

## LICENSEE EVENT REPORT

PREVIOUS REPORT DATE 12/8/83

UPDATE REPORT

CONTROL BLOCK:

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 A L B R F 1 2 0 0 - 0 0 0 0 0 - 0 0 3 4 1 1 1 1 4 5  
7 8 9 14 15 25 26 30 37 CAT 58

CON'T

0 1 REPORT SOURCE L 6 0 5 0 0 0 2 5 9 7 1 1 1 2 8 3 8 9  
7 8 60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 During refuel outage, while performing SI 4.10.A.1, the interlock that  
0 3 prevents bridge travel over the core with one rod withdrawn and fuel grapple  
0 4 extended failed to operate. This resulted in a loss of rod block function  
0 5 with the platform over the core (T.S. 3.10.A.1). There are no redundant  
0 6 systems. There was no effect on the health and safety of the public.  
0 7  
0 8

0 9 SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP. SUBCODE VALVE SUBCODE  
9 10 11 12 13 18 19 20  
F D 11 X 12 Z 13 I N S T R U 14 S 15 Z 16  
7 8 9 10 11 12 13 18 19 20  
17 LER-RO REPORT NUMBER 18 3 21 22 23 24 25 26 27 28 29 30 31 32  
8 3 0 6 6 0 3 X 1  
ACTION TAKEN FUTURE ACTION EFFECT ON PLANT SHUTDOWN METHOD HOURS ATTACHMENT SUBMITTED NRPD-4 FORM SUB. PRIME COMP. SUPPLIER COMPONENT MANUFACTURER  
18 19 20 21 22 23 24 25 26 27 28 29 30 31 32  
E G Z Z 0 0 0 0 Y Y N G 0 8 0  
33 34 35 36 37 38 39 40 41 42 43 44 45 46 47

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The lever arm on limit switch No. 1 (GE Part No. CR 115GW307) was found to be  
1 1 improperly adjusted. The cause is unknown. The lever arm was adjusted and SI  
1 2 4.10.A.1 was successfully completed. SI 4.10.A.1, Step 18, was revised to  
1 3 verify that limit switches 1 and 2 actuate for both CW and CCW rotation and to  
1 4 verify the limit switch's lever arms are installed and adjusted properly.

1 5 FACILITY STATUS H 28 0 0 0 29 30 NA 31 B 32 Surveillance Testing  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32  
1 6 ACTIVITY CONTENT RELEASED OF RELEASE AMOUNT OF ACTIVITY 35 NA 36 NA  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32  
1 7 PERSONNEL EXPOSURES NUMBER TYPE DESCRIPTION 29 NA 38 NA  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32  
1 8 PERSONNEL INJURIES NUMBER DESCRIPTION 41 NA 40 NA  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32  
1 9 LOSS OF OR DAMAGE TO FACILITY TYPE DESCRIPTION 43 NA 42 NA  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32  
2 0 PUBLICITY ISSUED DESCRIPTION 45 NA 44 NA  
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32

8403200213 840309  
PDR ADOCK 05090259  
S PDR

IE 22

NRC USE ONLY

NAME OF PREPARER E. T. Holder

PHONE: (205) 729-0885

LER SUPPLEMENTAL INFORMATION

BFRO-50- 259 / 83066 RI Technical Specification Involved 3.10.A.1

Reported Under Technical Specification 6.7.2.b.(2) \* Date Due NRC 4/1/84

Event Narrative:

Unit 2 was operating at 73 percent power and both units 1 and 3 were in refueling outages. While performing SI 4.10.A.1 on unit 1, the interlock limit switch No. 1 failed to stop the bridge from traversing over the core with one rod withdrawn, the fuel grapple extended, and the mode switch in refuel. This resulted in a loss of the rod block function with the platform over the core (T.S. 3.10.A.1). The SI was stopped and bridge moved from over the core. The lever arm on limit switch No. 1 (GE Part No. CR 115GW307) was found to be improperly adjusted. The cause is unknown as the interlock switches were checked for proper adjustment, tightness, and operationally tested in previous steps of SI 4.10.A.1. SI 4.10.A.1, Step 18, was revised to verify that limit switches 1 and 2 actuate for both CW and CCW rotation and to verify the limit switch's lever arms are installed and adjusted properly.

\* Previous Similar Events:

LER BFRO-50-259/7727  
LER BFRO-50-260/8054  
LER BFRO-50-296/8053  
LER BFRO-50-259/8301

Retention: Period - Lifetime; Responsibility - Document Control Supervisor

\*Revision: JRP

# PERMANENT INSTRUCTION CHANGE INFORMATION

Instruction Number BF SI 4.10.A.1  
 Unit No. 1, 2, 3  
 Title REFUELING INTERLOCKS

History of Revisions (For DOT Use Only)

Approval Date	Affected Pages
2/01/84	3, 3A
12/08/83	2, 2A, 3, 3A,
12/08/83	4, 4A, 5, 5A,
12/08/83	6, 11, 12, 13

Reason For Revision For reoccurrence control of LER 50-259/83066

Pages Affected 3, 3A

\*Is this change in response to an LER, IE Bulletin, NRC Inspection Report, OQAB audit, etc.? Yes X No        (If yes, specify document under reason for revision.)

Change in procedural detail of FSAR or other licensing document? Yes        No X; New instruction? Yes        No X  
 (If yes to either question, a USQD is required.)

