

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
CRYSTAL RIVER UNIT 3

DOCKET NUMBER (2)
0 5 0 0 0 1 3 0 2

PAGE (3)
1 OF 0 3

TITLE (4)
DESIGN REQUIRES SIMULTANEOUS DISABLING OF ALL EMERGENCY FEEDWATER ISOLATION AND CONTROL FUNCTIONS FOR PLANNED MAINTENANCE

| 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 | 2 | 6 | 8 | 5 | 8 | 5 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| N/A | | | | | | | | | | 0 5 0 0 0 0 0 0 0 0 | | | | | | | | | | | |
| N/A | | | | | | | | | | 0 5 0 0 0 0 0 0 0 0 | | | | | | | | | | | |

OPERATING MODE (9)
1

POWER LEVEL (10)
0 7 5

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)

| | | | |
|-------------------|-------------------|---------------------|--------------------------------------------------------------|
| 20.402(b) | 20.406(c) | 50.73(a)(2)(iv) | 73.71(b) |
| 20.406(a)(1)(i) | 50.36(e)(1) | 50.73(a)(2)(v) | 73.71(e) |
| 20.406(a)(1)(ii) | 50.36(e)(2) | 50.73(a)(2)(vi) | OTHER (Specify in Abstract below and in Text, NRC Form 386A) |
| 20.406(a)(1)(iii) | X 50.73(a)(2)(ii) | 50.73(a)(2)(vii)(A) | |
| 20.406(a)(1)(iv) | 50.73(a)(2)(iii) | 50.73(a)(2)(vii)(B) | |
| 20.406(a)(1)(v) | 50.73(a)(2)(iii) | 50.73(a)(2)(ix) | |

LICENSEE CONTACT FOR THIS LER (12)

NAME
L. W. Moffatt, Nuclear Safety Supervisor

TELEPHONE NUMBER
AREA CODE: 9 0 4 7 9 5 - 6 4 8 6

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

| CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPRDS | CAUSE | SYSTEM | COMPONENT | MANUFACTURER | REPORTABLE TO NPRDS |
|-------|--------|-----------|--------------|---------------------|-------|--------|-----------|--------------|---------------------|
| x | JIE | IIMIOIDV | 1121 | yes | | | | | |

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 December 26, 1985, Crystal River Unit 3 was operating at 75% reactor power while generating 685 MWe. A monthly surveillance procedure on the Emergency Feedwater Initiation and Control (EFIC) System was in progress. During performance of the surveillance procedure, it was determined that the "B" channel of EFIC probably contained a defective once through steam generator low level initiate bistable. To preclude a spurious actuation during troubleshooting, at 1510 all automatic functions of EFIC were rendered inoperable which is a condition prohibited by technical specifications. Additional licensed operators were assigned to manually activate EFIC if required during the twenty-eight minutes that EFIC was inoperable.

The EFIC automatic actuation function was rendered inoperable because the location of all fault signals could not be determined with certainty, and the EFIC design does not provide sufficient bypass capabilities to prevent spurious actuations during troubleshooting. Florida Power Corporation is considering a modification to the EFIC system to increase its bypass capabilities.

The "B" channel low level initiate bistable for OTSG "B" was found to have failed to the tripped condition. The failed bistable was replaced.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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|-----------------------------------------------|----------------------------------------------|----------------|-------------------|-----------------|----------|-----|-------|
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| | | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | | | |
| | | 8 5 | 0 1 3 1 3 | 0 1 0 | 0 1 2 | 7 F | 0 1 3 |

TEXT (if more space is required, use additional NRC Form 366A (11/77))

EVENT DESCRIPTION

On December 26, 1985, Crystal River Unit 3 was operating at 75% reactor power while generating 685 Mwe. A monthly surveillance procedure on the Emergency Feedwater Initiation and Control (EFIC) System (JE) was in progress. It was determined during the performance of the surveillance procedure that the "B" channel of EFIC probably contained a defective once through steam generator (OTSG) low level initiate bistable. The "B" channel of EFIC was declared inoperable and Action Statement 3.3.2.1 was entered at 1430. To preclude a spurious actuation while troubleshooting, all automatic functions of EFIC were rendered inoperable at 1510, thus entering TS 3.0.3. Additional licensed operators were assigned to manually initiate emergency feedwater, main steam line isolation, and main feedwater isolation functions of EFIC if necessary. An actuation channel "B" low level initiate module for "B" OTSG was found to be defective. The failed bistable was replaced and the system was returned to a fully operable status and TS 3.0.3 was exited at 1538.

CAUSE

EFIC troubleshooting techniques require replacement of components to determine the source of a fault. Replacement of components requires the respective channel be deenergized. However, when that channel is reenergized, the channel functions are in the tripped condition until manually reset. If the source of the fault is still present (i.e., not in the replaced module) then the two "half trip" logic conditions exist and a spurious EFIC actuation occurs. Additionally, the EFIC design does not provide sufficient bypass capability to prevent this spurious actuation during the troubleshooting process. Therefore, to preclude unnecessary EFIC actuations while performing repairs, the EFIC automatic actuation functions must be rendered inoperable.

The cause of the failure of the initiate bistable has not been determined. Because this is the first initiate bistable failure, Florida Power Corporation does not plan any further investigation.

ANALYSIS OF EVENT

While EFIC was inoperable, additional licensed operators were assigned to observe actuation parameters and initiate the protective actions if the actuation limits were reached. All EFIC actuation parameters were observed to be within bounds and EFIC was not actuated. All activities performed on EFIC were completed within the one hour time limit specified by Technical Specification 3.0.3. Plant safety was considered to be enhanced by using dedicated licensed operators to replace the automatic actuations of EFIC while performing repairs. Therefore, this event did not have any impact on the health and safety of the general public.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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| | | 8 5 | - 0 3 3 | - 0 0 | 0 3 | OF | 0 3 |

TEXT (If more space is required, use additional NRC Form 366A 2) (17)

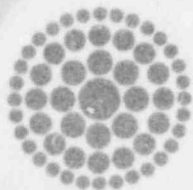
CORRECTIVE ACTION

Florida Power Corporation is considering a modification to the EFIC system to increase its bypass capabilities to prevent spurious actuations during repairs.

The defective initiate bistable was replaced.

PREVIOUS SIMILAR EVENTS

Four previous events concerning intentional voluntary entry into Technical Specification 3.0.3 occurred and were reported in LERs 84-014-00, 85-022-00, and 85-029-00. The latter two events concerned the EFIC system. This is the first failure of an initiate bistable.



**Florida
Power**
CORPORATION

January 24, 1986
3F0186-26

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. 85-033-00

Dear Sir:

Enclosed is Licensee Event Report (LER) No. 85-033-00 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

xc: 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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