

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Browns Ferry - Unit 1 DOCKET NUMBER (2) 05000259 PAGE (3) 1 OF 02

TITLE (4) High Drywell Leakage and Subsequent Manual Scram

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)
06	20	84	84	026	01	08	10	84			05000
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)											

OPERATING MODE (9) N	20.402(b)	20.406(c) X	60.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 01519	20.406(a)(1)(ii)	60.36(e)(1)	60.73(a)(2)(v)	73.71(c)
	20.406(a)(1)(iii)	60.36(e)(2)	60.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 365A)
	20.406(a)(1)(iv)	X 60.73(a)(2)(i)	60.73(a)(2)(viii)(A)	
	20.406(a)(1)(v)	60.73(a)(2)(ii)	60.73(a)(2)(viii)(B)	
	20.406(a)(1)(vi)	60.73(a)(2)(iii)	60.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12) NAME: William A. Roberts, Jr. TELEPHONE NUMBER: AREA CODE 205 729-0788

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		
X	A	D	S	E	A	L	B	5	8	0	Y

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)

Unidentified drywell leakage exceeded Technical Specification 3.6.C.1.a., 5-gallons per minute reactor coolant leakage rate. An orderly shutdown was initiated as required by Technical Specification 3.6.C.3 and the unit was manually scrambled at 59 percent power.

The drywell was entered and "B" recirculation pump upper seal was discovered to have failed. The seal was replaced with a spare seal assembly and the unit returned to service.

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PDR ADOCK 05000259  
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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  Browns Ferry - Unit 1	DOCKET NUMBER (2)  0   5   0   0   0   2   5   9	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		8   4	-   0   2   6	-   0   1	0   2	OF 0   2

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

On June 20, 1984, unit 1 was at 59 percent power; unit 2 was operating normally at 61 percent power; and unit 3 was in a refueling outage. Only unit 1 was affected by this event.

On June 19, 1984, at 2227, the unit 1 drywell floor drain sump pump (P) rate for 64 minutes equaled 5.125-gallons per minute. This unidentified leakage exceeded the Technical Specification 5-gallons per minute rate requiring a reactor shutdown within 24-hours. An orderly load reduction was initiated and on June 20, 1984, (at 0050, with the unit at 59 percent power), the unit was manually scrammed.

A drywell entry was subsequently made and the reactor coolant (AD) leakage source was identified to be from a failed upper seal (SEAL) on the "B" recirculation pump. The seal was replaced with a spare seal assembly and the unit returned to service.

The recirculation pump shaft seal is a compound seal. The breakdown bushing will only allow 20-gallons per minute leakage to the drywell sump in the event both seals fail (complete seal failure). This would be negligible for orderly shutdown.

The failed seal assembly was disassembled to determine cause of failure. Based on the disassembly and inspection of the seal components, orifice testing, and discussions with Byron Jackson Pump representatives, it has been concluded that the second stage stationary carbon ring failed causing an initial pressure drop which was observed on the second stage seal. Further breakdown of the seal face attributed to increased friction on both the shaft sleeve and shoulder of the pressure reducing cell. This resulted in a higher than normal second stage temperature. This is believed to be the cause of seal failure because the temperature element located in the control seal bleed-off line would indicate temperature variation as the pump speed was changed. There were no indications for the cause of the fracturing of the carbon seal ring.

Responsible Section - N/A

Previous Similar Events - None

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
Browns Ferry Nuclear Plant  
P. O. Box 2000  
Decatur, Alabama 35602

August 10, 1984

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

Dear Sir:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 - DOCKET  
NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - REPORTABLE OCCURRENCE  
REPORT BFRO-50-259/84026 R1

The enclosed updated report provides followup information concerning high  
drywell leakage and subsequent manual scram. This report is submitted in  
accordance with 10 CFR 50.73 (a)(2)(i) and (iv).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*J. R. Pittman*  
G. T. Jones  
Plant Manager  
Browns Ferry Nuclear Plant

Enclosure

cc (Enclosure):  
Regional Administrator  
U. S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
Region II  
101 Marietta Street, Suite 2900  
Atlanta, GA 30303

INPO Records Center  
Suite 1500  
1100 Circle 75 Parkway  
Atlanta, GA 30339

NRC Resident Inspector, BFN

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