

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

March 3, 1997  
3F0397-01

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

Subject: Licensee Event Report (LER) 97-S01-00

Dear Sir:

Please find the enclosed Licensee Event Report 97-S01-00 concerning a security breach in the Protected Area via the Circulating Water System. This report is submitted by Florida Power Corporation in accordance with 10 CFR 73.71

Sincerely,

D. F. Kunsemiller, Director  
Nuclear Site Support

DFK/TWC

Attachment

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

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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) Maintenance Activities in Circulating Water System Result in Protected Area Breach

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	1	3	0	9	7	9	7	---	S 0 1	---	0	0	0	3	0	3	9	7	N/A	0	5	0	0	0	---	---
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (CHECK ONE OR MORE OF THE FOLLOWING) (11)																							
5			20.402(b)			20.405(c)			50.73(a)(2)(iv)			X			73.71(b)											
POWER LEVEL (10)			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v)						73.71(c)											
0			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)(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.S. Campbell, Supervisor, Nuclear Security TELEPHONE NUMBER AREA CODE 3 5 2 5 6 3 - 4 7 2 3

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

## SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) X NO EXPECTED SUBMISSION DATE (15)

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

Florida Power Corporation's (FPC's) Crystal River Unit 3 was in MODE 5 (COLD SHUTDOWN) on January 30, 1997. At approximately 1800 hours, a security officer on routine rounds contacted a Security Field Supervisor (lieutenant) who initiated a walkdown and investigation which ultimately uncovered a previously unidentified pathway into the Protected Area. At approximately 1850 hours on January 30, 1997 the lieutenant completed his preliminary examination of the "D" waterbox and posted a security officer at the waterbox opening. While the investigation continued, the Security Shift Supervisor was consulted and after evaluating the breach, determined, at 0020 hours on January 31, 1997, that the incident was reportable. The Nuclear Shift Supervisor then reported the incident to the NRC in accordance with 10 CFR 73.71 at 0118 hours.

The breach remained posted until 0230 hours on January 31, 1997 when mechanics secured the circulating water system opening.

Security was not compromised during this event. The cause of this event was failure to identify and understand the security function of plant components affected by infrequently performed maintenance activities. Corrective actions include a broader look at plant components that could function as security barriers, physical modifications to secure the waterbox manways, and improved communications between Maintenance, Operations and Security departments concerning changes in plant conditions and their effect on Security systems.

EXPIRES 5/31/95

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
CRYSTAL RIVER UNIT 3 (CR-3)	0500030297	5	01	00	02 OF 05

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

**EVENT DESCRIPTION**

Florida Power Corporation's (FPC's) Crystal River Unit 3 (CR-3) was in MODE 5 (COLD SHUTDOWN) on January 30, 1997. Following security shift turnover on January 30, 1997, at approximately 1800 hours, a security officer on routine rounds contacted a Security Field Supervisor (hereafter referred to as Lieutenant) regarding the open "D" waterbox manway. The lieutenant acknowledged his awareness of the waterbox opening and advised the security officer that he would personally walkdown the system with the officer and address any concerns. The security officer who initiated this investigation also shared his concerns with a fellow security officer. This second security officer also contacted the lieutenant concerning the open waterbox manway. The lieutenant met both security officers at the "D" waterbox manway and began their waterbox walkdown and investigation. At approximately 1850 hours on January 30, 1997 the lieutenant completed his preliminary examination of the "D" waterbox and posted one of the two security officers at the waterbox opening. This possible breach in the Protected Area had not been previously identified as a pathway. The lieutenant contacted the Nuclear Shift Manager, mechanics shop and the Security Shift Supervisor and the investigation continued. Security Shift Supervision evaluated the breach and determined at 0020 hours on January 31, 1997 that it met the requirements for reportability. He then notified the Nuclear Shift Supervisor of the incident which was subsequently reported to the NRC at 0118 hours on January 31, 1997 as a one-hour report in accordance with 10 CFR 73.71. This notification was assigned NRC event number 31699.

