



**Florida
Power**
CORPORATION

Crystal River Unit 3
Docket No. 50-302

November 16, 1992
3F1192-10

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

Subject: Licensee Event Report (LER) 92-022

Dear Sir:

Enclosed is Licensee Event Report (LER) 92-022 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

230053

9211230240 921116
PDR ADDCK 05000302
S PDR

EXPIRES 4/30/92

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 (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)

CRYSTAL RIVER UNIT 3 (CR-3)

DOCKET NUMBER (2)

0 5 0 0 0 3 0 2

PAGE (3)

1 OF 0 4

TITLE (4)

Inadequate Lube Oil Collection Tank Reserve Capacity Due To Personnel Error Results In Operation Outside Appendix R Design Basis

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 (8)													
1	0	1	5	9	2	9	2	0	2	2	0	0	1	1	5	9	2	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)		0		9		2		20.402(d)		20.405(c)		50.73(a)(2)(iv)		79.71(b)									
				20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		79.71(c)													
				20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vi)		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)(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)(v)															

LICENSEE CONTACT FOR THIS LER (12)

NAME

W. A. Stephenson, Nuclear Safety Supervisor

TELEPHONE NUMBER

AREA CODE

9 0 4 7 9 5 - 8 4 8 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)

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 October 15, 1992, Crystal River Unit 3 was operating in MODE 1 (POWER OPERATION) at 92% of RATED THERMAL POWER. At 1240, it was discovered that the Reactor Coolant Pump lube oil collection drain tanks (LOTs) exhibited a fluid level of 19%. This level was in excess of the plant's administrative limit for the tanks. Further analysis revealed that insufficient reserve volume existed in the LOTs to meet the design requirements of 10CFR50, Appendix R. The discovery of excessive inventory in the LOTs was made during an investigation necessitated by an inadvertent spraying of the reactor containment building (RB) atmosphere. The RB spray flow was initiated earlier that day due to personnel error during the performance of a routine plant surveillance procedure. The LOTs were pumped down to acceptable levels and RB walkdowns and equipment checks were performed. The operator that made the error was removed from licensed duties. After receiving counseling from appropriate members of line management regarding the importance of practicing good self-checking and crosschecking techniques, the operator was subsequently reinstated.

EXPIRES 4/30/92

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 (P-530), 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)

CRYSTAL RIVER UNIT 3 (CR-3)

CKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

YEAR

SEQUENTIAL
NUMBERREVISION
NUMBER

0 5 0 0 0 3 0 2 9 2 0 2 2 0 0 0 2 OF 0 4

TEXT (If more space is required, use additional NRC Form 365A x (17))

EVENT DESCRIPTION

On October 15, 1992, Crystal River Unit 3 (CR-3) was operating in MODE 1 (POWER OPERATION) at 92% of RATED THERMAL POWER. At 1240, it was discovered that the Reactor Coolant Pump [AB, P] (RCP) lube oil collection drain tanks [TK] (LOTs), LOT-4A and LOT-4B, exhibited a fluid level of 19%. This level was in excess of the administrative limit of 12% placed on these tanks. Once the tanks had been pumped down, it was determined that insufficient reserve volume had existed in the LOTs while at the indicated level of 19% to meet the design requirements of 10CFR50, Appendix R. This condition thus constituted operation outside the plant's Design Basis (DB).

The discovery of excessive level in the LOTs was made during an investigation necessitated by the spraying of water from the Borated Water Storage Tank [BE, TK] (BWST) into the reactor containment building [NH] (RB) atmosphere via the building spray system [BE] spray headers. RB spray flow had been inadvertently initiated at 1205 during the performance of a routine plant surveillance procedure.

The event was reported to the Nuclear Regulatory Commission at 1439 via the Emergency Notification System per 10CFR50.72(b)(1)(ii)(B). This report is being submitted in accordance with 10CFR50.73(a)(2)(ii)(B).

CAUSE OF EVENT

The excessive fluid inventory in the LOTs resulted from an accumulation of over 65 gallons of water in the tanks. This condition was in turn a direct consequence of the inadvertent RB spray actuation due to personnel error. The personnel error involved the manipulation of an incorrect valve [BE, FCV] by a control room operator during the performance of a routine plant surveillance procedure. The procedure specified the correct valve to be manipulated. There were no inoperable systems, structures, or components which contributed to this event.

EVENT ANALYSIS

10CFR50 Appendix R requires that the RCP lube oil collection system be capable of collecting oil from all potential pressurized and unpressurized leakage sites and that the leakage be collected and drained to a vented, closed container that can hold the entire lube oil system inventory. Since the total capacity of the two collection tanks used at CR-3 is greater than the volume of all eight RCP lube oil reservoirs [RVR] and the associated piping, there is a reserve volume for collection of fluid other than oil. Assuming a nominal level in each of the eight lube oil reservoirs, this reserve capacity has been determined to be 42.2 gallons. If the fluid in the LOT is assumed to be all water this would correspond to an indicated level of 14% in the LOTs. The total system oil inventory available for collection at any given point in time is 760 gallons if all eight oil reservoirs are filled to the nominal value.

