

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
CRYSTAL RIVER UNIT 3DOCKET NUMBER (2)
0 5 0 0 0 3 0 2 1 OF 0 3TITLE (4)
UNPLANNED AUTOMATIC ACTUATION OF AN EMERGENCY DIESEL GENERATOR

| 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 | 5 | 0 | 8 | 8 | 5 | 8 | 5 | 0 | 0 | 5 | N/A | 0 5 0 0 0 |
| 0 | 5 | 0 | 8 | 8 | 5 | 8 | 5 | 0 | 0 | 5 | N/A | 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) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------|--|-------------------------------------|----------------------|--|-----------------|----------|-----------------|-------------|--------------------------|----------------|----------|------------------|-------------|--------------------------|------------------|--|-------------------|----------------|--------------------------|----------------------|--|------------------|-----------------|--------------------------|----------------------|--|-----------------|------------------|--------------------------|----------------|--|
| 6 | <table border="1"><tr><td>20.402(b)</td><td>20.406(c)</td><td><input checked="" type="checkbox"/></td><td>50.73(a)(2)(iv)</td><td>73.71(b)</td></tr><tr><td>20.406(a)(1)(i)</td><td>50.36(a)(1)</td><td><input type="checkbox"/></td><td>50.73(a)(2)(v)</td><td>73.71(a)</td></tr><tr><td>20.406(a)(1)(ii)</td><td>50.36(a)(2)</td><td><input type="checkbox"/></td><td>50.73(a)(2)(vii)</td><td>OTHER (Specify in Abstract below and in Text, NRC Form 366A)</td></tr><tr><td>20.406(a)(1)(iii)</td><td>50.73(a)(2)(i)</td><td><input type="checkbox"/></td><td>50.73(a)(2)(viii)(A)</td><td></td></tr><tr><td>20.406(a)(1)(iv)</td><td>50.73(a)(2)(ii)</td><td><input type="checkbox"/></td><td>50.73(a)(2)(viii)(B)</td><td></td></tr><tr><td>20.406(a)(1)(v)</td><td>50.73(a)(2)(iii)</td><td><input type="checkbox"/></td><td>50.73(a)(2)(x)</td><td></td></tr></table> | 20.402(b) | 20.406(c) | <input checked="" type="checkbox"/> | 50.73(a)(2)(iv) | 73.71(b) | 20.406(a)(1)(i) | 50.36(a)(1) | <input type="checkbox"/> | 50.73(a)(2)(v) | 73.71(a) | 20.406(a)(1)(ii) | 50.36(a)(2) | <input type="checkbox"/> | 50.73(a)(2)(vii) | OTHER (Specify in Abstract below and in Text, NRC Form 366A) | 20.406(a)(1)(iii) | 50.73(a)(2)(i) | <input type="checkbox"/> | 50.73(a)(2)(viii)(A) | | 20.406(a)(1)(iv) | 50.73(a)(2)(ii) | <input type="checkbox"/> | 50.73(a)(2)(viii)(B) | | 20.406(a)(1)(v) | 50.73(a)(2)(iii) | <input type="checkbox"/> | 50.73(a)(2)(x) | |
| 20.402(b) | 20.406(c) | <input checked="" type="checkbox"/> | 50.73(a)(2)(iv) | 73.71(b) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.406(a)(1)(i) | 50.36(a)(1) | <input type="checkbox"/> | 50.73(a)(2)(v) | 73.71(a) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.406(a)(1)(ii) | 50.36(a)(2) | <input type="checkbox"/> | 50.73(a)(2)(vii) | OTHER (Specify in Abstract below and in Text, NRC Form 366A) | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.406(a)(1)(iii) | 50.73(a)(2)(i) | <input type="checkbox"/> | 50.73(a)(2)(viii)(A) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.406(a)(1)(iv) | 50.73(a)(2)(ii) | <input type="checkbox"/> | 50.73(a)(2)(viii)(B) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20.406(a)(1)(v) | 50.73(a)(2)(iii) | <input type="checkbox"/> | 50.73(a)(2)(x) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

LICENSEE CONTACT FOR THIS LER (12)
NAME
W. K. Bandhauer, Nuclear Safety SupervisorTELEPHONE NUMBER
AREA CODE
9 0 4 7 9 5 - 3 8 0 2

| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13) | | | | | | | | | | |
|--|--------|-----------|--------------|---------------------|-------|--------|-----------|--------------|---------------------|--|
| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPDOS | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPDOS | |
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SUPPLEMENTAL REPORT EXPECTED (14)
YES (If yes, complete EXPECTED SUBMISSION DATE) ☐ NO ☒
EXPECTED SUBMISSION DATE (15)
MONTH DAY YEAR

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

On May 30, 1985, while in a refueling outage, Crystal River Unit 3 experienced an actuation of the "A" Engineered Safeguards (ES) 4160 VAC Bus Undervoltage Protective Relaying. The actuation was caused by lifting leads on two of three protective relays while performing equipment modifications to the "B" ES 4160 VAC Bus. An actual undervoltage condition did not exist on the "A" (ES) 4160 VAC Bus. However, upon actuation, the undervoltage relaying caused all "A" ES 4160 VAC feeder breakers to open, the "A" Emergency Diesel Generator (EGDG-1A) to start and the diesel generator output breaker to close. The lifted leads were reterminated, the normal feeder breaker was closed, and EGDG-1A was shutdown. This event had no significant impact on plant operations.

