Florida
Power
CORPORATION

April 12, 1994
3F0494-11

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

Subject: Licensee Event Report (LER) 94-001-00

Dear Sir:

Attached is Licensee Event Report (LER) 94-001-00 which is submitted in accordance with 10 CFR 50.73.

Sincerely,

Gary Boldt

G.L. Boldt
Vice President
Nuclear Production

GLB/JAF:rp

Attachment

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

190115

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NRC FORM 366 (6-92) U.S. NUCLEAR REGULATORY COMMISSION

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.

LICENSEE EVENT REPORT (LER)

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 5

TITLE (4)

Performance of Procedure to Return Makeup Pump 1C to Operability Results in Entry into LCO 3.0.3

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 3	1 5	9 4	9 4	0 0 1	0 0	0 4	1 2	9 4	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)	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
K. R. Wilson, Manager, Nuclear Licensing	9 0 4 5 6 3 - 6 4 8 6

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	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 March 15, 1994, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE 1 (POWER OPERATION), operating at 100% reactor power and generating 871 megawatts. Makeup pump (MUP)-1C was out of service. Operations personnel were in the process of performing a test procedure which would both complete post maintenance testing to return MUP-1C to operable status and satisfy a scheduled surveillance requirement. The procedure, written for normal surveillance testing, assumes all MUPs are operable and directs the operators to close a discharge crosstie valve (MUV-3) as part of the procedure which tests associated valves. At 2205, the control room operators closed MUV-3, thereby isolating the flow path to two high pressure injection (HPI) lines from an operable HPI pump. The shift supervisor identified that the plant was in a condition outside the safety analysis and immediately entered Technical Specification Limiting Condition for Operation (LCO) 3.0.3. At 2225, following the performance of the procedure section, LCO 3.0.3 was exited. Between 2205 and 2225, the makeup system would not have provided the HPI flow paths required by the Safety Analysis without operator actions. The cause of this event was lack of immediate self-checking by the shift supervisor. Several corrective actions were established, including additional training to reinforce timely self checking.

EVENT DESCRIPTION:

On March 15, 1994, Florida Power Corporation's (FPC) Crystal River Unit 3 (CR-3) was in MODE 1 (POWER OPERATION), operating at 100% reactor power and generating 871 megawatts. Makeup Pump (MUP)-1B [CB, P] was operating in the Engineered Safeguards (ES) mode, supplying water to the Reactor Coolant System (RCS) [AB], via valve MUV-31 [CB, LCV] (Refer to Attachment 1, Simplified Makeup System Diagram). Makeup Pump (MUP)-1A [CB, P] was operable in ES standby and Makeup Pump (MUP)-1C [CB, P] had been declared inoperable due to planned maintenance being performed on the pump. Discharge crosstie valves (MUV-3) and (MUV-9) were open, and the four High Pressure Injection (HPI) [BQ] Valves (MUV-23) [BQ, FCV], (MUV-24) [BQ,FCV], (MUV-25) [BQ, FCV], and (MUV-26) [BQ, FCV] were closed. MUPs 1-A and 1-B were ES) selected.

Operations personnel were in the process of performing a test procedure which would both satisfy post maintenance testing to return out of service MUP-1C to operable status and a scheduled quarterly surveillance requirement. The procedure, written for normal surveillance testing, assumes all MUPs are operable and directs the operators to close discharge crosstie valve MUV-3 as part of an early section of the procedure which tests associated valves. The shift supervisor recognized that the Emergency Core Cooling System (ECCS) [BQ] would be placed in a degraded condition by closing MUV-3 as required by the procedure and assigned a dedicated operator to stand by MUV-3. However, he expected this action to place the plant in a 72 hour action.

At 2205, after granting authorization for closure of MUV-3 and performance of the valve stroking, he self-checked these actions and discovered that LCO 3.0.3 applied rather than the 72 hour action, and immediately entered LCO 3.0.3. When the control room operators closed MUV-3, thereby isolating the flow path to two HPI lines from an operable HPI pump, the plant was placed in a condition outside the safety analysis and required immediate entry into Technical Specification Limiting Condition for Operation (LCO) 3.0.3.

