)(2)(iv) | 73.71(b) | 20.405(a)(1)(i) | 50.38(c)(1) | | 50.73(a)(2)(v) | 73.71(c) | 20.405(a)(1)(ii) | 50.38(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)(ix) | |
| 20.402(b) | 20.405(c) | X | 50.73(a)(2)(iv) | 73.71(b) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.405(a)(1)(i) | 50.38(c)(1) | | 50.73(a)(2)(v) | 73.71(c) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.405(a)(1)(ii) | 50.38(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)(ix) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

LICENSEE CONTACT FOR THIS LER (12)
NAME
Mark Leahy (X-422)
TELEPHONE NUMBER
8 1 5 9 4 2 - 2 9 2 0

| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) | | | | | | | | | |
|--|--------|-----------|--------------|---------------------|-------|--------|-----------|--------------|---------------------|
| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPROS | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPROS |
| B | | | | N | | | | | |
| | | | | | | | | | |

SUPPLEMENTAL REPORT EXPECTED (14)
YES (If yes, complete EXPECTED SUBMISSION DATE) X NO
EXPECTED SUBMISSION DATE (15)
MONTH DAY YEAR

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

With the unit shutdown for refueling, the breaker for feed from transformer 22 to bus 23 was opened per DOS 6600-6 (Bus Undervoltage and ECCS Integrated Functional Test for 2(3) Diesel Generator). The expected half-scrum was received on RPS Channel B due to loss of power. However, Channel A also received a half-scrum on reactor water low level, causing a full scrum.

As a part of the Environmental Qualification modification, the reactor water low level relays and switches were replaced, and trip units added. During the design of this change, the RPS power supply system divisions to the trip units were crossed, due to a misunderstanding, on the part of the Architect Engineer, of the power supply divisionalization. This error was not identified in reviews by the Station Nuclear Engineering Department and station personnel. With this error made, when Channel B power was disrupted, the Channel A reactor water low level switches also opened, creating the Channel A half-scrum and the full scrum.

To correct this problem, the power supplies will be redesigned, rewired and functionally tested.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) | |
|---------------------------------------|-------------------|----------------|-------------------|-----------------|----------|--------|
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | |
| Dresden Nuclear Power Station, Unit 2 | 0 5 0 0 0 2 3 7 | 8 5 | — 0 0 6 | — 0 1 | 0 2 | OF 0 2 |

TEXT (If more space is required, use additional NRC Form 366A's) (17)

With the unit shutdown for refueling, the breaker for feed from transformer 22 to bus 23 was opened for DOS 6600-6 (Bus Undervoltage and ECCS Integrated Functional Test for 2(3) Diesel Generator). This resulted in the expected half-scam on RPS Channel B when the power to MCC 25-2 (RPS Reserve Power Supply) was cut off. Simultaneously, an unexpected half-scam occurred on Channel A when the reactor water low level relays on sub-channels A and C dropped out on loss of power to their trip units, causing a full scram. Safety significance is minimal, as the full scram did occur. The switch's scram function was not impaired. Rather the error made the logic more conservative. This is the first reportable occurrence of this type at Dresden Station.

The event was caused by improper design by the Architect-Engineer, coupled with a design review which was not extensive enough on the part of CECO's Station Nuclear Engineering Department and the station. As a part of the Environmental Qualification modification, the reactor water level transmitters and switches were replaced. The divisionalization of the power supply systems for the new reactor water level trip units were crossed in the design, due to a misunderstanding on the part of the Architect Engineer. Thus, when power was taken off of RPS Channel B, the expected Channel B half-scam occurred, but RPS bus Channel A also tripped on simulation of low water level due to loss of power to the reactor water level trip units.

To correct this problem, the power supplies will be redesigned, rewired, and functionally tested. In addition, a schematic verification was made of other work performed by this Architect Engineer.



Commonwealth Edison

Dresden Nuclear Power Station

R.R. #1

Morris, Illinois 60450

Telephone 815/942-2920

April 23, 1985

DJS Ltr #85-440

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Revised Licensee Event Report #85-006-1, Docket #050237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73 (a)(2)(iv). This revised report is provided to update the cause code.

D.J. Scott
Station Manager
Dresden Nuclear Power Station

DJS/kjl

Enclosure

cc: J.G. Keppler, Regional Administrator, Region III
File/NRC
File/Numerical

LE22
1/1