



Florida Power

CORPORATION

Crystal River Unit 3

Docket No. 50-302

May 13, 1996
3F0596-15

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

Subject: Licensee Event Report (LER) 96-011-00

Dear Sir:

Please find the enclosed Licensee Event Report (LER) 96-011-00. This report is submitted by Florida Power Corporation in accordance with 10 CFR 50.73.

Sincerely,

B. J. Hickle, Director
Nuclear Plant Operations

JAF:ff

200037

Attachment

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

9605200090 960513
PDR ADOCK 05000302
S PDR

EXPIRES 5/31/95

LICENSEE EVENT REPORT (LER)

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)

CRYSTAL RIVER UNIT 3 (CR-3)

DOCKET NUMBER (2)

0 5 0 0 0 3 0 2 1 OF 0 5

PAGE (3)

TITLE (4)

Personnel Error Causes Testing Deficiency Resulting In Condition Prohibited By Improved 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)											
0	4	1	2	9	6	9	6	0	1	1	0	0	0	5	1	3	0	2	1	0	5
N/A										0	5	0	0	0							

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)

0 0 0

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

J. A. Frijouf, Sr. Nuclear Regulatory Specialist

TELEPHONE NUMBER

AREA CODE

3 5 2 5 6 3 - 4 7 5 4

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

EXPECTED SUBMISSION

MONTH

DAY

YEAR

YES (If yes, complete EXPECTED SUBMISSION DATE)

X NO

DATE (15)

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

On April 12, 1996, Florida Power Corporation's Crystal River Unit 3 was in MODE 5 (COLD SHUTDOWN). FPC engineering personnel were developing an initial response to NRC Generic Letter (GL) 96-01, "Testing of Safety Related Logic Circuits." During this effort, they identified two circuits which were not being appropriately tested in accordance with the Improved Technical Specifications (ITS). It was determined that these deficiencies constituted a violation of the Improved Technical Specifications (ITS) Surveillance Requirement 3.3.5.2 and 3.8.1.10.

A Problem Report was issued documenting the deficiencies. The cause was human error based on engineering personnel not fully identifying all circuits that should be tested. Corrective actions include procedure revisions, surveillance testing, and a program to perform the reviews recommended 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.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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0 5 0 0 0 3 0 2 9 6 0 1 1 0 0 0 2 OF 0 5

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

EVENT DESCRIPTION

On April 12, 1996, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE 5 (COLD SHUTDOWN), having previously entered the Refuel 10 outage on February 16, 1996. FPC engineering personnel were developing an initial response to NRC Generic Letter (GL) 96-01, "Testing of Safety Related Logic Circuits." During this effort, they identified two circuits which were not being appropriately tested in accordance with the Improved Technical Specifications (ITS).

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 Engineered Safety Features Actuation Systems [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.

FPC personnel were preparing draft "Generic Letter 96-01 System Analysis Guidelines" which will provide a methodology to review, evaluate, and document each system and function within the scope of GL 96-01. When finalized, this document will form the working guidelines for performing the system reviews. While developing these guidelines, FPC engineering and licensing personnel determined that the following two circuits were not being appropriately tested in accordance with the requirements of ITS:

1. The Auto reset of Engineered Safeguards (ES) blocks 4 & 6 timers load sequencing relays circuit was required to be tested by ITS Surveillance Requirement (SR) 3.3.5 and;
2. The Trip Emergency Feedwater Pump 1 [BA,P](EFP-1) when EGDG-1A is supplying the bus and a High Pressure Injection [BQ](HPI) signal is received load shed circuit was required to be tested by ITS SR 3.8.1.10.

It was determined that the first deficiency constituted a violation of the Improved Technical Specifications (ITS) Surveillance Requirement 3.3.5.2 which requires a CHANNEL FUNCTIONAL TEST be performed every 31 days, and the second deficiency was a violation of ITS SR 3.8.1.10 which requires testing every 24 months. A Problem Report was issued documenting the deficiencies. 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.

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

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".

These circuits do not specifically deal with the initiation of the 3 ES functions HPI, Low Pressure Injection [BP] (LPI), and Reactor Building Isolation and Cooling [JM] (RBIC) upon a design basis accident. They are added features of the system designed to address the specific operational concern of diesel load management. Existing comprehensive tests of the system did, however, provide a high level of assurance the system would function if called upon, although no specific documented test existed for very small portions of the subject circuitry. Refueling interval integrated tests demonstrated this point in past outages. Additionally, recent CHANNEL FUNCTIONAL TESTS which included the components identified as previously untested circuit components had functioned as designed. Therefore, this testing deficiency did not compromise the health and safety of the general public.

CAUSE

The cause of this testing deficiency was human error based on engineering personnel not fully identifying all circuits that should be tested. It should be noted that these circuits appear to be excluded from the specific wording of the ITS surveillance requirement, which may have contributed to the omission from existing tests. These circuits do, however, fall into the intent of the requirement and therefore should be tested in accordance with ITS.

IMMEDIATE CORRECTIVE ACTION

A Problem Report was issued documenting the testing deficiency.

The FPC System Engineer reviewed the findings and confirmed the deficiency.

ADDITIONAL CORRECTIVE ACTION

The applicable Surveillance Procedure was revised to incorporate the testing of the ESAS logic for the circuits associated with this deficiency.

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

The revised Surveillance Procedure was performed prior to escalation to MODE 4 (HOT SHUTDOWN) following the Refuel 10 outage.

Additionally, several other surveillance procedures are being reviewed and may be revised to reflect the identified deficiencies.

ACTION TO PREVENT RECURRENCE

FPC intends to finalize the "Generic Letter 96-01 System Analysis Guidelines", currently in draft review, to provide a methodology to review, evaluate, and document each system and function within the scope of Generic Letter 96-01. This document, when finalized, will form the working guidelines for performing the system reviews. Following the completion of the refueling outage which is currently in progress, resources will be allocated to begin the review of a pilot system. The pilot system review will be used to refine the review guidelines and to assess the manpower required to complete the Generic Letter requested review for the remaining systems. FPC is committed to completing the review in the time frame requested (prior to startup from the next refueling outage in the spring of 1998).

PREVIOUS SIMILAR EVENTS

There have been several previous reportable events involving ES testing. LER 87-005-00 was similar to the current LER in that it reported on the surveillance of a newly added logic matrix and the method used to demonstrate its operability.

ATTACHMENT

Attachment 1 - ABBREVIATIONS, DEFINITIONS AND ACRONYMS

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

ATTACHMENT 1 - ABBREVIATIONS, DEFINITIONS AND ACRONYMS

CR-3 Crystal River Unit 3

EFP Emergency Feedwater Pump

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

RBIC Reactor Building Isolation and Cooling

REFUEL 10 Refueling Outage which began February 16, 1996

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)).

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