

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) BROWNS FERRY UNIT 2	DOCKET NUMBER (2) 0 5 0 0 0 2 6 0	PAGE (3) 1 OF 0 3
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FAILURE TO MEET TECHNICAL SPECIFICATIONS BECAUSE OF LOSS OF RHRSW SUMP PUMPS

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		
04	04	89	89	011	00	05	04	89	DOCKET NUMBER(S) 0 5 0 0 0		

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)									
POWER LEVEL (10) 0 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)(ix)								

LICENSEE CONTACT FOR THIS LER (12)							TELEPHONE NUMBER				
NAME Stephen B. Jones, Engineer, Plant Reporting Section							AREA CODE 2 0 5 7 2 9 - 3 7 8 8				

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	

SUPPLEMENTAL REPORT EXPECTED (14)							EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO											

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

On April 4, 1989, at 2315 hours, the residual heat removal service water (RHRSW) pump room A-1 sump pump was declared inoperable because of a problem with the level switch that controlled the pump operation. The A-2 sump pump was undergoing maintenance at the time and was also inoperable. Since at least one sump pump is required to be operable to support the RHRSW pumps, the A1, A2, and A3 RHRSW pumps were declared inoperable. At the time of this event, Residual Heat Removal (RHR) loop I, A and C RHR pumps, was operable and RHR loop II was inoperable for scheduled maintenance. Because of the inoperability of the A1 and A2 RHRSW pumps, the A RHR heat exchanger did not have an operable supply of RHRSW. Therefore, the plant did not meet the technical specification requirements for containment cooling. On April 8, 1989, RHR loop II was declared operable and the required technical specifications were met. The A-1 RHRSW sump pump was returned to service on April 14, 1989, at 0050 hours. The A1, A2, and A3 RHRSW pumps were declared operable at that time.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		8 9	0 1 1	0 0	0 2	OF	0 3

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

Description of Event

On April 4, 1989, at 2315 hours, the residual heat removal service water (RHRSW)(EIIS code BI) pump room A-1 sump pump was declared inoperable because of a problem with the level switch that controlled the pump operation. The A-2 sump pump was undergoing maintenance at the time and was also inoperable. Since at least one sump pump is required to be operable to support the RHRSW pumps, the A1, A2, and A3 RHRSW pumps were declared inoperable. In the current unit 2 operation configuration, unit fueled with the reactor head removed and fuel pool gates open, the following technical specifications are applicable:

- 3.5.A.4 requires one core spray (CS) loop (EIIS code BM) operable with one operable pump except when the reactor head is removed as specified in 3.5.A.5.
- 3.5.B.9 requires at least one residual heat removal (RHR)(EIIS code B0) loop with two pumps or two loops with one pump per loop shall be operable.
- 3.5.B.10 If the requirements of 3.5.A.5 are met, low pressure coolant injection (LPCI) and containment cooling are not required.
- 3.5.C.7 Requires at least 2 pumps associated with selected RHR pumps aligned for RHR heat exchanger service for each reactor with irradiated fuel.
- 3.5.A.5 CS is not required to be operable provided the reactor cavity is flooded, the fuel pool gates are open and the fuel pool water level is maintained above the low level alarm point provided an RHRSW pump and associated valves supplying standby coolant supply are operable.

At the time of this event, RHR system loop II was inoperable for scheduled maintenance. Because of this, the standby coolant supply from the B2 or B1 RHRSW pumps did not have an operable injection path. The other standby coolant supply to unit 2 is currently not operable due to a lack of seismic qualification of some of the associated piping. Therefore, with no standby coolant supply the requirements of TS 3.5.A.5 could not be met and the requirements of TS 3.5.A.4, 3.5.B.9, and 3.5.C.7 were applicable. TS 3.5.A.4 was met since there was an operable core spray loop at the time of this event. RHR loop I was operable with both the A and C RHR pumps. Therefore, the low pressure coolant injection requirements of TS 3.5.B.9 were met with the operable RHR pumps and valves. However, the containment cooling requirements of TS 3.5.B.9 and the RHRSW requirements of TS 3.5.C.7 could not be met since the A2 and A1 RHRSW pumps were inoperable. This left only RHR C heat exchanger operable with an RHR pump and a RHRSW pump.

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

Description of Event (continued)

Unit 2 was fueled in cold shutdown and units 1 and 3 were defueled. This event is reportable under 10CFR 50.73 (a)(2)(i) as a failure to meet technical specifications.

Cause of Event

On April 4, 1989, technical specifications were not met because one RHRSW pump room A sump pump was inoperable for pump maintenance and the other sump pump experienced a problem with sump level instrumentation that controlled pump operation. The loss of the second sump pump placed that plant outside of an analysis which requires at least one sump pump to be operable to support the RHRSW pumps. Contributing to the event were various systems outages in progress which made the loss of the A1, A2, and A3 RHRSW pumps more significant than a normal operational configuration.

Corrective Action

On April 8, 1989, at 0405 hours, RHR loop II was declared operable. At that time the standby coolant supply became operable and the requirements of TS 3.5.A.5, 3.5.B.9 and 3.5.C.7 were met. The A-1 RHRSW sump pump was declared operable on April 14, 1989, at 0050 hours. The A1, A2, and A3 RHRSW pumps were then declared operable.

Analysis of Event

The containment cooling function would only be required when the plant is in an operating mode or post accident. Since the plant was in cold shutdown and the primary containment was open, there was not a functional need for containment cooling. In addition, the required RHRSW pumps were capable of supplying the required cooling water at all times during the duration of the condition.

The technical specifications requirement for the RHRSW supply to the RHR heat exchangers ensure that there is the capability to maintain the core cooled. At this time, the heat load in the core is such, as established by the fuel pool cooling performance, that one RHR heat exchanger is capable of cooling the core. Therefore, the conditions described in this report did not reduce the safety of the plant.

Previous Similar Events - None

Commitments - None

TENNESSEE VALLEY AUTHORITY

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MAY 04 1989

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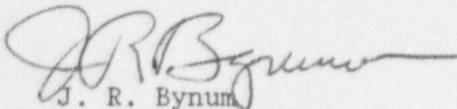
Dear Sir:

TVA - BROWNS FERRY NUCLEAR PLANT (BFN) UNIT 2 - DOCKET NO. 50-260 - FACILITY
OPERATING LICENSE DPR-52 - REPORTABLE OCCURRENCE REPORT BFRO-50-260/89011

The enclosed report provides details concerning the failure to meet technical specifications because of loss of RHRSW sump pumps. This report is submitted in accordance with 10 CFR 50.73 (a)(2)(i).

Very truly yours,

TENNESSEE VALLEY AUTHORITY



J. R. Bynum
Vice President
Nuclear Power Production

Enclosures

cc (Enclosures):

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NRC Resident Inspector, BFN

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