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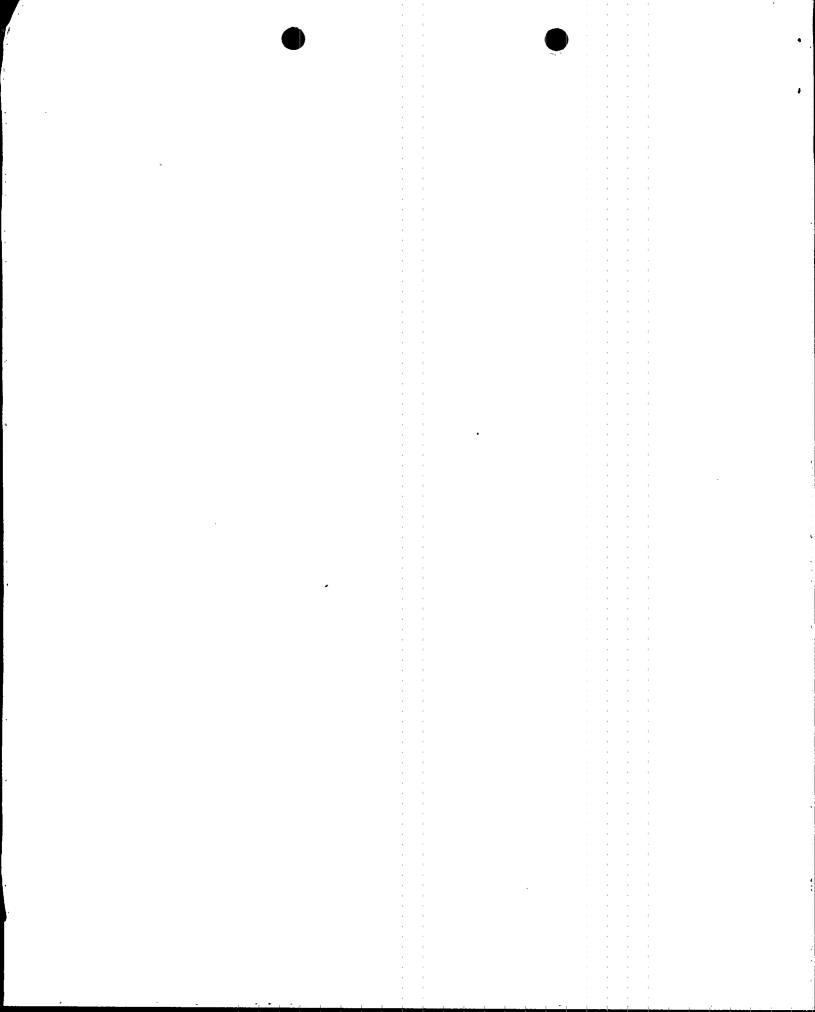
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NOTE TO ALL "RIDS" RECIPIENTS: PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM OWFN 5D-5(EXT. 415-2083) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

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Tennessee Valley Authority, Post Office Box 2000, Decatur, Alabama 35609-2000

R. D. (Rick) Machon Vice President, Browns Ferry Nuclear Plant

April 26, 1996

U.S. Nuclear Regulatory Commission ATTN: Document Control Desk Washington, D.C. 20555 10 CFR 50.73

Dear Sir:

BROWNS FERRY NUCLEAR PLANT (BFN) - UNITS 1, 2, AND 3 - DOCKET NOS. 50-259, 260, and 296 - FACILITY OPERATING LICENSE DPR-33, 52, AND 68 - LICENSEE EVENT REPORT 50-260/96003

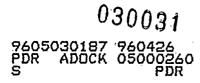
The enclosed report provides details concerning a condition prohibited by the plant's technical specifications. The event was caused by inadequate reviews of safety assessments for procedure changes made to facilitate refueling outage work.

This report is being submitted in accordance with 10 CFR 50.73(a)(2)(i)(B), as an operation or condition prohibited by the plant's technical specifications. If you have any questions concerning this report, please contact Pedro Salas at (205) 729-2636.

