

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) CRYSTAL RIVER UNIT 3										DOCKET NUMBER (2) 0 5 0 0 0 3 0 2					PAGE (3) 1 OF 4	
TITLE (4) Spurious Engineered Safeguards System Actuation																
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 N/A				DOCKET NUMBER(S) 0 5 0 0 0			
0 3	1 2	8 4	8 4	0 0 5	0 0	0 4	1 0	8 4	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)														
1		20.402(b)				20.406(c)				<input checked="" type="checkbox"/> 50.73(a)(2)(iv)				73.71(b)		
POWER LEVEL (10)		0 9 8				20.406(a)(1)(i)				50.38(a)(1)				73.71(a)		
		20.406(a)(1)(ii)				50.38(a)(2)				50.73(a)(2)(v)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)		
		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)(viii)(B)						
		20.406(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(ix)						
LICENSEE CONTACT FOR THIS LER (12)																
NAME W. K. Bandhauer, Nuclear Safety Supervisor										TELEPHONE NUMBER 9 0 4 7 9 5 1 - 6 4 8 6						
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						
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)												<input checked="" type="checkbox"/> NO				

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

On March 12, 1984, at 1120, Crystal River Unit 3 experienced a partial Engineered Safeguards System Actuation. The unit was at 98% Reactor Power (877 MWe) with surveillance procedure "Engineered Safeguards Monthly Functional Test" in progress. The 'A' and 'B' trains of Channels 1 and 2, as well as the 'A' train of Channel 3 had passed the "RB Isolation and Cooling" portion of the test when Channel 2, 'B' train High Pressure Injection relay actuated. This relay actuation combined with Channel 3 being in 'Test' resulted in the High Pressure Injection initiation. Borated water was injected into the Reactor Coolant System from the Borated Water Storage Tank. The excess boron caused a power reduction of approximately eight percent.

The Engineered Safeguards System was tested by Instrumentation and Control (I&C) personnel immediately following plant stabilization. All channels were tested satisfactorily. No failed relays or abnormal operations of any type were observed, other than an intermittent fan failure condition in Channel 2 cabinet.

The relay actuation was apparently caused by a noise signal in Channel 2 'B' train, however, no source has been identified. The actuation is considered an isolated event and the system has been returned to service.

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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) 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 4	— 0 0 5	— 0 0	0 2	OF	0 4

TEXT (If more space is required, use additional NRC Form 365A's) (17)

EVENT DESCRIPTION

On March 12, 1984, the Instrument and Control (I&C) Technicians were performing a surveillance test on the Engineered Safeguards System (JE). After having completed the testing on Channels 1, 2, and 3 'A' train equipment, they began with the Reactor Building Isolation and Cooling (JM) portion of the 'B' train. Channel 2 had been tested satisfactorily and the test switch was positioned to test Channel 3. Approximately ten to fifteen seconds later, the High Pressure Injection (BQ, RLY) relay in Channel 2 'B' train actuated several times and then cleared. With Channel 3 in test and Channel 2 actuated, the two out of three logic requirement was met and the 'B' train of Engineered Safeguards High Pressure Injection was initiated.

PLANT PERFORMANCE1. Pre-Event

The plant was at ninety-eight (98%) Reactor (AC) Power (877 MWe). Both Emergency Diesel Generators (EK, DG) were in standby. The 'B' Makeup and Purification Pump (CB, P) was running, supplying normal makeup to the Reactor Coolant System (AB). The Reactor Containment Fans 'A' and 'C' (BK, FAN) were running in slow. Decay Heat Removal Pumps 'A' and 'B' (BP, P) were off. All other Engineered Safeguards associated systems were in a normal lineup with the normal duty unit in service and the emergency units in standby. These systems are:

- a. Emergency Diesel Generators (EK)
- b. Decay Heat Closed Cycle Cooling (CC)
- c. Nuclear Services Closed Cycle Cooling (CC)
- d. Nuclear Services Seawater (BS)

2. Initiating Event

The initiating event was the spurious actuation of a relay in Channel 2 of High Pressure Injection train 'B' of the Engineered Safeguards System while Channel 3 of the same system was in test. This satisfied the two out of three logic requirement and initiated High Pressure Injection.

All appropriate equipment started automatically and borated water was injected into the Reactor Coolant System. No anomalies in equipment were noted.

3. Post Event

The operators ascertained that the actuation was falsely initiated and began recovery. The equipment which was unnecessarily started was replaced with normal duty equipment. Injection of borated water was secured. The power reduction caused by boron injection was approximately eight percent. No abnormalities in equipment operation were noted.

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4. Operator Actions and Procedural Adequacy

The I&C Technicians were following the surveillance procedure and there were no deviations from it. Their actions were appropriate both before and after the initiation. The procedure has been used as it is written for the last five months without a prior occurrence of this event.

The actions of the control room operators were expeditious and appropriate following the initiation. All procedures were adequate for recovery operations.

SAFETY CONSIDERATIONS1. Reactivity Control

The plant remained critical throughout the event and power was reduced by the increase in boron concentration. Reactivity was under control at all times.

2. Thermal Control

There was no effect on normal heat removal using the steam generators. Tave showed very minor changes due to borated water injection. Cold leg and hot leg temperatures were basically unaffected.

3. Radioactivity Control

There was no affect on radioactivity release rates or levels.

4. Safety Equipment Availability

All safety equipment performed as required.

ASSESSMENT CONCLUSIONS

1. The 'B' train of Engineered Safeguards Channel 2 actuated due to an unidentified signal.
2. All safety equipment was in an operable condition.
3. The primary system response to this event was normal.
4. The secondary system response to this event was normal.

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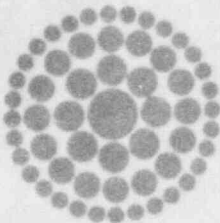
TEXT (If more space is required, use additional NRC Form 366A's) (17)

CORRECTIVE ACTIONS

This event is considered an isolated event and thus no corrective action is considered appropriate.

PREVIOUS SIMILAR EVENTS

There has been no previous spurious activation of the ES System which resulted in HPI initiation.



**Florida
Power**
CORPORATION

April 10, 1984
3F0484-05

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. 84-005-00

Dear Sir:

Enclosed is Licensee Event Report (LER) No. 84-005-00 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: Mr. James P. O'Reilly
Regional Administrator, Region II
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
101 Marietta Street N.W., Suite 2900
Atlanta, GA 30303

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