

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) CRYSTAL RIVER UNIT 3	DOCKET NUMBER (2) 0 5 0 0 0 3 1 0 2	PAGE (3) 1 OF 0 1 3
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TITLE (4) **VOLUNTARY ENTRY INTO TECHNICAL SPECIFICATION 3.0.3 FOR MAINTENANCE ON EMERGENCY FEEDWATER INITIATION AND CONTROL SYSTEM**

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	0	1	8	6	8	6	-	0	1	6	-	0	0	1	0	2	7	8	6	N/A			0 5 0 0 0 0		
									N/A			0 5 0 0 0 0														

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)											
POWER LEVEL (10) 0 1 9 8	20.402(b)			20.406(c)			50.73(a)(2)(iv)			73.71(b)		
	20.406(a)(1)(i)			50.38(e)(1)			50.73(a)(2)(v)			73.71(e)		
	20.406(a)(1)(ii)			50.38(e)(2)			50.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Text, NRC Form 388A)		
	20.406(a)(1)(iii)			50.73(a)(2)(i)			50.73(a)(2)(vii)(A)					
	20.406(a)(1)(iv)			50.73(a)(2)(ii)			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	MANUF. TURER	REPORTABLE TO NPROS		CAUSE	SYSTEM	COMPONENT	MANUF. TURER	REPORTABLE TO NPROS	
X	J E	X T	V 1 2 4	Yes							

SUPPLEMENTAL REPORT EXPECTED (14)							EXPECTED SUBMISSION DATE (15)		
YES (If yes, complete EXPECTED SUBMISSION DATE)							MONTH DAY YEAR		
<input checked="" type="checkbox"/> NO									

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

On September 30, 1986, Crystal River Unit 3 (CR-3) was operating at 98% reactor power and producing 860 megawatts electric. At 2159 the nuclear operator received a half-trip signal on the "A" channel of the main steam line isolation (MSLI) for the "A" once through steam generator (OTSG). Main steam line isolation is part of the Emergency Feedwater Initiation and Control (EFIC) System.

The operator determined the half-trip to be unwarranted and inadvertent. Subsequent investigation identified a faulty light emitting diode (LED).

After careful consideration, it was determined that plant safety would be enhanced by precluding a severe plant transient resulting from a spurious full actuation of EFIC while performing the repairs.

At 1435 on October 1, 1986 Technical Specification 3.0.3 was voluntarily entered and two dedicated operators were stationed at the EFIC controls. The faulty LED was replaced and the applicable surveillance testing was performed satisfactorily. Post maintenance testing was performed and the EFIC system was returned to an operable status. Technical Specification 3.0.3 was exited at 1520 on October 1, 1986.

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

EVENT DESCRIPTION

On September 30, 1986, Crystal River Unit 3 was operating at 98% reactor power and producing 860 megawatts electric. At 2159 the licensed nuclear operator received a half-trip signal on the "A" channel of the main steam line isolation (MSLI) for the "A" once through steam generator (OTSG) [HX,AB]. Main steam line isolation is part of the Emergency Feedwater Initiation and Control (EFIC) System [JE].

The operator determined the half-trip to be unwarranted and inadvertent based upon backup indication which indicated pertinent parameters were entirely normal and stable. The man on call was notified the affected channel was in a tripped condition as required by the Technical Specification.

Subsequent investigation identified a faulty light emitting diode (LED) [JE,XT] which provides a fiber-optic communication link from the "B" to the "A" EFIC channel. The faulty LED did not affect the operability of the "A" EFIC channel (except for being in a half-trip condition).

To ensure adequate review and pre-planning would be accomplished prior to performing the necessary maintenance, the repairs were deferred until the following day, October 1, 1986. After careful consideration by the Plant Review Committee (PRC), it was determined plant safety would be enhanced by precluding a severe plant transient resulting from a spurious full actuation of EFIC while performing the repairs. To achieve this objective would require the automatic actuation function of both "A" and "B" EFIC channels be temporarily disabled. This condition is prohibited by Technical Specification 3.3.2.1; thus, a voluntary entry into Technical Specification 3.0.3 would be necessary. All remote manual functions of the EFIC system would remain completely operable from the control room. The voluntary entry into Technical Specification 3.0.3 was authorized by the Director, Nuclear Plant Operations.

At 1435 on October 1, 1986 Technical Specification 3.0.3 was voluntarily entered and two independent dedicated licensed operators were stationed at the EFIC controls. Continuous and independent communication was established with the repair crew in the EFIC Room. All EFIC cabinets remained energized; however, the output signal breakers for EFIC cabinets were opened to prevent any automatic EFIC actuations while repairs were being

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performed. The faulty LED was replaced and the applicable surveillance testing was performed satisfactorily. The output signal breakers were then closed, post maintenance testing was performed, and the EFIC system was returned to an operable status. At 1520 Technical Specification 3.0.3 was exited.

CAUSE

Technical Specification 3.0.3 was voluntarily entered due to planned maintenance to replace a failed LED. The cause of the LED failure is unknown.

SAFETY CONSIDERATIONS

While the automatic actuation function of the EFIC system was inoperable, additional licensed operators were assigned to observe actuation parameters and initiate the protective actions if the actuation limits were reached. Manually, all of the EFIC control functions were completely operable at all times. All EFIC actuation parameters were observed to be within limits and EFIC was not actuated. All activities performed on the EFIC system were completed within the one hour time limit specified by Technical Specification 3.0.3. This event did not have any impact on the health and safety of the general public.

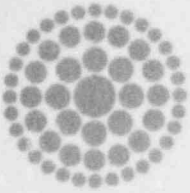
CORRECTIVE ACTION

The affected LED was replaced.

The root cause of the LED failure continues to be under review and evaluation by a special EFIC engineering task group which was established in early 1986.

PREVIOUS SIMILAR EVENTS

Since installation, the EFIC system has had several events involving LED failures. The most recent previous event occurred in October of 1985 and was reported in LER 85-022. Seven previous similar events concerning voluntary entry into Technical Specification 3.0.3 have occurred at CR-3 and were reported in LERs 84-014 (two events), 85-001, 85-022, 85-029, 85-033, and 86-011. Three of these events were associated with the EFIC system and one of the three (85-022) was associated with a failed LED.



**Florida
Power**
CORPORATION

October 27, 1986
3F1086-21

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. 86-016-00

Dear Sir:

Enclosed is Licensee Event Report (LER) No. 86-016-00 which is submitted in accordance with 10CFR50.73.

Should there be any questions, please contact this office.

Sincerely,

E. C. Simpson
Director, Nuclear Operations
Engineering and Licensing

AEF/feb

Enclosure

xc: Dr. J. Nelson Grace
Regional Administrator, Region II
U.S. Nuclear Regulatory Commission
101 Marietta Street N.W., Suite 2900
Atlanta, GA 30323

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