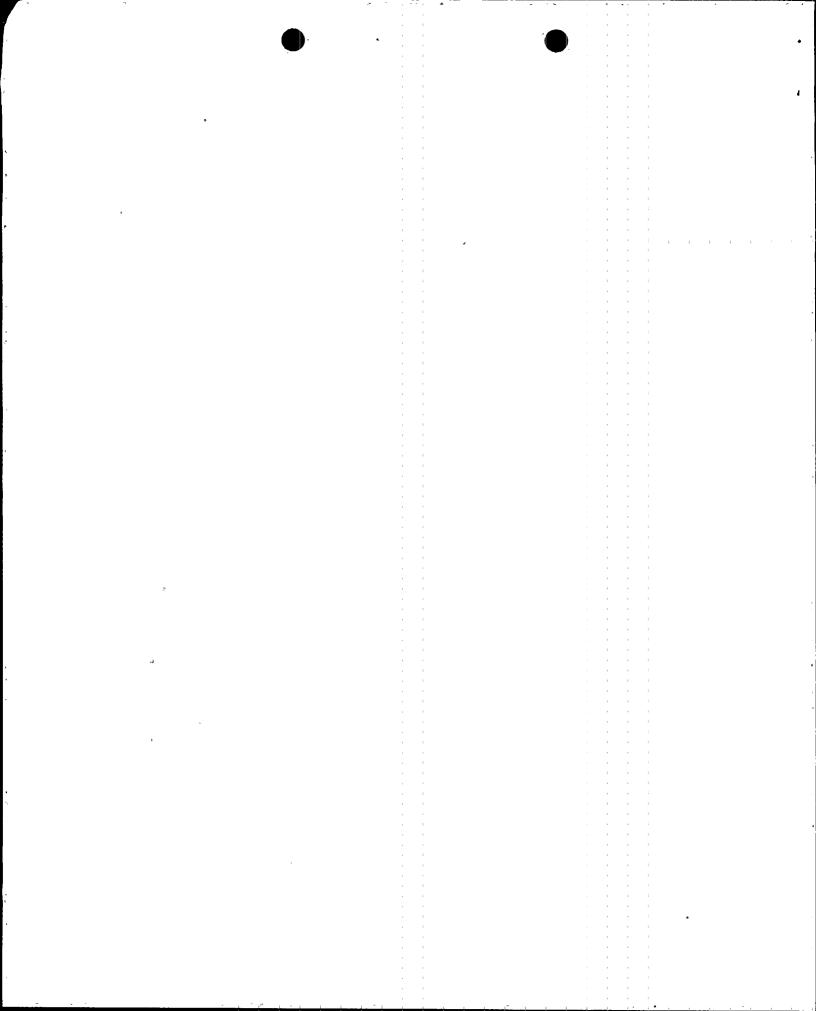
Sincerely,

R. D. Machon

cc: See page 2



JE22/1



U.S. Nuclear Regulatory Commission Page 2 April 26, 1996

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Enclosure cc (Enclosure): Mr. Mark S. Lesser, Branch Chief U.S. Nuclear Regulatory Commission Region II 101 Marietta Street, NW, Suite 2900 Atlanta, Georgia 30323

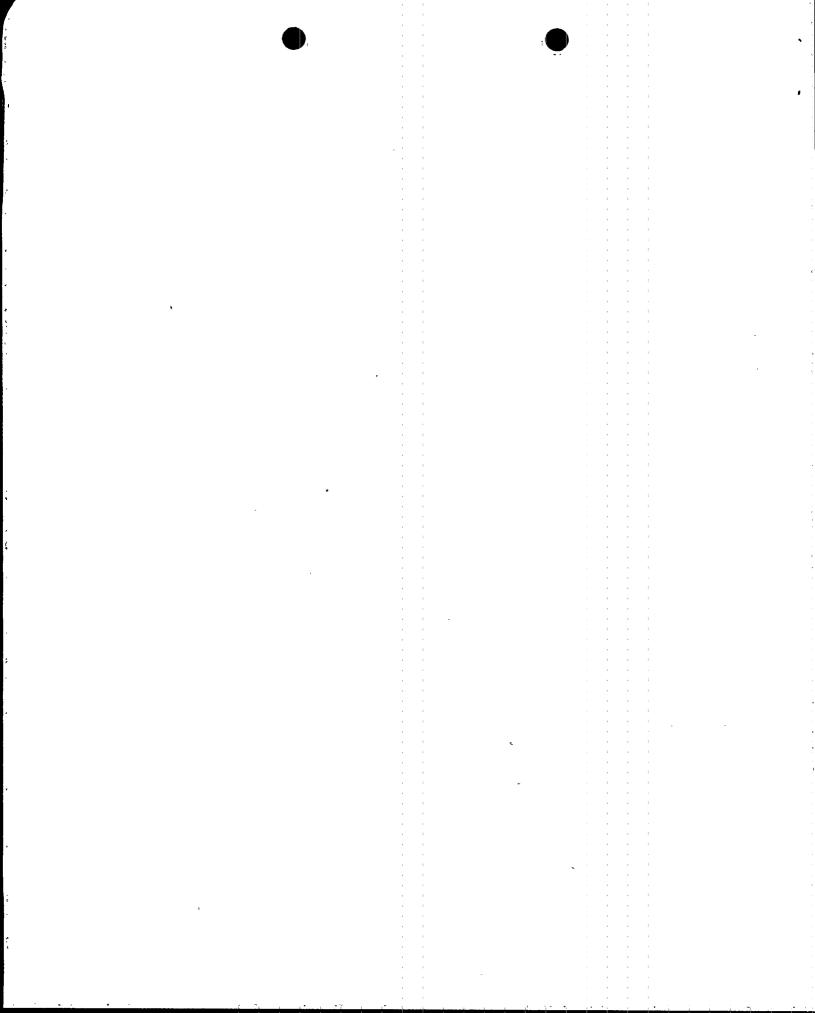
> NRC Resident Inspector Browns Ferry Nuclear Plant 10833 Shaw Road Athens, Alabama 35611

