



**Florida
Power**
CORPORATION

Crystal River Unit 3
Docket No. 50-302

November 6, 1992

3F1192-03

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

Subject: Licensee Event Report (LER) 92-021

Dear Sir:

Enclosed is Licensee Event Report (LER) 92-021 which is submitted in accordance with 10 CFR 50.73.

Sincerely,

G. L. Boldt
Vice President
Nuclear Production

EEF:mag

Enclosure

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

12-103

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PDR ADOCK 05000302
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A Florida Progress Company

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EXPIRES 4/30/92

LICENSEE EVENT REPORT (LER)

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 (P-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
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TITLE (4)
Lack of Required Lube Oil Leakage Collection Tank Reserve Capacity For Reactor Coolant Pumps Violates 10CFR50 Appendix R Design Criteria

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)														
1	0	0	4	9	2	9	2	0	2	1	0	0	1	1	0	6	9	2	N/A	0	5	0	0	0

OPERATING MODE (9) 1

POWER LEVEL (10) 1 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (CHECK ONE OR MORE OF THE FOLLOWING) (11)

20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.38(c)(1)	50.73(a)(2)(v)	73.71(c)
20.405(a)(1)(ii)	50.56(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 306A)
20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
20.405(a)(1)(iv)	X 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)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
W. A. Stephenson, Nuclear Safety Supervisor	AREA CODE 9 0 4 7 9 5 - 6 4 6 6

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)

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

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

On October 4, 1992, during the 0800-1600 shift, Crystal River Unit 3 (CR-3) was operating at 100 percent reactor power. During the performance of a surveillance of the plant, which is performed every eight hour shift, the operator noted the fluid level in the Reactor Coolant Pump (RCP) Lubricating Oil Collection Tanks (LOTS) was 14 percent. These tanks are designed to capture leakage of oil from the RCPs. They will, however, also collect condensation that occurs on cooling water lines around the RCPs. The oil/water mixture was removed from the tanks on October 4, 1992. On October 9, 1992, it was determined that the reserve volume required to meet 10CFR50, Appendix R, had not been maintained and CR-3 had been operating outside the design basis for this system from approximately 0800 hours until 1400 hours. The cause was personnel error in that the tanks were not emptied prior to exceeding administrative limits. Corrective actions include informing appropriate personnel to take prompt action before the level exceeds administrative limits and strengthening the procedural guidance provided to operators. In addition, a modification is being initiated to control the cooling water temperature thus decreasing the condensation entering the collection tanks.

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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 (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20546, 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)
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CRYSTAL RIVER UNIT 3 (CR-3)	0 5 0 0 0 3 0 2 9 2	0	1	1	0 0 0 7 OF 0 4

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

EVENT DESCRIPTION

On October 4, 1992, during the 0800-1600 shift, Crystal River Unit 3 (CR-3) was operating in MODE 1 (POWER OPERATION) at 100 percent reactor power. During the performance of the routine surveillance data taking on systems, the operator noted the fluid level in the Lubricating Oil Collection Tanks [WK,TK] (LOTs) for the Reactor Coolant Pumps [AB,P] (RCPs) was 14 percent. This exceeded the 12 percent administrative limit placed on these tanks. The tank contents were removed and it was later determined, on October 9, 1992, that insufficient reserve volume had existed in the LOTs to meet the design requirements of 10CFR50, Appendix R. Therefore, CR-3 had been operating outside of the design basis for this system for approximately six hours. This event is reportable under 10CFR50.73 a.2.ii.B. There were no inoperable systems, structures, or components which contributed to this event.

CAUSE

The cause of this event was personnel error in that the tanks were not emptied prior to exceeding the administrative limit. The volume rate of rise in the tanks for this event was a direct result of increased condensation from the Reactor Building [NH] (RB) atmosphere. Since the tanks had not been emptied earlier, there was insufficient time to plan and accomplish a RB entry in order to drain the tanks prior to exceeding current design limits. The increased condensation was the consequence of a small, two gallons per minute, feedwater System [SJ] leak in containment and decreasing temperature of the Nuclear Services Closed Cycle Cooling Water System [CC] (SW) in the RB.

