Progress Energy

Crystal River Nuclear Plant
Docket No. 50-302
Operating License No. DPR-72

Ref: 10 CFR 50.73

February 26, 2004
3F0204-08

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

Subject: SUPPLEMENTAL LICENSEE EVENT REPORT 50-302/01-005-01

Reference: FPC to NRC Letter 3F1201-06, Licensee Event Report (LER) 50-302/01-005-00 dated December 18, 2001

Dear Sir:

The purpose of this letter is to document a change in the corrective actions identified in the referenced Licensee Event Report (LER) 50-302/01-005-00 regarding simultaneous outages at Crystal River Unit 3 (CR-3) and the fossil units that supply Auxiliary Steam for CR-3.

No new regulatory commitments are made in this letter.

If you have any questions regarding this submittal, please contact Mr. Sid Powell, Supervisor, Licensing and Regulatory Programs at (352) 563-4883.

Sincerely,

Jon A. Franke
Plant General Manager
Crystal River Nuclear Plant

JAF/lvc

Enclosure

xc: Regional Administrator, Region II
Senior Resident Inspector
NRR Project Manager

Progress Energy Florida, Inc.
Crystal River Nuclear Plant
15760 W. Powerline Street
Crystal River, FL 34428

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NRC FORM 366 (7-2001) — U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 — EXPIRES 7-31-2004

Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
CRYSTAL RIVER UNIT 3	05000 302	1 OF 5

4. TITLE

Loss of Steam to the Operating Main Feedwater Pump Results in Actuation of the Emergency Feedwater System

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	24	2001	01	- 005 -	01	02	26	2004	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE	3
10. POWER LEVEL	000

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)

	20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)
	20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)
	20.2203(a)(1)		50.36l(1)(i)(A)	X	50.73(a)(2)(iv)(A)		73.71(a)(4)
	20.2203(a)(2)(i)		50.36l(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)
	20.2203(a)(2)(ii)		50.36l(2)		50.73(a)(2)(v)(B)		OTHER Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)		
	20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)		
	20.2203(a)(2)(v)		50.73(a)(2)(i)(B)		50.73(a)(2)(vii)		
	20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)		
	20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)		

12. LICENSEE CONTACT FOR THIS LER

NAME	TELEPHONE NUMBER (Include Area Code)
Loretta V. Cecilia, Senior Engineer	(352) 563-4546

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

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

16. ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On October 24, 2001, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE 3 (HOT STANDBY) at 0 percent RATED THERMAL POWER. Once through steam generator (OTSG) levels were being maintained by the "B" steam-driven main feedwater pump (FWP-2B). Auxiliary steam (AS) (motive steam) to FWP-2B was being supplied from the Crystal River Unit 1 (CR-1) coal-fired plant. The Crystal River Unit 2 (CR-2) coal-fired plant, which can also supply AS to CR-3, was in a scheduled maintenance outage. At approximately 1000, CR-1 tripped, causing a loss of AS to FWP-2B. The loss of steam resulted in a loss of main feedwater (FW) and the actuation of the emergency feedwater system (EFW) on low OTSG levels. EFW actuated and functioned as designed to restore OTSG levels. CR-1 was restarted and AS from CR-1 was restored to CR-3 at approximately 1643. FW was reestablished to the OTSGs and EFW was secured at approximately 1748. The cause of the event was the unexpected loss of the only available source of AS during plant startup. The planned corrective actions have been modified to limit activities which could reduce the availability of systems needed to respond to a loss of FW if a CR-3 shutdown occurs simultaneously with a shutdown of CR-1 or CR-2. Previous similar events at CR-3 were reported in LERs 50-302/86-021-00 and 50-302/99-004-00.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
CRYSTAL RIVER UNIT 3	05000-302	01	- 005 -	01	2 OF 5

17. NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)*

DESCRIPTION

On October 24, 2001, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE 3 (HOT STANDBY) at 0 percent RATED THERMAL POWER preparing for a reactor startup. Reactor coolant system (RCS) [AB] temperature was 531 degrees Fahrenheit and RCS pressure was 2125 pounds per square inch gauge. Once through steam generator (OTSG) [SB, HX] levels were being maintained by the "B" steam-driven main feedwater pump (FWP-2B) [SJ, P]. Auxiliary steam (AS) [SA] (motive steam) to FWP-2B was being supplied from the Crystal River Unit 1 (CR-1) coal-fired plant. The Crystal River Unit 2 (CR-2) coal-fired plant, which can also supply AS to CR-3, was in a scheduled maintenance outage. At approximately 1000, CR-1 tripped causing a loss of AS to FWP-2B. The loss of steam caused the pump to slow down, resulting in a loss of main feedwater (FW) [SJ] and the subsequent actuation of the emergency feedwater system (EFW) [BA] on low OTSG levels. CR-1 was restarted and AS from CR-1 was restored to CR-3 at approximately 1643. FW was reestablished to the OTSGs and EFW was secured at approximately 1748.