Mr. J. F. Williams, Project Manager U.S. Nuclear Regulatory Commission One White Flint, North 11555 Rockville Pike Rockville, Maryland 20852



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NRC FORM 366A (4-95)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	7	LER NUMBER	(6)	PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Browns Ferry Unit 2	05000260	96 -	- 003 -	00	2 of 5

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

I. PLANT CONDITIONS

At the time of this event, Unit 2 was in a refueling outage with fuel movement activities in progress. Unit 3 was operating at approximately 100 percent power. Unit 1 was shutdown and defueled.

II. DESCRIPTION OF EVENT

A. Event:

On March 23, 1996, at 0200 hours, BFN Unit 2 was manually scrammed to begin the Cycle 8 refueling outage. Following the shutdown all control rods were verified as fully inserted and the directional control valves for each rod were electrically disconnected. Subsequently, and in accordance with approved procedures, the position indication circuitry for the control rods [AA] was bypassed to facilitate refueling outage work. On March 26, 1996, at approximately 0230 hours, fuel movement activities commenced.

On March 28, 1996, at 1540 hours, fuel movement activities were stopped due to a concern with the operability of the all control rods fully inserted ("all rods in") refueling interlock [IEL].¹ TVA considered that fully inserting the control rods and disconnecting the directional control valves satisfied the intent of the technical specifications (TS) for having an operable "all rods in" refueling interlock. However, after fuel movement activities were stopped, TVA reevaluated this condition and determined that bypassing the control rod position indication inputs to the "all rods in" interlock was not in literal compliance with TS requirements.

