NRC Form 366
(4-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
CRYSTAL RIVER UNIT 3	0 5 0 0 0 3 0 2	1 OF 0 3

TITLE (4): Unknown Cause of Instrument Drift Leads to Loss of Required Safety Function

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 1	0 4	8 8	8 8	- 0 0 8	- 0 0	0 4	1 4	8 8	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 §: (Check one or more of the following) (11)			
5		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	0 0 0	20.405(a)(1)(i)	50.36(c)(1)	X 50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	X 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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
L. W. MOFFATT, NUCLEAR SAFETY SUPERVISOR	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	B A	L T	R 3 6 9	Y							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		0 8	1 5	8 8

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

On January 4, 1988 Crystal River Unit 3 was maintaining MODE 5 (Cold Shutdown) conditions subsequent to a refueling outage. A surveillance procedure for calibration of level transmitters used for Emergency Feedwater Initiation and Control (EFIC) on the Once Through Steam Generators (OTSG) had been performed. From the surveillance it was determined that three out of four of the low level transmitters on the 'B' OTSG were out of tolerance sufficiently to have prevented the actuation of Emergency Feedwater to the 'B' OTSG at its required low level setpoint and in fact would not have actuated Emergency Feedwater to the 'B' OTSG. All EFIC level instruments were recalibrated to within specified limits prior to the plant ascending into MODE 3 (Hot Standby) in which EFIC OPERABILITY is required. The cause of the instrument error is unknown. While three of the four transmitters on the 'B' OTSG were out of tolerance, all four of the transmitters on the 'A' OTSG were within the allowed instrument tolerances. Therefore, the 'A' OTSG was available for decay heat removal in the event of loss of level in the 'A' OTSG. High Pressure Injection/Power Operated Relief Valve cooling was available for decay heat removal if needed. Nuclear Engineering will evaluate the instrument error to determine the cause. Corrective action will be considered based on the evaluation.

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(9-83)

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

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

EVENT DESCRIPTION:

On January 4, 1988 Crystal River Unit 3 was maintaining MODE 5 (Cold Shutdown) conditions subsequent to a refueling outage. A surveillance procedure for calibration of level transmitters [BA,LT] used for Emergency Feedwater Initiation and Control (EFIC) [BA] on the Once Through Steam Generators (OTSG) [AB] had been performed. From the surveillance it was determined that four of the eight low level transmitters associated with EFIC were outside of the allowed 'as found' tolerances. As-found data must be taken on any instrument prior to the performance of any test or inspection procedure in accordance with ANSI requirements. As required, a Non-Conforming Operations Report (NCOR) was written and submitted to the Nuclear Safety Group for evaluation. Initial evaluation of the situation was that this was a case of instrument drift which was not a reportable event and as such the NCOR was not scheduled for immediate investigation. During subsequent evaluation on March 16, 1988 it was determined that three out of four of the low level transmitters on the 'B' Once Through Steam Generator were out of tolerance sufficiently to have prevented the actuation of Emergency Feedwater to the 'B' OTSG at its required low level setpoint. In fact, the transmitters were so far out of tolerance that they would not have actuated Emergency Feedwater to the 'B' OTSG at all. The fourth EFIC Low Level transmitter on the 'B' OTSG was also out of tolerance for 'as found condition' but the error was in a conservative direction (i.e. it would have initiated its signal before the level reached the intended setpoint).

CAUSE:

The cause of the instruments being outside of the allowed tolerances is not known. While some instrument drift is expected, the magnitude of the drift should not be such that the instrument will exceed established limits during the period of surveillance. Further investigation is underway.

EVENT ANALYSIS:

There are four EFIC low level transmitters on each OTSG. These instruments are Rosemont Differential Pressure Transmitters, Model 1154D, which were installed during Refuel V in 1985. This is the second time these instruments have been calibrated since their installation. During the first calibration in 1986, some of the as-found conditions were out of tolerance but not sufficiently out of tolerance to prevent Emergency Feedwater from actuating on low OTSG level in either OTSG.

The EFIC system initiate logic requires that at least two out of four transmitters reach the setpoint to actuate Emergency Feedwater flow. Since three out of four low level transmitters on the 'B' OTSG were well out of tolerance, 10CFR50.73(a) (2)(v) and (vii) which require reporting of prevention of a safety function and loss of multiple channels in a system designated to remove residual heat respectively apply. Although three of the four low level transmitters on the 'B' OTSG were out of tolerance, all four of the low level transmitters on the 'A' OTSG were within setpoint tolerances. Therefore, Emergency Feedwater would have actuated on the 'A' OTSG in the event of loss of level in the 'A' OTSG. High Pressure Injection/Power Operated Relief Valve cooling was also available for decay heat removal if needed. The only secondary function of the level transmitter which was affected was level indication on the EFIC panel.

CORRECTIVE ACTION:

All EFIC level transmitters were recalibrated to within the specified limits prior to ascending into MODE 3 (Hot Standby) in which EFIC OPERABILITY is required. Nuclear Engineering will investigate this event under their instrument drift investigation program. This action will be tracked under a Corrective Action Assignment with high priority. Further action may be required based on the results of the Nuclear Engineering investigation. A supplement to this LER will be issued providing the results of the Engineering investigation into this event.

PREVIOUS SIMILAR EVENTS:

There have been no previous events of this type which would have resulted in the failure of a system to perform its intended safety function.

Florida Power
CORPORATION

April 14, 1988
3F0488-08

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

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
Licensee Event Report No. 88-008-00

Dear Sir:

Enclosed is Licensee Event Report (LER) 88-008-00 which is submitted in accordance with 10 CFR 50.73.

Should there be any questions, please contact this office.

Sincerely,

Ken Wilson

K. R. Wilson
Manager, Nuclear Licensing

WLR:mag

Enclosure

xc: Dr. J. Nelson Grace
Regional Administrator, Region II

Mr. T. F. Stetka
Senior Resident Inspector

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