The lifting of leads was the result of an input error to a computer program for the printout used to sequence modifications for components during this outage. The computer program input error was corrected and a full verification of the printout information was performed.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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|---|--|----------------|----------------------|--------------------|----------|----|-----|
| FACILITY NAME (1) CRYSTAL RIVER UNIT 3 | DOCKET NUMBER (2) 0 5 0 0 0 3 0 2 | LER NUMBER (6) | | | PAGE (3) | | |
| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 8 5 | - 0 0 5 | - 0 0 | 0 2 | OF | 0 3 |

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

EVENT DESCRIPTION

On May 30, 1985, Crystal River Unit 3 was in a refueling outage with the reactor completely defueled. The "B" Engineered Safeguards (ES) 4160 VAC Bus (EB) was de-energized and the "B" Emergency Diesel Generator (EGDG-1B) (EK, DG) was tagged out for maintenance activities. The "B" ES 480 VAC (ED) was fed from the "A" ES 480 VAC Bus (ED) via the crosstie breakers. The maintenance activities being performed included equipment modification, Modification Approval Record (MAR) 77-07-01-04, "Remote Shutdown Pre-Outage/Outage Electrical Terminations."

At 1610, the "A" ES 4160 VAC Bus feeder breakers opened, EGDG-1A started and the EGDG-1A output breaker shut restoring power to the "A" ES 4160 VAC Bus. All electrical loads supplied by the "A" ES 4160 VAC Bus, the "A" VAC Bus, and the "B" 480 VAC Bus were de-energized during this transfer and were either manually or automatically started as needed. There was no significant impact on plant operations due to the defueled condition.

The automatic start and loading of the diesel generator resulted from the actuation of the "A" ES 4160 VAC Bus Undervoltage Protective Relaying caused by the lifting of two of three protective relays. Contractor supplied electricians lifted the leads as directed by the work package for the "B" ES 4160 VAC Bus. The lifting of leads was intended to be limited to the "B" ES 4160 Bus undervoltage circuits. Due to the extensive number of plant modifications scheduled for this outage, a computer program, "End Item Data Report," was created to sequence modifications and other maintenance activities. In this case, an error in input to this program resulted in the premature inclusion of the "A" ES 4160 VAC Bus undervoltage relaying.

After discovering the error, the affected leads were reterminated, the normal feeder breaker was closed, and EGDG-1A was shutdown.

SAFETY CONSIDERATIONS

After the initial error involving the lifting of leads, all safety related equipment performed as designed. The reactor was defueled and the spent fuel pools were adequately cooled throughout the event.

Due to their time consuming nature, modifications of this type would not be scheduled during power operations. Therefore, it is unlikely that a loss of ES buses caused by similar circumstances would occur at power. If this did occur, no unacceptable risks would exist as evidenced by the Crystal River Unit 3 Final Safety Analysis Report, Section 14.1.2.8, Loss of Electrical Power.

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EXPIRES 8/31/85

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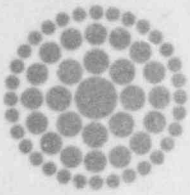
TEXT (If more space is required, use additional NRC Form 366A's) (17)

CORRECTIVE ACTION

The input error in the "End Item Data Report" program has been corrected. A full verification review of this report was in progress at the time of the event and has been completed since that date with no further significant input errors detected. This program input error is considered an isolated event.

PREVIOUS SIMILAR EVENTS

Unplanned Emergency Diesel Generator automatic starts have occurred four times in the past. However, this is the first event in which the EGDG automatic start resulted from premature MAR installation caused by a program input error.



**Florida
Power**
CORPORATION

June 28, 1985
3F0685-30

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

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
Licensee Event Report No. 85-005-00

Dear Sir:

Enclosed is Licensee Event Report (LER) No. 85-005-00 which is submitted in accordance with 10 CFR 50.73.

Should there be any questions, please contact this office.

Sincerely,

G. R. Westafer
Manager, Nuclear Operations
Licensing and Fuel Management

AEF/feb

Enclosure

cc: Dr. J. Nelson Grace
Regional Administrator, Region II
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
101 Marietta Street N.W., Suite 2900
Atlanta, GA 30323

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11