The breach remained posted until 0230 hours on January 31, 1997, when mechanics secured the circulating water system breach.

**EVENT EVALUATION**

The Circulating Water System [KE](CW) provides seawater to the Main Condenser [SG,COND] to condense steam from the Low Pressure Turbines [TA,TRB] and Main Feed Pump [SJ,P] turbine exhausts. It also provides sea water to the Secondary Services Closed Cycle Cooling Water (SC) Heat Exchangers [KB,HX]. The Amertap System provides intermittent cleaning and removal of deposits in the Main Condenser tubes by recirculating sponge rubber balls. Seawater is drawn from the intake canal at the intake structure. Four Circulating Water Pumps [KE,P] move the water through individual underground conduits to the inlet water boxes. The main flow is through the condenser tubes to the Outlet Waterbox. At the Outlet Waterbox, main flow is mixed with the outlet from the respective SC Heat Exchanger and passes through Amertap ball retention screens before entering the underground conduits. The bypass line flaps control water flow in the CW debris filter bypass lines. The conduits direct the water to the outfall at the discharge canal. The (CW) debris filter bypass line flaps serve as a security barrier that had not been previously identified as a protective barrier until this event occurred.

No safety systems were affected or threatened by this event; however, the removal of the Circulating Water System debris filter bypass line flap exposed a possible penetration path into the protected area.

EXPIRES 5/31/95

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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 (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)

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LER NUMBER (6)

YEAR SEQUENTIAL  
NUMBER REVISION  
NUMBER

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PAGE (3)

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

Maintenance activity on the Circulating Water System debris filter bypass line flap began at approximately 2300 hours on January 29, 1997. By 0230 on January 30, 1997 the debris filter bypass line flaps were removed from the waterbox. The Protected Area breach could have existed for up to 16 hours and 20 minutes.

The likelihood that an individual could have used this path to enter the Protected Area is remote in that unauthorized and undetected access into the Protected Area is neither easily or likely to be exploitable. The pathway is underwater and is long, narrow, winding, and dangerous. An individual attempting to use this path would need details of the plant, special scuba equipment, and prior knowledge that the right circumstances existed to make this entrance viable. In addition, the individual would have to avoid detection by roving security patrols and mechanics working on the system.

Based upon the lack of unusual incidents before and after this event, the lack of any unexplained alarms, and the lack of any other indications to the contrary, it is our assessment that no credible threat to plant security existed during this event.

**CAUSE**

A root cause team was formed and concluded that the root cause was failure to identify and understand the security function of plant components affected by infrequently performed maintenance activities.

A contributing cause of this event was the fact that a similar event in 1994 involving the same access path, did not sufficiently diagnose the path for Protected Area vulnerability. The 1994 event and corrective actions were limited to removal of a section of the bypass line piping and did not identify the affect of removal of the bypass flaps.

**IMMEDIATE CORRECTIVE ACTION**

Once security supervision discovered the possibility that a protected area penetration existed, they immediately established an armed security officer as a compensatory measure. The Protected and Vital Areas were searched for possible perpetrators. At 0230 hours on January 31, 1997, mechanics physically secured the breach.

**ADDITIONAL CORRECTIVE ACTION**

Other Circulating Water System manway covers were checked by security personnel and were found secured. Security issued Security Information Report 10818 directing compensatory posting for any future waterbox maintenance activities that require opening of the CW system or associated piping.



EXPIRES 5/31/95

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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)		LER NUMBER (6)			PAGE (3)															
			YEAR	SEQUENTIAL NUMBER	REVISION NUMBER																
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TEXT (If more space is required, Use additional NRC Form 366A's (17))

**ACTIONS TO PREVENT RECURRENCE**

The waterbox manways will be secured with Security-controlled locking mechanisms.