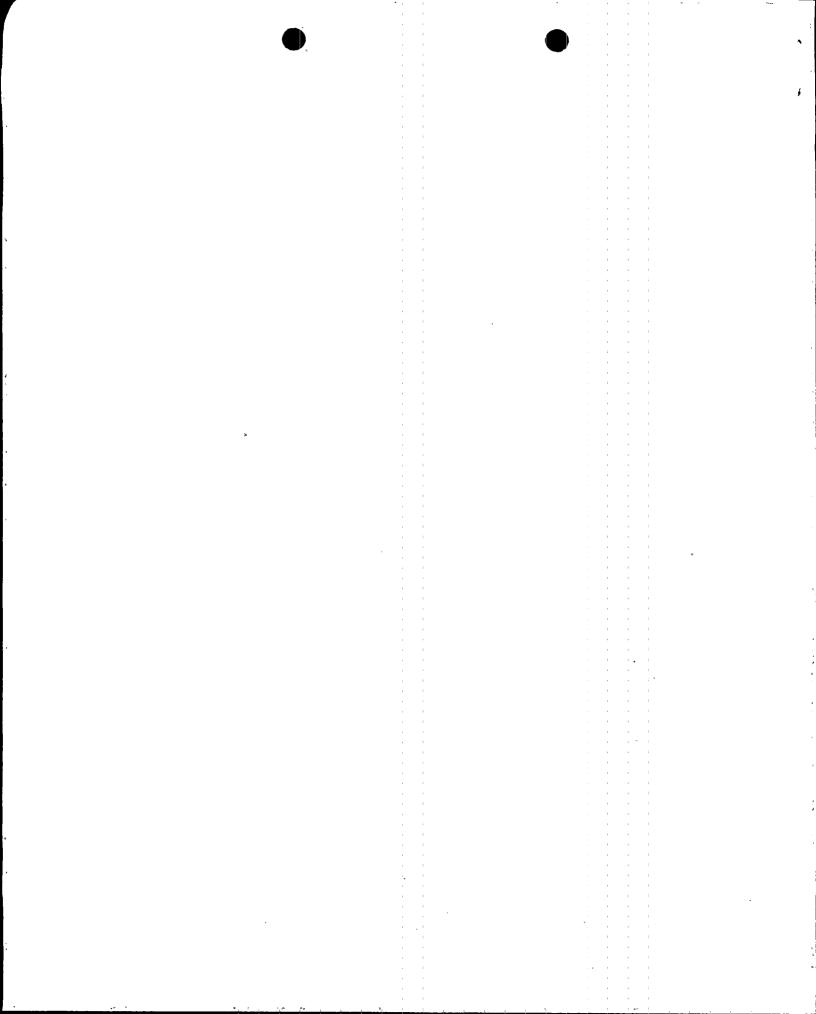
Accordingly, because fuel was moved with the "all rods in" refueling interlock technically inoperable, this event is reportable pursuant to 10 CFR 50.73(a)(2)(i)(B) as any operation or condition prohibited by the plant's TS.

B. Inoperable Structures, Components, or Systems that Contributed to the Event:

None.

¹TS 3.10.A.1 states, in part, that "[t]he required refueling equipment interlocks shall be OPERABLE during in-vessel fuel movement with equipment associated with the interlocks . . ." TS 4.10.A.1 states, in part, that "[p]rior to any fuel handling with the head off the vessel, the following required refueling equipment interlocks shall be functionally tested: a. All rods inserted . . ."

NRC FORM 366A (4-95)