\*Is this a work plan initiated change?        Yes (Work Plan No.       ) X No

Fire Protection System involved? Yes        No X (If yes, review and signature of fire protection engineer is required.)

\_\_\_\_\_  
 Fire Protection Engineer

Was this change made to meet a NRC commitment? Yes X No         
 (If yes, refer to BF 2.3 for proper identification of the change.)

Security System involved? Yes        No X (If yes, review and signature of Public Safety Services Supervisor is required.)

J W Hays / 1/20/84  
 Prepared By Date  
W J Perle / 1/20/84  
 Submitted By Date

Public Safety Services Supervisor  
J E Swindell 12/1/84  
 PORC Chairman Date  
S. T. Kim 12/2/84  
 Plant Superintendent Date

Retention: Period - Lifetime; Responsibility - Document Control Supervisor  
 (Note: If this is a new instruction or instruction deletion, document control will update the source document matrix.)

\*Revision

SI 4.10.A.1 Refueling Interlocks Functional Test

NOTE: Omit steps 10 through 17 unless the service platform is over the core and the jib crane is attached. Make appropriate entries in situations 2 and 3 of the data sheet.

NRC/C

NRC Rpt 10.  
259/80-40

Check that the mode switch is in "Refuel", that all control rods are fully inserted, (except as noted in Step 1) and that the refueling platform is over the pool.

11. Withdraw one control rod one notch.

12. Attempt to load jib crane hoist with a 313 lb. load (underwater weight.) Observe that hoist cannot be loaded.

13. Fill in situation 2 on data sheet.

NRC/C

NRC Rpt 14.  
259/80-40

14. Insert all control rods (except as noted in Step 1.)

15. Load jib crane hoist with the 313 lb load.

16. Attempt to withdraw one control rod one notch. Observe a rod block. Transfer mode switch to "Startup." Attempt to withdraw one control rod one notch. Observe rod block.

17. Fill in situation 3 on the data sheet and remove the load from the jib crane.

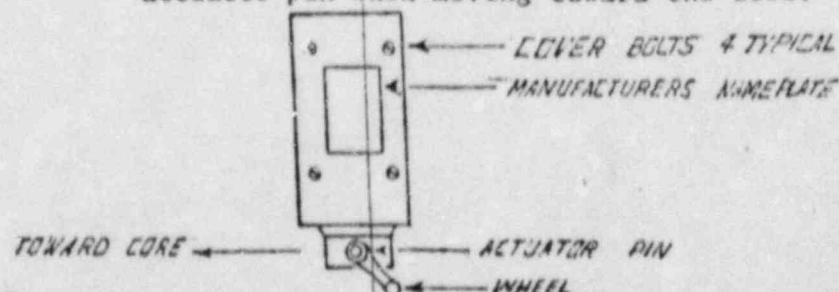
18. Check the following conditions:

NRC/C

NRC Rpt  
259/83066

CAUTION: Verify that the refueling platform interlock limit switches actuate for both clock-wise and counter clock-wise operation. (If not, then adjust actuator to do so.)

Verify that the wheel on the actuator arm trails the actuator pin when moving toward the core.



Verify that the actuator arm is adjusted so that the contacts are in (1) the normal position when the cam is not under the limit switch and (2) the non-normal position when the cam is under the switch.



FEB 1 1984

SI 4.10.A.1 Refueling Interlocks Functional Test (Continued)

NRC/C  
NRC Rpt  
260/8054

Prior to the performance of any further steps, verify that refuel floor maintenance electricians have checked the refueling platform interlock limit switches for condition and tightness of set screw on the actuating arm of both limit switches.

NRC/C  
NRC Rpt  
259/80-40

- a. Mode switch in "Startup"
  - b. Refueling platform over pool
  - c. All control rods fully inserted, (except as noted in Step 1) and one control rod selected.
19. Move refueling platform toward core. Observe platform motion is blocked as it approaches core.
  20. Fill in situation 4 on the data sheet.
  21. Attempt to withdraw one rod one notch. Observe rod block.
  22. Fill in situation 5 on the data sheet.
  23. Move refueling platform toward pool to clear refueling interlock.
  24. Withdraw two control rods one notch each.

NOTE: Select control rods in accordance with rod worth minimizer patterns.

\*Revision

TENNESSEE VALLEY AUTHORITY

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

March 9, 1984

34 MAR 16 AIO: 52

Mr. James P. O'Reilly, Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region II  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

TENNESSEE VALLEY AUTHORITY - BROWNS FERRY NUCLEAR PLANT UNIT 1 - DOCKET  
NO. 50-259 - FACILITY OPERATING LICENSE DPR-33 - REPORTABLE OCCURRENCE  
REPORT BFRO-50-259/E3C66 R1

Reference: H. J. Green's memorandum to you dated December 8, 1983

The enclosed report provides followup information concerning interlock that prevents bridge travel over the core with one rod withdrawn and fuel grapple extended failed to operate. This report is submitted in accordance with Browns Ferry Unit 1 Technical Specification 6.7.2.b.(2).

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*G. T. Jones*

G. T. Jones  
Power Plant Superintendent  
Browns Ferry Nuclear Plant

Enclosure

cc (Enclosure)  
U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington D. C. 20555

NRC Inspector, Browns Ferry Nuclear Plant

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