EXPIRES 4/30/92

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 (P-530), 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)

LER NUMBER (3)

PAGE (3)

CRYSTAL RIVER UNIT 3 (CR-3)

YEAR

SEQUENTIAL
NUMBERREVISION
NUMBER

0 5 0 0 0 3 0 2 9 2 0 2 2 0 1 0 3 OF 0 4

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

Since the total RCP lube oil inventory will vary as a function of the actual oil levels in the eight reservoirs, a level in excess of 14% in the LOTs does not necessarily mean that a violation of the Appendix R design criteria has occurred. Anytime the level in the LOTs exceeds the 14% value, the situation must be carefully analyzed to determine if a nonconformance exists. The 19% level achieved in this event resulted in the drainage of approximately 65 gallons of water and 2.5 gallons of an oil/water emulsion from the LOTs during the pump down. Since all eight RCP lube oil reservoirs were at or near nominal level, this event was a clear violation of the Appendix R criteria.

Due to the design of the collection system, fluid other than RCP lube oil can find its way into the LOTs from a variety of sources including cooling water system leakage, condensation of RB atmospheric moisture onto cooling water lines (and subsequent drainage into the LOTs), and RB spray initiation. As a result of prior experiences with moisture accumulation in the LOTs via the condensation mechanism, administrative limits were implemented in the past to initiate: (1) monitoring of any level increase once a value of 10% is achieved in the LOTs; and (2) a complete draindown of the collection system prior to exceeding a level of 12%. The intent of these actions was to maintain a comfortable margin to the actual limiting level of 14% while experiencing normal rates of fluid accumulation in the lube oil collection system.

In this particular situation, however, water from the BWST had been inadvertently sprayed into the RB atmosphere from 1205 to 1218 that same day, resulting in the introduction of approximately 8,500 gallons of borated water into the PB. Since the RCP lube oil collection system is of the catchbasin or drip pan design, it is capable of rapidly gathering water which is being sprayed into the building. Consequently, the collection rate experienced during this event was far more rapid than would normally be anticipated. The inherent result was the LOTs exceeding their administrative limits, as well as the Appendix R criteria, before any reasonable operator action could be effective.

It is important to note that the reduced reserve capacity of the collection system in this event would have resulted in an overflow of less than 70 gallons of RCP lubricating oil if a complete loss of all RCP oil reservoirs had occurred with the level of the LOTs at 19%. The CR-3 Fire Hazards Analysis assumed a fire loading in that area of the RB involving 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. Additionally, a complete loss of all eight RCP reservoirs is not considered credible since the design of the RCP motor [MO] support structures [SPT] and the oil collection system included seismic loading assumptions. The small reduction in collection capacity experienced in this event would, therefore, not have prevented a credible leak or rupture of the RCP lube oil reservoirs from being contained by the collection system. Considering the small amount of RCP lube oil that could have theoretically been spilled onto the RB floor in a DB event,

EXPIRES 4/30/92

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 (P-530), 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) CRYSTAL RIVER UNIT 3 (CR-3)	DOCKET NUMBER (2)		LER NUMBER (6)			PAGE (3)													
			YEAR	SEQUENTIAL NUMBER	REVISION NUMBER														
	0	5	0	0	0	3	0	2	9	2	0	2	2	0	0	0	4	OF	0

TEXT (If more space is required, use additional NRC Form 360A's. (17)

together with the non-credibility of the postulated failure and the short time in which the collection volume was compromised, it is concluded that this event did not place the plant in an unsafe condition and did not endanger the health and safety of the public.

CORRECTIVE ACTION

The excess fluid was drained from the LOTs. The readings were returned to within specification prior to 2200 hours. RB walkdowns and equipment checks were performed with no significant concerns identified. The operator that inadvertently initiated spray flow into the RB was temporarily removed from licensed duties while a human performance evaluation was conducted encompassing all of the event circumstances. After receiving counseling from appropriate members of line management regarding the importance of practicing good self-checking and crosschecking techniques, the affected operator was returned to licensed duties.

PREVIOUS SIMILAR EVENTS

LERs 90-003 and 92-021 each reported events involving excessive fluid inventory in the LOTs and consequently inadequate reserve capacity for meeting the 10CFR50, Appendix R design criteria. In both situations, however, the fluid volume accumulated in the LOTs could be attributed to rapid condensation of an unusual amount of RB atmospheric moisture onto cooling water lines and subsequent drainage of the water into the tanks.