Florida Power
CORPORATION

December 15, 1989
3F1289-10

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. 89-026-01

Dear Sir:

Enclosed is a supplement to Licensee Event Report (LER) 89-026 which was previously submitted in accordance with 10 CFR 50.73.

Should there be any questions, please contact this office.

Very truly yours,

Rolf C. Widell
Director, Nuclear Operations Site Support

WLR:mag

Enclosure

xc: Regional Administrator, Region II
Senior Resident Inspector

IE22
1/1

NRC FORM 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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) Inability to Repair Emergency Diesel Generator Within Time Allowed by Action Statement Results in Shutdown Required by Technical Specifications

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)
									N/A	0 5 0 0 0
0 6	2 9	8 9	8 9	0 2 6	0 1	1 2	1 5	8 9	N/A	0 5 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 9 7	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 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
	AREA CODE
L. W. MOFFATT, NUCLEAR SAFETY SUPERVISOR	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	E K	D G	F 0 1 0	Y							

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

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

On June 29, 1989 Crystal River Unit Three was in OPERATIONAL MODE ONE (POWER OPERATION) AT 97% Power. Emergency Diesel Generator 1B had been out of service for maintenance since June 26 at 0650. Technical Specification 3.8.1.1 action b had been initiated at that time. At 0300 plant shutdown was initiated because EGDG-1B could not be repaired in the time remaining in the action statement. An Unusual Event was declared because the plant was conducting a shutdown required by Technical Specifications. OPERATIONAL MODE THREE (HOT STANDBY) was entered at 1142 on June 29, 1989. Cooldown was initiated and OPERATIONAL MODE FIVE (COLD SHUTDOWN) was entered at 1722. The Unusual Event was terminated at 1730.

The diesel generator failed the post maintenance test due to low crankcase vacuum. Inspection of the turbochargers revealed one of the turbocharger rotors had not been turning. This caused the low crankcase vacuum. The Turbochargers have been replaced. Turbochargers on the other diesel generator will be replaced. Procedures will be revised to provide for periodic inspection and cleaning of turbochargers.

EVENT DESCRIPTION

On June 29, 1989 Crystal River Unit Three was in OPERATIONAL MODE 1 (POWER OPERATION), at 97% Power. Emergency Diesel Generator 1B (EGDG-1B) [EK,DG] had been out of service since 0650 June 26, 1989 when it was removed from service for investigation of a decreasing trend in crankcase vacuum. This trend had been detected over the last several times that the diesel had been operated. Action b of Technical Specification 3.8.1.1 had been entered at that time. At 0200 on June 29, 1989 EGDG-1B failed the post maintenance test, and could not be returned to service. This left less than five hours of the 72 hours allowed by the action statement.

At 0300 on June 29, 1989 a plant shutdown was initiated due to the inability to repair EGDG-1B in the time remaining in the action statement. At that time, the Shift Supervisor (Senior licensed Utility Personnel) entered an Unusual Event, as required by the Radiological Emergency Response Plan. At 1142 on June 29, 1989, the plant entered OPERATIONAL MODE THREE (HOT STANDBY). Cooldown and depressurization were initiated in order to be in OPERATIONAL MODE FIVE (COLD SHUTDOWN) within the time requirement of the action statement.

On June 30, 1989 at 1355 the plant entered OPERATIONAL MODE FOUR (HOT SHUTDOWN). Cooldown continued and at 1722 the plant entered OPERATIONAL MODE FIVE (COLD SHUTDOWN). In this mode Technical Specification 3.8.1.1 is no longer applicable. Technical Specification 3.8.1.2 becomes applicable in OPERATIONAL MODE FIVE. This Specification only requires one diesel generator and one offsite power source to be operable. This Specification was met; therefore, the Unusual Event was terminated at 1730. This constituted completion of a shutdown required by Technical Specifications and this event is being reported pursuant to 10CFR50.73.a.2.i.B

EGDG-1B was manufactured by Fairbanks Morse. It is a model 38TD8 1/8 X10 OP.

EVENT ANALYSIS

The applicable action statement of Technical Specifications was complied with. Numerous additional failures would have been necessary before the plant reached a condition in which control of fission product barriers would have been lost. Therefore, this event did not impact the health and safety of the general public.

CAUSE

The two turbochargers were sent to the equipment supplier for failure analysis. The supplier determined the rotor of one of the turbochargers had not been turning. This would explain the loss of crankcase vacuum. No evidence of why the turbocharger stopped turning could be found.

CORRECTIVE ACTION

The crankcase vapor ejector and its associated tubing and oil separator have been cleaned and tested satisfactorily. The supercharger blower [EK,BLO] and both turbochargers [EK,BLO] were replaced. Following these activities surveillance testing of the diesel generator was successfully accomplished.

The new turbochargers are of a different size than the one which stopped turning. The turbochargers on the other diesel generator will be replaced with the new design in an upcoming refueling outage. Plant procedures will be revised to include periodic inspection and cleaning of diesel generator turbochargers.

PREVIOUS SIMILAR EVENTS

No previous events in which decreasing crankcase vacuum caused a diesel generator to become inoperable were found.