Florida
Power
CORPORATION
Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72

November 6, 1998
3F1198-08

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

Subject: LICENSEE EVENT REPORT 50-302/98-010-00

Dear Sir:

Please find attached Licensee Event Report (LER) 50-302/98-010-00. Florida Power Corporation personnel did not recognize that the Limiting Condition for Operation Required Actions of Improved Technical Specifications were applicable when a relay failed during performance of a surveillance procedure.

Sincerely,

C. G. Pardee
Director
Nuclear Plant Operations

CGP/rlm

Attachments

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

NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an 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.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
CRYSTAL RIVER UNIT 3	05000302	1 OF 6

TITLE (4)

Required Actions Of Improved Technical Specifications Were Not Recognized As Applicable Due To Personnel Error.

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 NAME	DOCKET NUMBER
10	08	98	98	-- 010 --	00	11	06	98	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	100	20.2201(b)	20.22[illegible](d)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)
		20.2203(a)(1)	20.2[illegible](a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
		20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
		20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
		20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
		20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Robert L. McLaughlin, Sr. Regulatory Specialist	(352) 795-6486

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

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 15 single-spaced typewritten lines) (16)

On October 8, 1998, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE 1 (POWER OPERATION) at 100 percent RATED THERMAL POWER. FPC personnel did not recognize that the Limiting Condition for Operation (LCO) Required Actions of Improved Technical Specification (ITS) 3.8.1 were applicable when a relay failed during performance of a surveillance procedure (SP). This resulted in failure to perform Required Actions, a condition prohibited by ITS. Investigation revealed that a solid state time delay relay had failed to reset after timing out. The operability of the Engineered Safeguards (ES) and Emergency Diesel Generator (EDG) systems was determined to not be impacted. There was no decrease in protection of the health and safety of the public. The cause of the event was personnel error. Corrective actions include discussions, required reading of lessons learned and additional training. FPC has previously submitted one report regarding missed required surveillances or testing due to personnel error.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)				PAGE (3)
		YEAR	SEQUENTIAL NUMBER		REVISION NUMBER	
CRYSTAL RIVER UNIT 3	05000302	98	--	010	--	00	2 OF 6

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

DESCRIPTION

On October 8, 1998, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE 1 (POWER OPERATION) at 100 percent RATED THERMAL POWER. FPC personnel did not recognize that the Limiting Condition for Operation (LCO) Required Actions of Improved Technical Specification (ITS) 3.8.1 were applicable when a relay failed during performance of a surveillance procedure (SP).

Technicians were performing functional testing of the automatic actuation logic circuit [JE, BLK] in accordance with SP-130, "Engineered Safeguards (ES) Monthly Functional Test." At 0901, during performance of SP-130, the loading for the Channel 1 "A" ES Block 4 came in simultaneously with Block 3. Investigation revealed that one of the solid state time delay relays [JE,2] had failed to reset after timing out. This caused the relay to actuate immediately instead of providing a time delay for Emergency Diesel Generator (EDG) [EK] block loading. Block loading sequences groups of components onto the EDG to minimize the instantaneous load applied to the EDG. Since the relay is part of the ES automatic actuation logic circuit, FPC entered ITS 3.3.7 LCO Required Condition A[1] and the ES channel was placed in the tripped configuration within one hour.

Analysis of the event revealed that the relay failed to actuate in its required sequence, which had a potential impact on block loading of the EDG. The operability of the EDG was considered, with the decision made that block load sequencing was maintained by the other two channels of ES relaying. FPC personnel did not recognize that the requirements of ITS Surveillance Requirement (SR) 3.8.1.9[2] were no longer satisfied, therefore the Actions of ITS 3.8.1 LCO Required Condition B[3] were applicable to this situation. This failure to recognize the applicability of ITS 3.8.1 resulted in failure to perform Required Actions B.1 (breaker alignment checks) and B.2 (verification of Emergency Feedwater Pump (EFP-2) [EF,P] and valve operable status). The ES time delay relay was replaced and the channel was reset at 1804 on October 8, 1998. At that time, and as a result of performing another SP, the Required Actions were completed satisfactorily with no discrepancies noted.

This omission was recognized at 0700 on October 9, 1998. Review of plant conditions for the period in question revealed no switchgear manipulations or EFP-2 / EF impairments that would have prevented satisfactory performance of these systems. This condition was prohibited by Technical Specifications and is reportable pursuant to 10CFR50.73 (a)(2)(i)(B).