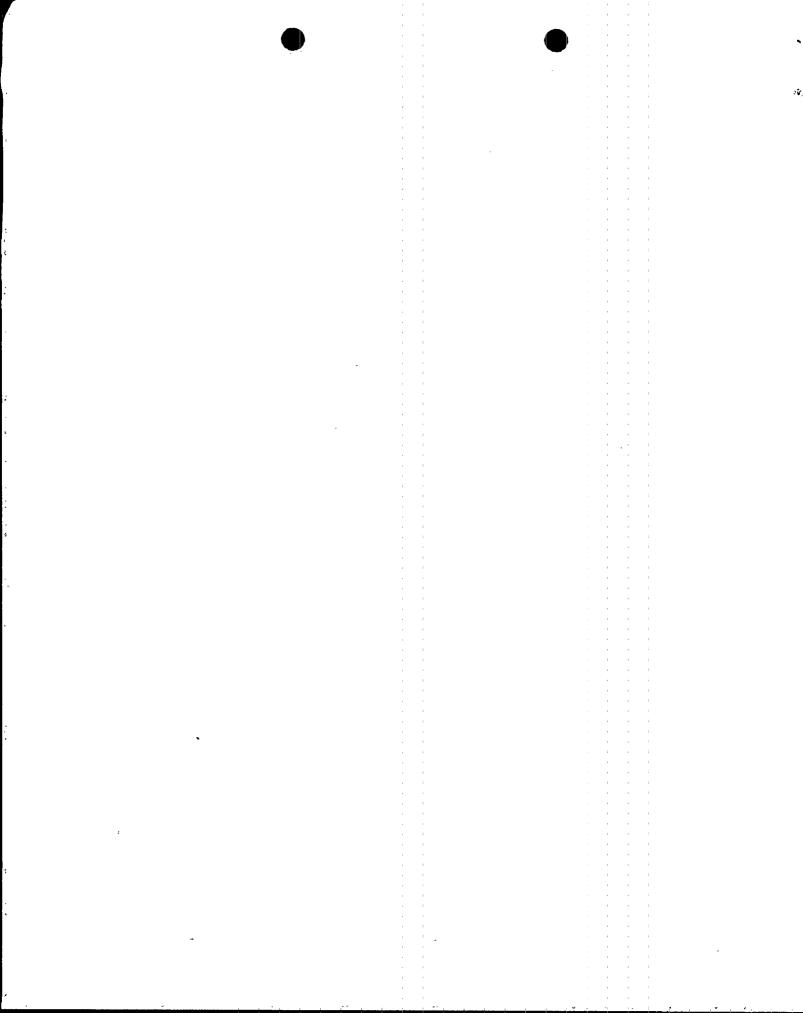
NRC FORM 366A (4-95)		U.S. NUCLEAR REGULATORY COMMISSIO								
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FACILITY NAME (1)	DOCKET	LER NUMBER (6)	PAGE (3)							
Browns Ferry Unit 2	05000260	YEAR SEQUENTIAL NUMBER REVISION NUMBER 96 003 00	3 of 5							
TEXT (If more space is required, use ad	ditional copies of NRC Form 366A) (17	<u>)</u>	*							
C. Dates	and approvinate Time									
	Dates and Approximate Times of Major Occurrences:									
- March	March 23, 1996, at 0200 CST Unit 2 was shutdown for the Cycle refueling outage.									
March	March 24, 1996 Control rod position indication circuitry inputting to the "all rods in" refueling interlock disabled.									
March	March 26, 1996, at 0230 CST Fuel movement activities commenced.									
March	28, 1996, at 1540 CS	T Fuel movement activities sto	pped.							
March	28, 1996, at 1850 CS	T Control rod position indicat circuitry inputting to the " in" refueling interlock reco	all rods							
March	March 28, 1996, at 2230 CST Fuel movement activities recommenced.									
D. <u>Other</u>	Other Systems or Secondary Functions Affected:									
None.	None.									
E. Metho	Method of Discovery:									
This the o	This event was discovered when NRC resident inspectors questioned the operability of the "all rods in" refueling interlock.									
F. Opera	Opèrator Actions:									
Opera movem	Operator actions taken during this event were as expected. Fuel movement activities were stopped when the concern was identified.									
G. Safet	Safety System Responses:									
None.	None.									
III. CAUSE OF T	HE EVENT									
A. Inmed	Immediate Cause:									
	The immediate cause of this event was movement of fuel with an inoperable refueling interlock.									

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NRC FORM 366A (4-95)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET		LER NUMBE	R (6)	PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Browns Ferry Unit 2	05000260	96 -	003	00	4 of 5

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

B. Root Cause:

This event was caused by a misinterpretation of TS requirements for declaring/maintaining the "all rods in" refueling interlock operable. Plant personnel believed that fully inserting all control rods and electrically disconnecting their directional control valves satisfied the intent of the TS for having an operable "all rods in" interlock. Additionally, the TS require that control rods whose position cannot be positively determined shall be considered inoperable. Inoperable control rods are inserted and electrically disarmed per TS. These conditions were verified as being met prior to bypassing the full-in position switches for the control rods. Plant personnel did not consider this interlock inoperable since all 185 control rods were fully inserted and prevented from being withdrawn from the core. As a result, plant personnel failed to recognize that disabling the control rod position inputs to the "all rods in" refueling interlock functionally disabled the interlock.

IV. ANALYSIS OF THE EVENT

The BFN Updated Final Safety Analysis Report (UFSAR) states that the refueling interlocks are designed to back up procedural core reactivity controls during refueling operations to prevent an inadvertent criticality. In this event, one of the interlocks was technically inoperable; however, the remaining required refueling interlocks were operable. Additionally, all control rods were fully inserted with their directional control valves electrically disconnected. These other interlocks and fully inserted control rods, combined with established procedural controls, prevented any inadvertent movement of control rods or inadvertent criticality. Therefore, this event did not affect the safety of the plant or the health and safety of the public.

