

08/12 21:60

NRC FORM 366
(12-81)
10 CFR 50

U.S. NUCLEAR REGULATORY COMMISSION
LICENSEE EVENT REPORT

APPROVED BY OMB
3150-0011

CONTROL BLOCK:

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0	1	A	L	B	R	F	2	0	0	-	0	0	0	0	0	-	0	0	3	4	1	1	1	1	4	5
7	8	9	14					15	23								24	30				31	32			
		LICENSEE CODE						LICENSE NUMBER									LICENSE TYPE					CAT				

CON T

01 REPORT SOURCE 1 6 0 5 0 0 0 2 6 0 7 0 7 1 6 8 3 8 0 8 1 2 8 3 9
7 8 80 81 DOCKET NUMBER 48 49 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 During transient operation following control rod sequence exchange and scram
03 testing (SI 4.3.C), program P1 indicated R calculated (FRP/CMFLPD) less than R
04 setpoint (at 0952 and again at 1400). Tech. Spec. 2.1.A.1 requires R calculated
05 \geq R setpoint. OD-1 and OD-2 programs were performed to verify axial power
06 distribution. Efforts were hampered by inoperable D TIP machine. There was no
07 effect on public health or safety. The APRM 120% high neutron flux trip remained
08 operable during the event.

SYSTEM CODE		CAUSE CODE		A CAUSE SUBCODE		COMPONENT CODE						COMP. SUBCODE		VALVE SUBCODE							
0	9	Z	Z	11	X	12	Z	13	Z	Z	Z	Z	Z	Z	14	Z	15	Z	16		
1	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
17		EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE		REPORT TYPE		REVISION NO.											
LEAD REPORT NUMBER		8	3	0		3	9	/		0	3	L		0							
21		22	23		24		25		26		27		28		29		30				
ACTION TAKEN		FUTURE ACTION		EFFECT ON PLANT		SHUTDOWN METHOD		HOURS		ATTACHMENT SUBMITTED		NRPD-1 FORM SUB		PRIME COMP. SUPPLIER		COMPONENT MANUFACTURER					
X	18	Z	19	Z	20	Z	21	0	0	0	0	Y	23	N	24	Z	25	Z	9	9	9
33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS

1 0 Event cause was the following: Xenon transient due to rod sequence exchange and

1 1 soram testing; failure of D TIP machine indexer; and limited thermal margins.

1 2 Control rods restored R to 1.049 at 1047. At 1958 APRM gains were reduced to less

1 3 than R calculated to comply with T.S. 2.1.A.1, and will be consistent with gene-

1 4 ric LCO. T.S. changes have been submitted to clarify 6 hours to correct R.

FACILITY STATUS % POWER OTHER STATUS (30) METHOD OF DISCOVERY DISCOVERY DESCRIPTION (32)

1 6 E (28) 0 5 9 (29) NA A (31) Engineer Observation

ACTIVITY CONTENT
RELEASED OF RELEASE

1 6 Z 33 Z 34 NA

AMOUNT OF ACTIVITY (35)

LOCATION OF RELEASE (36)

NA

PERSONNEL EXPOSURES			TYPE		DESCRIPTION	
NUMBER						
1	7	0	0	0	37	Z
3	9	0	0	0	38	NA

PERSONNEL INJURIES
NUMBER DESCRIPTION (41)

1	8	0	0	0	(40)	NA
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LOSS OF OR DAMAGE TO FACILITY
TYPE DESCRIPTION (43)
1 9 Z (42) NA
S 8308190420 830812
PDR ADDCK 05000260
PDR

PUBLICITY
 ISSUED DESCRIPTION (45)
 2 0 N (44) NA
 NRC USE ONLY

NAME OF PREPARER Bill T. Williamson

PHONE (205) 729-0845

SI:60 21/80

Form BF 17
BF 15.2
2/12/82

LER SUPPLEMENTAL INFORMATION

BFRO-50-260 / 83039 Technical Specification Involved 2.1.A

Reported Under Technical Specification 6.7.2.b(2) * Date Due NRC 08/15/83

Event Narrative:

Unit 1 was in a refueling outage and unit 3 was operating at 99-percent power and steady state. Neither unit 1 nor unit 3 was affected by this event. Unit 2 was operating at 59-percent power under transient conditions due to a control rod sequence exchange and scram time testing (SI 4.3.C.) At 0952 and 1400 process computer program P1 indicated R calculated (FRP/CMFLPD) to be less than R setpoint. Technical specification 2.1.A.1 requires R calculated to be \geq R setpoint. At all times during this event the APRM flux scrams were operable.

The event was caused by a combination of several factors: (1) Unit 2 was undergoing a Xenon transient, having just completed a control rod sequence exchange from B2 to A1 rod pattern (this reduces the accuracy of P1 until OD-1 or OD-2 program runs are completed); (2) the failure of "D" TIP machine limited the ability to update the axial power distribution; and (3) unit 2 has had to operate closer to thermal limits this cycle due to the core loading.

An OD-1 program (full core LPRM calibration) and several OD-2 programs were performed to verify the axial power distribution data input to the P1 calculation. However, this effort was hampered by "D" TIP machine which became inoperable during performance of the OD-1. Process computers first determined R to be out of limits at 0952. At 1047, following control rod withdrawals to flatten the power distribution (which followed the OD-1), R calculated was determined to be 1.049 and in limits. R was determined to be out of limits again at 1400, and control rod moves at 1745 failed to bring R back in limits. This is indicative of failed LPRM's, which could not be updated due to the inoperable D TIP machine. At 1958, following several OD-2 program runs and control rod moves, the APRM gains were reduced to less than R calculated, complying with technical specification 2.1.A.1. Consistent with the generic LCO, R was restored to within limits in 6 hours. At 2340, the R setpoint was adjusted down and the APRM gains were reset to 1.000. Unit 2 was returned to the B2 rod pattern until the D tip was repaired.

It is possible the unit was never out of limits after 1047. However, since this could not be verified, the P1 indications were considered valid. Technical Specification Submittal 167, submitted in October 1981, was originated to clarify the requirements for restoring R factor to within limits. Should this technical specification revision be approved, as it has been for unit 1, 6 hours will be allowed to restore R factor to within limits.

* Previous Similar Events:

BFRO-50-259/80053, 80056, 80078
260/81005, 81006, 81007, 83033, 83035
296/79003, 81018

Retention: Period - Lifetime; Responsibility - Document Control Supervisor

*Revision: JRP

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
USNRC REGION II
ATLANTA, GEORGIA

1750 Chestnut Street Tower II

83 AUG 17 A8:07

August 12, 1983

Mr. James P. O'Reilly, Director
U.S. Nuclear Regulatory Commission
Suite 2900
101 Marietta Street, NW
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 2 - DOCKET
NO. 50-260 - FACILITY OPERATING LICENSE DPR-52 - REPORTABLE OCCURRENCE
REPORT BFRO-50-260/83039

The enclosed report provides details concerning a calculated R factor
that was less than the R setpoint value required by plant technical
specifications. This report is submitted in accordance with Browns
Ferry unit 2 Technical Specification 6.7.2.b(2).

Very truly yours,

TENNESSEE VALLEY AUTHORITY



f H. J. Green
Director of Nuclear Power

Enclosure

cc (Enclosure):

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

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Institute of Nuclear Power Operations
Suite 1500
1100 Circle 75 Parkway
Atlanta, Georgia 30339

NRC Inspector, Browns Ferry

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