At 2225, following the performance of the procedure section, LCO 3.0.3 was exited by reopening MUV-3. Although LCO 3.0.3 requires actions to shut down the reactor to commence within one hour, a reactor shutdown was not required since this condition existed for less than one hour. This report is submitted in accordance with 10CFR50.73(a)(2)(i)(B).

EVENT EVALUATION:

Improved Technical Specification (ITS) 3.5.2 requires that two ECCS trains be operable during MODES 1, 2, and 3. The Final Safety Analysis Report (FSAR) for CR-3 discusses combinations of operable MUPs and HPI valves necessary to ensure adequate HPI flow in the event of a postulated break in one of the HPI lines.

During normal plant operations, MUP-1B and MUP-1C are ES selected and aligned to automatically start when the Engineered Safeguards Actuation System [JE] actuates. The pumps provide HPI flow to the RCS via MUV-23, MUV-24, MUV-25, and MUV-26. Discharge crosstie valves MUV-3 and MUV-9 are normally maintained open to allow any operating MUP to feed all of the HPI lines. This configuration ensures single failure protection. When MUV-3 was closed concurrent with the inoperability of MUP-1C, MUV-25 and MUV-26 were isolated from the operable MUP-1A and MUP-1B, and the system could not have performed its intended safety function.

Between 2205 and 2225, the Makeup System would not have provided the HPI flow paths required by the Safety Analysis without operator actions. However, during this time period a dedicated plant operator was assigned to MUV-3. The dedicated plant operator could have reopened MUV-3 at any time, immediately reestablishing a combination of MUPs and HPI valves that would have returned the required HPI flow paths to an operable state.

CAUSE:

The primary cause of this event was lack of immediate self-checking by the shift supervisor. He immediately recognized that the ECCS would be placed in a degraded condition by closing MUV-3, however he expected the plant to be placed in a 72 hour action. After granting authorization for performance of the valve stroking and closure of MUV-3, he self-checked these actions and discovered that LCO 3.0.3 applied rather than the 72 hour action. Performance of the valve portion of the procedure after MUP-1C was returned to service would have avoided the LCO 3.0.3 entry. This option was not considered since operations personnel did not immediately recognize the additional degradation resulting from the standard sequence.

A contributing cause was the conversion to ITS on March 12, 1994. Under previous TS, an interpretation had been written clarifying the ECCS operability requirements which addressed the inoperability of specific ECCS components. This interpretation was generalized in the ITS Bases. Given the sheer volume of changes as a result of ITS, and the cancellation of the TSI, the operator had questions as to whether ITS requirements for this system differed from STS requirements.

CORRECTIVE ACTION:

Corrective actions for this event include the following:

1. MUV-3 was opened and LCO 3.0.3 was exited.

2. Training will be conducted reviewing this event and ITS 3.5.2 Bases. Additionally, the Self-Checking program will be re-emphasized relative to this event.