At 1341, on October 24, 2001, a non-emergency eight-hour notification was made to the NRC Operations Center (Event Number 38422) in accordance with 10CFR50.72(b)(3)(iv)(A) as an event that resulted in automatic actuation of the emergency feedwater system. This report is being submitted pursuant to 10CFR50.73(a)(2)(iv)(A).

CAUSE

The cause of the event was the unexpected loss of the only available source of AS during plant startup. A contributing cause is the dependency of CR-3 on external sources of AS when the plant is shutdown.

SAFETY CONSEQUENCES

The main feedwater pumps at CR-3 are steam turbine driven. At high power levels (>80 percent RATED THERMAL POWER) the main feedwater pump turbines are normally supplied from reheat steam (RH) [SB]; at lower power levels and shutdown conditions the turbines are supplied from AS. When the plant is at >/=10 percent RATED THERMAL POWER, the source of AS is the main steam system (MS) [SB]. When the plant is shutdown or operating at <10 percent RATED THERMAL POWER, the source of AS is cold reheat steam from CR-1 or CR-2.

With CR-2 shutdown for maintenance and CR-3 in HOT STANDBY at the time of the event, CR-1 was the only source of AS available to provide the motive force for FWP-2B and supply the gland steam (GS) [TC] needed to maintain condenser [SG, COND] vacuum. The unexpected trip of CR-1 and loss of AS caused FWP-2B to slow down and stop feeding the OTSGs, resulting in an EFW actuation on low OTSG levels. EFW actuated and operated as designed. The steam driven emergency feedwater pump (EFP-2) [BA, P] and diesel emergency feedwater pump (EFP-3) started and restored levels in the OTSGs. OTSG levels

remained on scale throughout the event. The loss of AS also resulted in a loss of GS and decreasing condenser vacuum. The control room operators realigned the GS supply from AS to MS, which restored GS and condenser vacuum.

When CR-3 is in MODE 3, the heat input to the RCS is limited to that provided by the operating reactor coolant pumps (RCP) [AB, P] and core decay heat. With the plant supplying EFP-2 and the steam loads that had been supplied from CR-1 prior to the trip of the unit, this heat input was not sufficient to maintain RCS temperature. In response to the decreasing RCS temperature, the control room staff appropriately secured EFP-2 and minimized other plant steam loads, allowing RCS temperature to return to its pre-event value. EFP-3 was used to supply EFW to the OTSGs until AS from CR-1 was restored and FW was reestablished to the OTSGs using FWP-2B.

Based on the above information, this event did not represent a reduction in the public health and safety. This event does not meet the definition of a Safety System Functional Failure.

CORRECTIVE ACTIONS

The plant was stabilized in MODE 3 (HOT STANDBY).

CR-3 will not normally schedule an outage simultaneous with a scheduled outage of either CR-1 or CR-2. Should an equipment issue at CR-3 raise the need for an outage, CR-3 will balance the risk and benefit of available outage schedule windows. If a CR-3 outage is necessary when either CR-1 or CR-2 is shutdown, CR-3 will establish restrictions on activities which would reduce the availability of systems required to respond to a loss of FW while the FW Pumps are operating on Auxiliary Steam.

PREVIOUS SIMILAR EVENTS

There have been two previous similar events at CR-3 involving EFW actuations due to a loss of FW.

LER 50-302/86-021-00 Emergency Feedwater Actuation

LER 50-302/99-004-00 Main Feedwater Pump Trip During Refueling Shutdown Results in Emergency Feedwater Actuation

ATTACHMENTS

Attachment 1 - Abbreviations, Definitions, and Acronyms
Attachment 2 - List of Commitments

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	EVISION NUMBER	
CRYSTAL RIVER UNIT 3	05000-302	01	- 005 -	01	4 OF 5

17. NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)*

ATTACHMENT 1

ABBREVIATIONS, DEFINITIONS, AND ACRONYMS

10CFR	Title 10 of the Code of Federal Regulations
AS	Auxiliary Steam
CR-1	Crystal River Unit 1
CR-2	Crystal River Unit 2
CR-3	Crystal River Unit 3
EFP	Emergency Feedwater Pump
EFW	Emergency Feedwater System
FPC	Florida Power Corporation
FW	Main Feedwater
FWP	Main Feedwater Pump
GS	Gland Steam
MS	Main Steam
OTSG	Once Through Steam Generator
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RH	Reheat Steam

Note: Improved Technical Specifications terms appear in capitalization in the text of the LER. EIIS Codes appear in square brackets. Defined terms / acronyms / abbreviations appear in parentheses when first used.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
CRYSTAL RIVER UNIT 3	05000-302	01	- 005 -	01	5 OF 5

17. NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)*

ATTACHMENT 2

LIST OF COMMITMENTS

The following table identifies those actions committed to by Florida Power Corporation in this document. Any other actions discussed in the submittal represent intended or planned actions by Florida Power Corporation. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Supervisor, Licensing & Regulatory Programs of any questions regarding this document or any associated regulatory commitments.

RESPONSE SECTION	COMMITMENT	DUE DATE
	No regulatory commitments are made in this submittal.	