Florida Power
CORPORATION
Crystal River Unit 3
Docket No. 50-302

November 21, 1996
3F1196-13

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

Subject: Licensee Event Report (LER) 96-025-00

Dear Sir:

Please find the enclosed Licensee Event Report (LER) 96-025-00 concerning a technical specification testing discrepancy discovered while performing actions required by Generic Letter 96-01, "Testing of Safety Related Logic Circuits."

This report is submitted in accordance with 10 CFR 50.73.

Sincerely,

Gary Boldt for

P.M. Beard, Jr.
Senior Vice President
Nuclear Operations

PMB/TWC

Attachment

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

IE22

NRC FORM 366 (5-92)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104

EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HOURS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (MNBB 7714), 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.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
CRYSTAL RIVER UNIT 3 (CR-3)	0 5 0 0 0 3 0 2	1 OF 0 4

TITLE (4)

Personnel Error Causes Testing Deficiency Resulting in Condition Prohibited 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)
10	22	96	96	025	00	11	21	96	N/A	05000
									N/A	05000

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (CHECK ONE OR MORE OF THE FOLLOWING) (11)							
POWER LEVEL (10)	000	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
Wm. J. Leonard, Licensing Engineer	352 563-4021

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

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 October 22, 1996, Florida Power Corporation's Crystal River Unit 3 was in MODE 5 (COLD SHUTDOWN). FPC personnel were performing a pilot comparison of schematic diagrams against plant surveillance procedures as a validation of FPC's methodology to respond to NRC Generic Letter 96-01, "Testing of Safety Related Logic Circuits." During this effort, 12 contacts were identified in the Engineered Safeguards Actuation System logic which were not being tested in accordance with the Improved Technical Specifications. It was determined that these deficiencies constituted a violation of the Improved Technical Specifications Surveillance Requirements 3.3.5.2 and 3.3.5.3.

A Problem Report was issued documenting the deficiencies. The cause was human error in that personnel responsible for procedure preparation and review did not account for adequate test methodology to ensure all contacts were properly tested. Corrective actions include procedure revisions, surveillance testing, and completion of the program established to perform the reviews requested by GL 96-01. This report is submitted in accordance with 10 CFR 50.73(a)(2)(i)(B) for operation or condition prohibited by the plant's Technical Specifications.

EVENT DESCRIPTION

On October 22, 1996, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE 5 (COLD SHUTDOWN), having entered an outage on September 2, 1996. FPC personnel were performing a review of ESAS actuation circuits to validate the methodology which will be used to perform the reviews requested by Generic Letter 96-01. While performing this review, it was determined that twelve contacts in the ESAS Reactor Coolant System (RCS) Pressure - Low and Low Low actuation circuits were not tested during the required once per 31 day CHANNEL FUNCTIONAL TEST nor during the required once per 24 months CHANNEL CALIBRATION.

GL 96-01 requests licensees to perform a comparison of electrical schematic drawings and logic diagrams for the Reactor Protection System [RPS], Emergency Diesel Generator [EK,DG](EGDG) load shedding and sequencing, and actuation logic for the ESAS against plant surveillance test procedures to ensure that all portions of the logic circuitry, including the parallel logic, interlocks, bypasses and inhibit circuits, are adequately covered in the surveillance procedures to fulfill the ITS requirements.

The ESAS initiates Engineered Safeguards (ES) systems, based on the values of selected plant parameters, to protect core design and reactor coolant pressure boundary limits and to mitigate design basis accidents.

The ESAS system utilizes three pressure transmitters (RC-3A-PT3, RC-3B-PT3, and RC-3A-PT4) to monitor RCS pressure. Each of the RCS pressure transmitters provides a signal to one of three RCS Pressure - Low ESAS Bistables and one of three RCS Pressure - Low Low ESAS Bistables.

Each RCS Pressure - Low and each RCS Pressure - Low Low ESAS Bistable has two contacts which provide an actuation signal to the A and B ESAS actuation matrices. When either matrix senses that two of the three RCS Pressure - Low ESAS Bistables indicate a low RCS pressure, the matrix will actuate ES equipment needed to mitigate the effects of a Small Break Loss of Coolant Accident. When either matrix senses that two of the three RCS Pressure - Low Low ESAS Bistables indicate a low RCS pressure, the matrix will actuate ES equipment needed to mitigate the effects of a Large Break Loss of Coolant Accident.