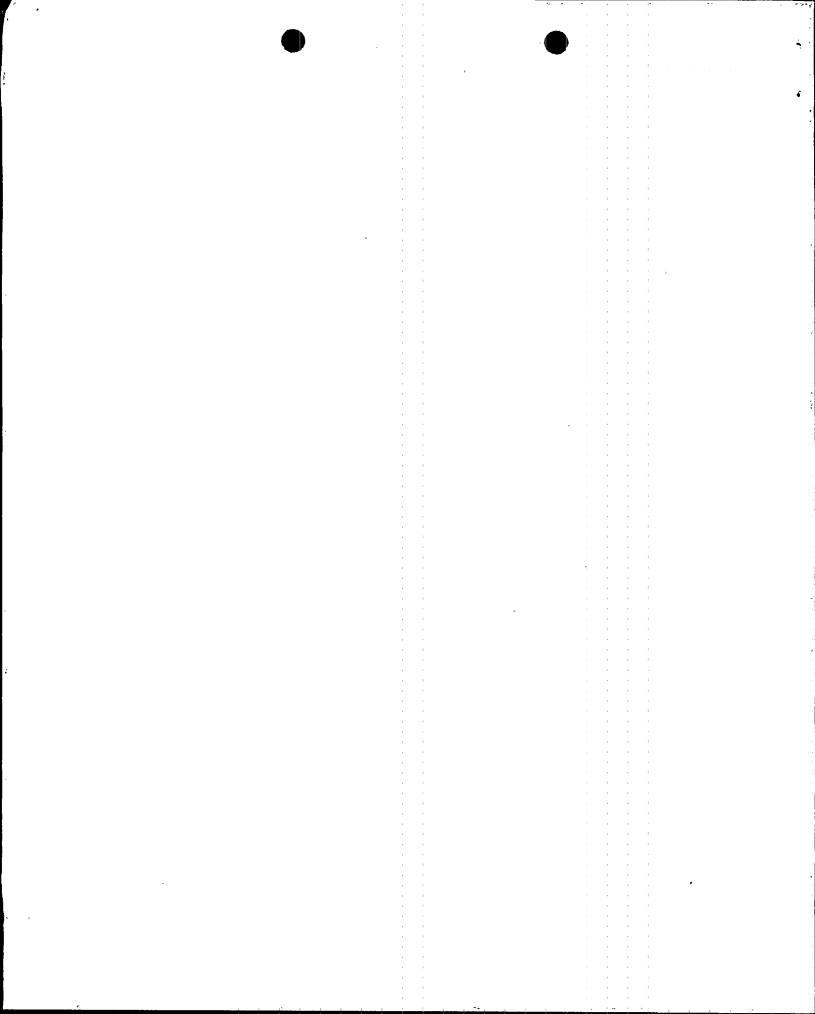
V. CORRECTIVE ACTIONS

A. Immediate Corrective Actions:

The immediate corrective action was to discontinue fuel movement activities and reconnect the control rod position inputs to the "all rods in" refueling interlock.

B. Corrective Actions to Prevent Recurrence:

Appropriate personnel corrective actions will be taken with the individuals involved in the preparation of the safety assessments for disabling the interlock and in the decision to move fuel with the control rod position inputs disabled. Additionally, the two procedures that were revised to allow the interlock to be



NRC FORM 366A **U.S. NUCLEAR REGULATORY COMMISSION** (4-95) * LICENSEE EVENT REPORT (LER) TEXT CONTINUATION FACILITY NAME (1) DOCKET LER NUMBER (6) PAGE (3) YEAR SEQUENTIAL REVISION NUMBER NUMBER 5 of 5 Browns Ferry Unit 2 05000260 96 003 00 TEXT (If more space is required, use additional copies of NRC Form 366A) (17) disabled will be revised to discontinue this practice.² In addition to the above actions, TVA has identified several programmatic enhancements as a result of investigation of this event. For example, TVA plans to develop a briefing paper that discusses this event, the lessons learned, management expectations for preparation of safety assessments and safety evaluations, and the need for literal compliance with TS requirements. TVA plans to distribute this briefing paper to 50.59 qualified individuals at BFN. TVA also plans to include discussion of this event, the lessons learned, and other relevant information in the licensed operator regualification training program. TVA expects to complete these actions by July 25, 1996.° VI. ADDITIONAL INFORMATION А. Failed Components: None. Previous LERs on Similar Events: в. None. VII. COMMITMENTS Appropriate personnel corrective actions will be taken with the individuals involved in the preparation of the safety assessments for disabling the interlock and in the decision to move fuel with the control rod position inputs disabled. TVA expects to complete this action by May 29, 1996. Energy Industry Identification System (EIIS) system and component codes are identified in the text with brackets (e.g., [XX]).

²This action (i.e., procedure revisions) is not a regulatory commitment.

³These additional actions are considered enhancements and are not commitments.

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