

# Florida Power

CORPORATION

Crystal River Unit 3  
Docket No. 50-302

August 4, 1995

3F0895-05

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

Subject: Licensee Event Report (LER) 95-011-00

Dear Sir:

Please find the enclosed Licensee Event Report (LER) 95-011-00. 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  
Attachment

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

050036

CRYSTAL RIVER ENERGY COMPLEX: 15760 W Power Line St • Crystal River, Florida 34428-6708 • (904) 795-6486

A Florida Progress Company

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EXPIRES 5/31/96

## LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HOURS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (MN88 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 6

PAGE (3)

TITLE (4)

Personnel Error Leads to Incorrect Orientation of Door Seals Resulting in Operation Outside the Design Basis

EVENT DATE (5)

LER NUMBER (8)

REPORT DATE (7)

OTHER FACILITIES INVOLVED (8)

MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)												
0	7	0	5	9	5	0	1	1	0	0	0	8	0	4	9	5	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)

1 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)

50.73(a)(2)(i)

50.73(a)(2)(vii)(A)

20.405(a)(1)(iv)

X

50.73(a)(2)(ii)

50.73(a)(2)(vii)(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, Nuclear Regulatory Specialist

TELEPHONE NUMBER

AREA CODE

9 0 4 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 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 July 5, 1995, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE ONE (POWER OPERATION), operating at 100% reactor power and generating 871 megawatts. During a routine walkdown, an FPC engineer discovered that door C-508 had been installed with the door seals and astragal improperly oriented. A formal operability evaluation was conducted which concluded that the door could perform both its fire protection and habitability envelope design functions; however, the door configuration constituted operation outside the design basis of the plant. The event was reported to the Nuclear Regulatory Commission at 1600 on July 5, 1995 as a 1 hour non-emergency report per the requirements of 10 CFR 50.72(b)(1)(ii)(B) and was assigned the Event number 29027. This report is submitted in accordance with 10 CFR 50.73(a)(2)(ii)(B) for operation outside the design basis of the plant. By July 19, 1995, the astragal and door seals were removed and replaced in their proper configuration, thereby returning the plant to within its design basis. The cause of the event was personnel error. Corrective actions include counselling, training, and enhancing inspection plan instructions.

EXPIRES 5/31/95

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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CRYSTAL RIVER UNIT 3 (CR-3)	0 5 0 0 0 3 0 2	9 5	0 1 1	0 0	0 2 OF 0 6

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

EVENT DESCRIPTION

On July 5, 1995, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE ONE (POWER OPERATION), operating at 100% reactor power and generating 871 megawatts. At approximately 1600, FPC personnel determined that CR-3 had operated outside its design basis in that control complex habitability envelope [NA](HE) door [NA,DR] seals were improperly oriented.

As part of an ongoing effort to improve the HE, FPC is conducting a replacement program to upgrade HE doors. HE door C-508, located on the 145 foot elevation (turbine deck) is currently the main entrance to the HE and consists of an ingress door and egress door. A replacement door assembly, comprising a frame, ingress and egress doors, and associated hardware was purchased, tested, and shipped fully assembled from the vendor.

In accordance with FPC procedures, a temporary wooden structure was constructed around door C-508 to maintain the integrity of the HE envelope during the door replacement. Additionally, since door C-508 is a rated fire door a fire watch was required. On January 17, 1995, FPC maintenance personnel completed assembly of the temporary wooden structure and removed the original ingress and egress doors. Subsequently the old door frame was removed and the new door assembly disassembled for installation. The new door frame was installed and finally, the new ingress and egress doors installed. Following painting, hardware adjustments and inspections, the temporary wooden structure was removed on March 9, 1995.

On July 5, 1995, during a routine walkdown, the engineer responsible for the project design discovered that door C-508 had been installed with the door seals and astragal improperly oriented. A formal operability evaluation was conducted in accordance with NOD-14, "Evaluating Operability and Determining Safety Function Status", which concluded that door C-508 could perform its design function and was operable; however, the door configuration constituted operation outside the design basis of the plant.

The event was reported to the Nuclear Regulatory Commission at 1600 on July 5, 1995 via the Emergency Notification System as a 1 hour non-emergency report per the requirements of 10 CFR 50.72(b)(1)(ii)(B) and was assigned the Event number 29027. This report is submitted in accordance with 10 CFR 50.73(a)(2)(ii)(B) for operation outside the design basis of the plant.

By July 19, 1995, the astragal and door seals were removed and replaced in their as tested configuration, thereby returning the plant to within its design basis.

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TEXT (If more space is required, Use additional NRC Form 368A's (17))

**EVENT EVALUATION**

The HE provides protection for the Control Room operators during conditions of high radiation, during an Engineered Safeguards (ES) reactor building isolation signal, and on a Chlorine or Sulfur Dioxide toxic gas isolation signal.

Figure 1A illustrates the door sealing detail including weather stripping on the positive (higher) pressure side of the doors and the astragal on the negative (lower) pressure side of the doors as tested by the door assembly vendor. Figure 1B is a plan view of the ingress and egress doors as installed with the incorrect door seal orientation. Figure 1C illustrates the doors properly installed in the tested configuration.

As the doors were re-installed following frame installation, FPC maintenance personnel performing the work failed to install the doors in conformance with the work package drawings illustrating the door seal orientation. Since these doors are identical, except for the seal configuration, either door could be installed on either side of the door frame. The only difference would be the door seal orientation. During the re-installation of the doors, they were inadvertently reversed, resulting in the condition placing the plant outside the design basis, relative to the HE.