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[1] One or more automatic actuation logic matrices inoperable.

[2] Verify interval between each sequenced load block is within +/- 10% of design interval for each emergency load sequencing relay.

[3] Two emergency diesel generators (EDGs) each capable of supplying one train of the onsite Class 1E AC Electrical Power Distribution System. ("A" train inoperable.)

EVALUATION

CR-3 has a total of 33 Agastat Model DSC Solid State Time Delay Relays used in the EDG block load sequencing. These relays were installed in 1991 to alleviate concerns over electro-mechanical time delay relay accuracy. These relays have functioned well in the area of timer accuracy and have been reliable until intermittent failures began in 1996. Agastat relay failures are being evaluated in accordance with the FPC Corrective Action Program.

To address the effect of the Agastat failures, FPC evaluated the required functions of the relays and the failure modes encountered. These relays are required to trip to perform their safety function. Most of the failures were in the failure of the relays to reset after a trip. In addition, the relays are tested periodically and circuit configuration is such that a failure would not be hidden from the operator due to indication in the Main Control Room. The ES system contains three channels of block loading relays per train. A failure of a component to actuate would require two specific relays in different channels to fail. The failure rate is random with no identifiable increases in the last year. Thus, the operability of the ES and EDG systems was determined to not be impacted. There was no decrease in protection of the health and safety of the public.

CAUSE

The Nuclear Shift Manager and Nuclear Shift Supervisor on duty at the time of the relay failure did not recognize the applicability of ITS 3.8.1 LCO Condition B to the situation. While the impact on block loading of EDG-1A was considered, the failure to meet SR 3.8.1.9, which required entry into ITS 3.8.1, was not evaluated.

IMMEDIATE CORRECTIVE ACTIONS

When the ES channel was reset after relay replacement at 1804 on October 8, 1998, the Required Actions B.1 and B.2 were performed satisfactorily with no discrepancies noted. Review of plant conditions for the period in question did not reveal switchgear manipulations or EF / EFP-2 impairments that would have prevented satisfactory performance of these systems.

An extent of condition review was conducted to assess previous occurrences of this same type of component failure and the actions taken. This type of relay was installed in 1991 with intermittent failures beginning in 1996. The review identified two other instances where the applicability of ITS 3.8.1 was not recognized under similar conditions.

ACTIONS TO PREVENT RECURRENCE

The Assistant Plant Director, Operations and the Manager, Nuclear Plant Operations have discussed the lessons learned from this event with the Nuclear Shift Manager and Nuclear Shift Supervisor involved.

The lessons learned from this event have been made a required reading for other Nuclear Shift Managers and Nuclear Shift Supervisors by an Operations Study Book entry.

Operations will conduct ITS training exercises via "ITS Questionnaire Worksheets." One of the specific examples used will be the application of ITS to the ES Actuation System. Additionally, as part of the normal requalification cycle, this LER will be one of the items discussed in the Operational Experience/Special Training module. These actions will be completed in the first quarter of 1999.

PREVIOUS SIMILAR EVENTS

FPC has previously submitted one other recent report regarding missed required surveillances or testing due to personnel error:

LER 98-007-01 ASME Code Section XI System Pressure Tests Were Not Performed Due to Personnel Error

ATTACHMENTS

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

ATTACHMENT 1

ABBREVIATIONS, DEFINITIONS, AND ACRONYMS

10CFR	Title 10 of the Code of Federal Regulations
CR-3	Crystal River Unit 3
EDG	Emergency Diesel Generator
EF	Emergency Feedwater
EFP	Emergency Feedwater Pump
ES	Engineered Safeguards
FPC	Florida Power Corporation
ITS	Improved Technical Specifications
LCO	Limiting Condition for Operation
LER	Licensee Event Report
SP	Surveillance Procedure
SR	Surveillance Requirement

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.

ATTACHMENT 2

RESPONSE SECTION	COMMITMENT	DUE DATE
Page 4	Operations will conduct ITS training exercises via "ITS Questionnaire Worksheets." One of the specific examples used will be the application of ITS to the ES Actuation System. Additionally, as part of the normal requalification cycle, this LER will be one of the items discussed in the Operational Experience/Special Training module. These actions will be completed in the first quarter of 1999.	March 31, 1999