FPC Engineering will develop a Security Barrier Component List (SBCL) based on the 96 square inch opening criteria associated with protected and vital area barriers as established by the CR-3 Physical Security Plan. This SBCL will be integrated into the planning and work controls process for maintenance activities.

Procedural enhancements in Operations, Security, and Work Controls will incorporate lessons learned for this event.

**PREVIOUS SIMILAR EVENTS**

This event repeats one that occurred in March 1994 (LER 94-S01-00) when a section of Amertap debris filter bypass flush line was removed and created a previously unidentified new pathway to the Protected Area. The 1994 event and the event discussed in this LER caused FPC to discover new pathways into the Protected Area that had not been previously identified effecting the CW system.

LER 93-S02-00 and LER 96-S02-00 describe CW System breaches involving breaches of identified pathways.

**ATTACHMENTS**

Figure 1 - Conceptual Drawing of CW System

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.5 HOURS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (NRCB 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)

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YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
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CONCEPTUAL DRAWING OF CW SYSTEM

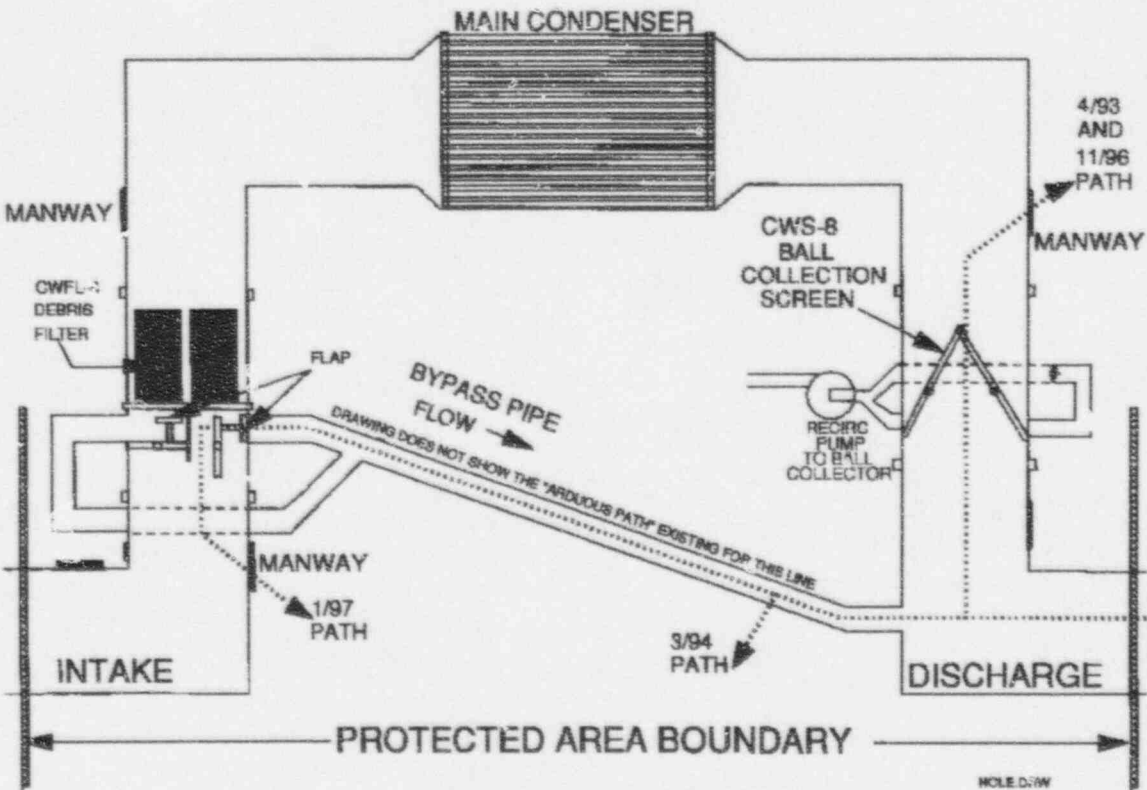


Figure 1