



**Florida
Power**
CORPORATION

June 30, 1989
3F0689-19

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

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
Licensee Event Report No. 89-16

Dear Sir:

Enclosed is Licensee Event Report (LER) 89-16 which is submitted
in accordance with 10 CFR 50.73.

Should there be any questions, please contact this office.

Yours very truly,

Rolf C. Widell
Director, Nuclear Operations Site Support

WLR:mag

Enclosure

xc: Regional Administrator, Region II
Senior Resident Inspector

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) CRYSTAL RIVER UNIT 3										DOCKET NUMBER (2) 0 5 0 0 0 3 0 2 1 OF 0 4										PAGE (3) 1 OF 0 4																					
TITLE (4) Administrative Problems Cause Deficiencies in the Environmental Qualification Program Resulting in Plant Equipment Not Properly Qualified																																									
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)																											
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OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																																							
5																																									
POWER LEVEL (10)		20.402(b)										20.406(c)										60.73(e)(2)(iv)										73.71(b)									
0 0 0		20.406(e)(1)(i)										60.36(e)(1)										60.73(e)(2)(v)										73.71(c)									
		20.406(e)(1)(ii)										60.36(e)(2)										60.73(e)(2)(vii)										OTHER (Specify in Abstract below and in Text, NRC Form 366A)									
		20.406(e)(1)(iii)										60.73(e)(2)(i)										60.73(e)(2)(viii)(A)																			
		20.406(e)(1)(iv)										60.73(e)(2)(ii)										60.73(e)(2)(viii)(B)																			
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L. W. MOFFATT, NUCLEAR SAFETY SUPERVISOR												TELEPHONE NUMBER																													
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																									
CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NPROS		CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NPROS																															
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)

Crystal River Unit 3 was in Mode 5 (Cold Shutdown) April 26, 1989. On this date, NRC inspectors discovered deficiencies related to environmental qualification of Containment isolation valves located in the Reactor Building. Deficiencies were the result of deficiencies in detailed development and implementation of the environmental qualification program. Utility personnel have repaired identified Environmental Qualification deficiencies, or have justified continued operation with the deficiencies. Environmental Qualification files contain necessary justification for continued operation until repairs are completed. The utility has embarked on a major voluntary effort to review past activities and to correct additional EQ deficiencies that may be discovered.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1) CRYSTAL RIVER UNIT 3	DOCKET NUMBER (2) 0 5 0 0 0 3 0 2	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
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TEXT (If more space is required, use additional NRC Form 386A's) (17)

EVENT DESCRIPTION

Crystal River Unit 3 was in Mode 5 (Cold Shutdown) on April 26, 1989. On this date, a Nuclear Regulatory Commission inspection team discovered several deficiencies related to environmental qualification of four valve motor operators located in the Reactor Building. The EQ deficiencies identified involved the installation and maintenance of motor operator T-drains (enclosure drains) and grease reliefs (thermal expansion reliefs).

Inspectors found deficiencies associated with the following valves:

- 1) CAV-1, Pressurizer [AB,PZR] steam space sampling containment isolation valve,
- 2) CAV-3, Pressurizer water space sampling containment isolation valve,
- 3) CAV-4, Steam Generator [AB,SG] "A" sampling containment isolation valve,
- 4) RCV-11, Isolation valve for Pressurizer Pilot Operated Relief Valve.

Immediately following the NRC audit, utility personnel performed inspections of the 21 valve motor actuators that require environmental qualification, and are located in the Reactor building. The inspections addressed installation and maintenance in the following areas of T-drains, grease reliefs, and splices and terminations associated with limit switches.

The valve currently installed as RCV-11, and its associated motor actuator were installed and tested in 1982. The operator qualification test included references to T-drains. It should be noted that in some instances, T-drains are shipped with motor operators, but are not attached. Similarly, grease reliefs are covered with a cap during shipping. Based upon current verification data, it appears that T-drains were never installed, and grease relief caps were never removed.