EVENT ANALYSIS

10CFR50, Appendix R, Section O, requires the RCP oil collection system to be capable of collecting oil from all potential leakage sites, both pressurized and unpressurized. RCP lube oil leakage is required to be collected and drained to vented, closed containers capable of holding the entire RCP lube oil system inventory. The capacity of the collection system at CR-3 is greater than the volume of all eight RCP lube oil reservoirs and the associated piping. However, the reserve capacity of the collection system is small.

Calculations have shown that if the allowed content of the LOTs reaches 14 percent there will be insufficient reserve volume to meet the collection system design criteria. Therefore, an action limit has been set to initiate increased monitoring activities when the

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LICENSEE EVENT REPORT (LER)
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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 (P-500), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON DC 20503.

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

has been set to initiate increased monitoring activities when the level reaches 10 percent. It is also the intent of the administrative limits to cause the LOT contents to be drained at less than 12 percent before the level reaches the 14 percent design limit.

The level in the LOTs had risen from eight percent on the 0000-0800 shift of October 3, 1992, to 14 percent on the 0800-1600 shift of October 4, 1992. This rapid increase was unusual. Review of log readings showed there had been a decrease in the temperature of the water from the Gulf of Mexico which serves as the Ultimate Heat Sink for CR-3. The reduced seawater temperature resulted in a corresponding decrease in the SW water temperature of about six degrees Fahrenheit. SW is the cooling medium for components in the reactor containment building including the RCPs. Water vapor from the RB atmosphere condensed on cooling water lines contained in the RB. Condensate from cooling lines above or contained within the collection system dripped into the collection trays under the RCPs and drained to the LOTs. Because of the sudden decrease in the cooling water temperature, six degrees in two days, the rate of condensation on cooling water lines increased significantly. The LOT level increased to an out-of-design specification reading of 14 percent before the tanks could be drained.

The reduced reserve capacity of the collection system would have resulted in an overflow of less than 10 gallons of RCP lubricating oil if a complete loss of all RCP reservoirs had occurred at the time of reduced capacity. The CR-3 Fire Hazards Analysis assumed a fire loading in that area of the RB involving all 800 gallons of RCP oil with no adverse impact on safe shutdown capability. Therefore, the consequences of the overflow of the collection system is bounded by the worst case analysis for a fire in that area of the RB. In addition, a complete loss of all eight RCP reservoirs is not considered credible since the design of the RCP motor support structures and the oil collection system included seismic loads. Thus, the small reduction in reserve capacity would not have prevented a credible leak or rupture of the RCP lube oil reservoirs from being contained by the collection system. It is therefore concluded that, although the reserve capacity of the RCP oil collection system required by Appendix R was not maintained for approximately six hours, this did not place the plant in an unsafe condition and did not endanger the health and safety of the public.

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		0 5 0 0 0 3 0 2	9 2 --- 0 2 1 ---	0 0	

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

CORRECTIVE ACTION

Action was initiated to make an entry into the RB and drain the LOTs. The readings were returned to within specification at 14:17 on October 4, 1992.

Action to prevent recurrence will be to make an Operations Study Book entry to inform applicable Operations personnel of this event and for them to take prompt action to have the LOTs drained prior to exceeding administrative requirements.

In addition, a plan to repair the feedwater leak is in place and a plant modification to control the cooling water temperature is in process.

Additionally, a recent change to the procedure for taking operator shift logs incorporated a hand held electronic computer capable of providing audible alarms for out of tolerance readings. This format and revised wording now associated with the LOT level record should further enhance personnel awareness and timeliness for draining the LOTs.

PREVIOUS SIMILAR EVENTS

This is the second event in which the accumulated water volume has been sufficient to prevent the plant from maintaining the design reserve capacity of the LOTs. See Licensee Event Report Number 88-009.