During the subsequent inspections, the work group supervisor did not detect the door seal orientation problem. The fire protection inspector verified compliance with site fire protection requirements, which did not include door seal orientation, and other FPC personnel did not detect the door seal orientation problem during unrelated inspections. The NOD-14 operability and safety function evaluation concluded, based on engineering judgement, that due to the low pressure loading (1/8 inch water) and the stiffness of the seals, the installation could perform its design function. Therefore, since the door installation did not challenge the integrity of the HE, the safety of personnel within the HE was not compromised, and this event did not compromise the health and safety of the general public.

**CAUSE**

The cause of this event was personnel error by FPC maintenance personnel. During installation of the door, the drawings associated with the work package were not consulted for proper door orientation.

**IMMEDIATE CORRECTIVE ACTION**

A formal operability evaluation was conducted in accordance with NOD-14, titled "Evaluating Operability and Determining Safety Function Status".



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

ADDITIONAL CORRECTIVE ACTION

1. The maintenance person responsible for the improper door orientation was verbally counselled.
2. A Human Performance Evaluation System (HPES) evaluation was conducted and the final report is currently in final review. This evaluation may result in the generation of additional corrective actions.

ACTION TO PREVENT RECURRENCE

1. Additional drawing and print reading training will be provided to mechanical personnel.
2. Engineering personnel preparing inspection plans for work packages will provide specific references to drawings relative to the proper orientation and configuration of installed structures and equipment.

The completion schedule for items 1 and 2 is currently being developed.

PREVIOUS SIMILAR EVENTS

There have been four previous reportable events involving HE breaches. LERs 90-007-00 involved HE door removal, LER 94-010-00 involved blocking open a HE door, LER 95-001-00 addressed a HE total breach exceeding 32 square inches, and LER 95-004-01 reported a HE door ajar.

ATTACHMENT

Figure 1 - Door C-508 Sealing Configuration

Attachment 1 - Abbreviations, Acronyms and Definitions

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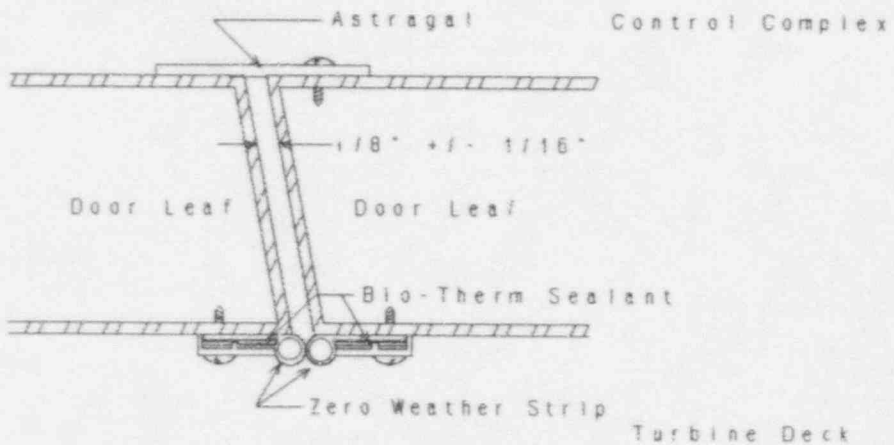
LER NUMBER (6)

PAGE (3)

TEXT (if more space is required, use additional NRC Form 309A's (1-7))

Figure 1  
Door C-508 Sealing Configuration

Negative Pressure Side



Positive Pressure Side

Fig 1-A Door Sealing Detail

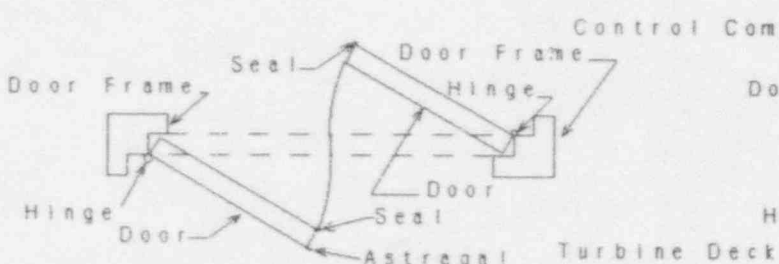


Fig 1-B As Installed

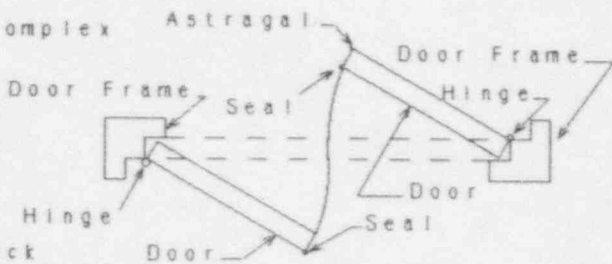


Fig 1-C As Tested

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TEXT (If more space is required, Use additional NRC Form 386A's (17))

## ATTACHMENT 1 - ABBREVIATIONS, ACRONYMS AND DEFINITIONS

ASTRAGAL	Projecting strip on edge of a door
CR-3	Crystal River Unit 3
C-508	Control Complex Habitability Envelope Door
EGRESS	Place or means of going out
ES	Engineered Safeguards
FPC	Florida Power Corporation
HPES	Human Performance Evaluation System
INGRESS	Place or means of coming in
MODE ONE	Power Operation
NOD-14	Evaluating Operability and Determining Safety Function Status (procedure)