Motor operators on valves CAV-1, CAV-3, and CAV-4 were replaced in 1979 due to EQ concerns. Valve operator test procedures used at that time did not include T-drains. In 1981, plant personnel determined that the valve operators were not qualified for submergence, even though they were located below the postulated flood elevation in the Reactor Building. The valves were relocated. Relocation work did not include T-drain installation.

In 1983, valves CAV-1 and CAV-3 and their associated operators were replaced with different types of valves and operators due to operational problems. Modification instructions for installation of the new valves included directions for installing T-drains. However, the modification contained no instructions for removing grease relief shipping caps. Based upon current inspection data, the T-drains were installed on CAV-1 and CAV-3 (although the CAV-1 T-drain was found plugged), but the grease relief shipping caps for both CAV-1 and CAV-3 had never been removed.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 305A's) (17)

In 1985, as a result of additional reviews required by IE Bulletin 79-01B, Florida Power Corporation (FPC) replaced 13 valve actuator motors in the Reactor Building with new Class RH insulation motors and pinion gears. The modification also contained specific instructions for verifying the installation of T-drains and grease reliefs in 9 of the 13 actuators. It appears the verification instructions for the 9 actuators were performed because the current inspection results indicated all 9 had T-drains and grease reliefs installed. However, several of these actuators had plugged grease reliefs and one had only one T-drain. From the documentation it is not clear why the modification did not include the remaining EQ actuators located in the Reactor Building.

In 1986 plant personnel inspected each of the 21 environmentally qualified valve actuators in the Reactor Building. This inspection discovered deficiencies related to T-drains and grease reliefs. The inspection instructions provided guidance for identifying the deficiencies and notifying appropriate supervision. The identified deficiencies were documented on individual inspection data sheets which were then forwarded to the Site Nuclear Procurement Engineer for review. It appears the completed inspection sheets and work requests were never adequately reviewed and appropriate corrective actions were never pursued.

CAUSE

These events are varied in nature and root cause. However, the events indicate the overall environmental qualification program was deficient in the following areas:

- 1) Development of overall EQ program definition, responsibilities, administrative controls, and detail procedures,
- 2) Technical and programmatic training at levels or stages of program implementation,
- 3) Communication and coordination of program requirements and responsibilities necessary to achieve and maintain desired program objectives,
- 4) Post EQ installation verification, inspection and acceptance,
- 5) Maintenance of EQ performance capability, i.e. specific EQ surveillance programs and procedures, specific EQ preventative maintenance activities.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

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TEXT (If more space is required, use additional NRC Form 356A's) (17)

EVENT ANALYSIS

Valves CAV-1, CAV-3, and CAV-4 automatically close upon receipt of an automatic diverse containment isolation signal from the ES system. These valves promptly receive an ES signal to close and will have performed their safety function before being exposed to a harsh environment. Each of these valves have redundant containment isolation valves outside of the RB. In the event of LOCA the outboard valves would still be available for containment isolation.

If RCV-11 failed in the closed condition there is no safety significance. Should RCV-11 fail in an open position the PORV provides a back-up to the block valve. Should both valves remain open CR-3 has the capability to maintain inventory via the HPI and LPI systems. CR-3 small break LOCA Analysis Bounds this event.

CORRECTIVE ACTION

Plant personnel corrected the specific EQ deficiencies contained in this report during the 1989 Spring outage.

In order to prevent future occurrences, the utility has committed to perform EQ training in August 1989 and to implement an enhancement to the present EQ program. The enhancement will address the following seven areas:

- a. Organization
- b. Procedures
- c. Field Verification
- d. Documentation
- e. Environmental Profile
- f. E.Q. Master List
- g. Training

PREVIOUS SIMILAR EVENTS

The utility has submitted five previous Licensee Event Reports concerning Environmental qualification deficiencies.