3. ITS 3.5.2 Bases will be evaluated for possible clarification.

4. An Operations Study Book Entry discussing this event will be completed.

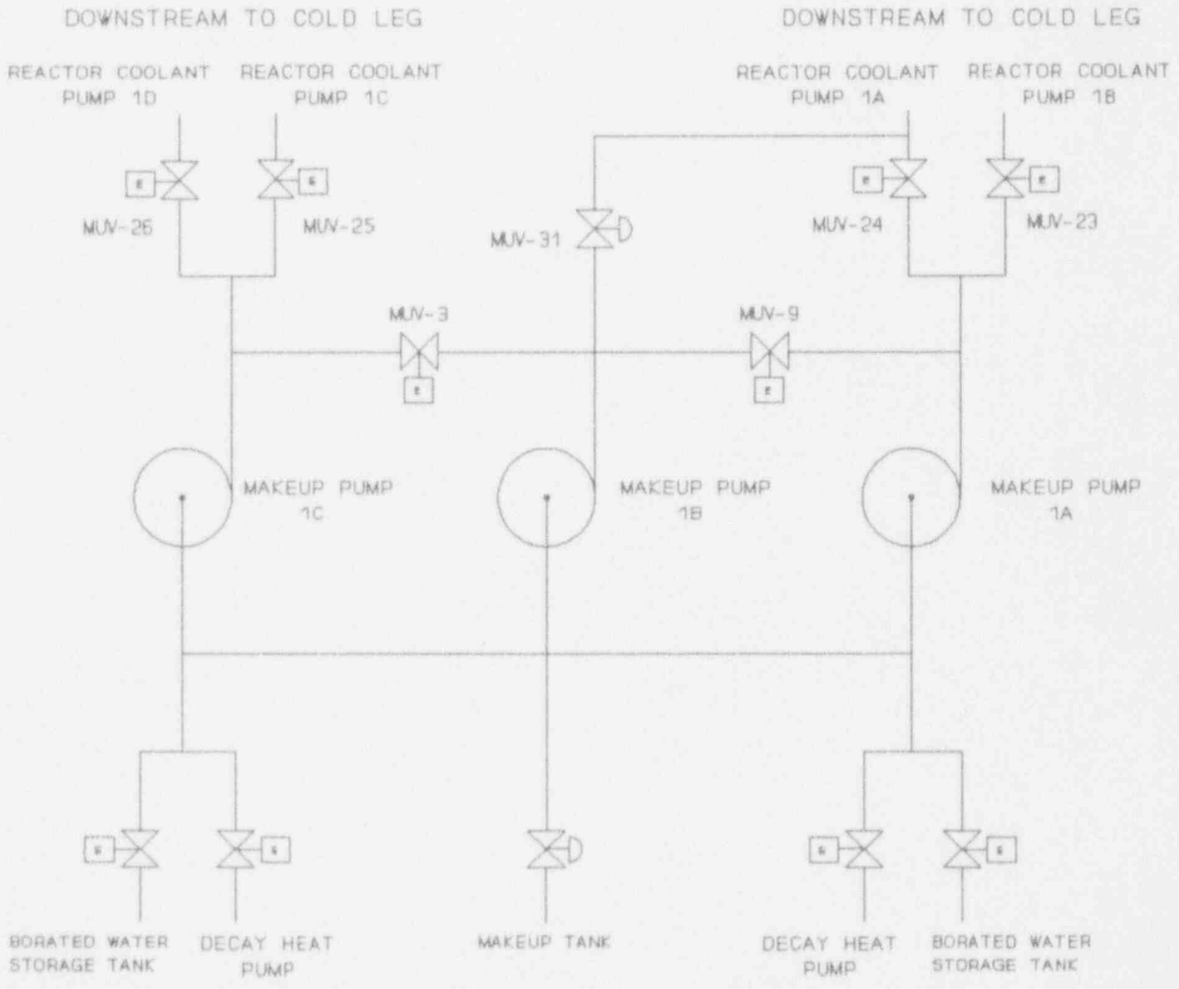
5. The surveillance procedure is being revised to include a statement to assure performance of the procedure only if proper pump/valve line-ups exist to avoid entry into LCO 3.0.3.

PREVIOUS SIMILAR EVENTS:

There have been twenty-seven previous events involving entry into TS 3.0.3, including a similar event reported in LER 91-005-00.

ATTACHMENT 1:

SIMPLIFIED MAKEUP SYSTEM DIAGRAM



ALL VALVES SHOWN ARE POWER OPERATED

MUV-3	Normally Open	MUV-23	Normally Closed	MUV-25	Normally Closed
MUV-9	Normally OPen	MUV-24	Normally Closed	MUV-26	Normally Closed