It was determined that the two contacts on each of the three ESAS RCS Pressure - Low ESAS Bistables (RC-3-BT1, RC-3-BT2, RC-3-BT3) and on each of three ESAS RCS Pressure - Low Low ESAS Bistables (RC-3-BT7, RC-3-BT8, RC-3-BT9) used to actuate the ESAS matrices were not tested by Surveillance Procedure SP-130, "Engineered Safeguards Monthly Functional Test."

These deficiencies constituted a violation of the Improved Technical Specifications (ITS) Surveillance Requirement 3.3.5.2, which requires a CHANNEL FUNCTIONAL TEST be performed once per 31 days, and Surveillance Requirement 3.3.5.3, which requires a CHANNEL CALIBRATION be performed once per 24 months. The CHANNEL CALIBRATION requires performance of a CHANNEL FUNCTIONAL TEST.

This report is submitted in accordance with 10 CFR 50.73(a)(2)(i)(B) for operation or condition prohibited by the plant's Technical Specifications.

EVENT EVALUATION

The ESAS initiates ES systems, based on the values of selected plant parameters, to protect core design and reactor coolant pressure boundary limits and to mitigate Design Basis accidents.

The ESAS is designed to be tested any time during plant operation or shutdown and complies with the requirements of IEEE 279-1968, "Criteria for Protection Systems for Nuclear Power Generating Stations."

The contacts not tested during the CHANNEL FUNCTIONAL and CHANNEL CALIBRATION tests have been satisfactorily tested during verification of ESAS ESF RESPONSE TIME testing once per 24 months on a STAGGERED TEST BASIS as required by ITS SR 3.3.5.4. These response time tests are performed using procedures SP-135A, "Engineered Safeguards Actuation Channel 1 System Response Time Test," SP-135B, "Engineered Safeguards Actuation Channel 2 System Response Time Test," and SP-135C, "Engineered Safeguards Actuation Channel 3 System Response Time Test."

Therefore, this testing deficiency did not compromise the health and safety of the general public.

CAUSE

The cause was human error in that personnel responsible for procedure preparation and review did not account for adequate test methodology to ensure all contacts were properly tested.

IMMEDIATE CORRECTIVE ACTION

A Problem Report was issued documenting the testing deficiency. The plant was in MODE 5; therefore, no operability concerns existed.

ADDITIONAL CORRECTIVE ACTION

Prior to startup from the current outage, applicable procedures will be revised to include testing of the ESAS logic for the circuits associated with this deficiency.

The revised Surveillance Procedure will be performed prior to escalation to MODE 4 (HOT SHUTDOWN) from the current outage.

ACTION TO PREVENT RECURRENCE

FPC has committed to completing the reviews and corrective actions requested in Generic Letter 96-01. As part of this activity, FPC will develop a methodology to maintain our capability to perform complete CHANNEL FUNCTIONAL TEST requirements to comply with technical specifications.

PREVIOUS SIMILAR EVENTS

There have been several previous reportable events involving ES testing. LER 96-011-00 was similar to the current LER in that it reported logic system testing deficiencies identified by FPC's investigation in response to GL 96-01.

ATTACHMENT

Attachment 1 -Abbreviations, Definitions and Acronyms

ATTACHMENT 1 - ABBREVIATIONS, DEFINITIONS AND ACRONYMS

CR-3	Crystal River Unit 3
EGDG	Emergency Diesel Generator
ES	Engineered Safeguards
ESAS	Engineered Safeguards Actuation System
FPC	Florida Power Corporation
GL 96-01	Generic Letter 96-01, Testing of Safety Related Logic Circuits
HPI	High Pressure Injection
IEEE 279	Criteria for Protection Systems for Nuclear Power Generating Stations
ITS	Improved Technical Specifications
LPI	Low Pressure Injection
MODE FIVE	COLD SHUTDOWN
MODE FOUR	HOT SHUTDOWN
NRC	Nuclear Regulatory Commission
Problem Report	Document to record, track and correct plant deficiencies
RCS	Reactor Coolant System
RPS	Reactor Protection System

NOTES: ITS defined terms appear capitalized in LER text (e.g. MODE ONE)

Defined terms/acronyms/abbreviations appear in parenthesis when first used (e.g. Reactor Building (RB)).

EIIS codes appear in square brackets (e.g. Makeup Tank [CB,TK])