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Vice President, Browns Ferry Nuclear Plant

JAN 29 1993

U.S. Nuclear Regulatory Commission
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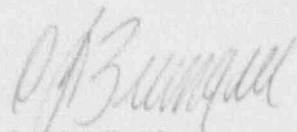
Dear Sir:

TVA - BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1, 2, AND 3 - LOCKET NOS. 50-259, 260, AND 296 - FACILITY OPERATING LICENSE DPR-33, 52, AND 68 - LICENSEE EVENT REPORT LER 50-259/92006

The enclosed report provides details concerning a violation of Control Room Emergency Ventilation system technical specifications resulting from a failure to perform required surveillance testing after maintenance. This condition was discovered on December 30, 1992.

This report is submitted in accordance with 10 CFR 50.73(a)(2)(i)(B).

Sincerely,


G. J. Zeringue

Enclosure
cc: See page 2

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U.S. Nuclear Regulatory Commission

JAN 29 1993

cc (Enclosure):

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Browns Ferry Nuclear Plant (BFN) Unit 1										DOCKET NUMBER (2) PAGE (3) 050002 5 91001 07	
TITLE (4) Violation of Control Room Emergency Ventilation System Technical Specification Due to Failure to Perform Surveillance Testing After Maintenance.											
EVENT DAY (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
			SEQUENTIAL REVISION MONTH DAY YEAR YEAR NUMBER NUMBER			MONTH DAY YEAR BFN Unit 2			DOCKET NUMBER(S) 050002060		
1 1 2 9 9 2 9 2			0 0 6 0 0 0 1 2 9 9 3			BFN Unit 3			050002096		
OPERATING MODE (9) THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following)(11)											
POWER			20.402(b)			20.405(c)			50.73(a)(2)(iv) 73.71(b)		
LEVEL			20.405(a)(1)(i)			50.36(c)(1)			50.73(a)(2)(v) 73.71(c)		
(10) 0 7 2			20.405(a)(1)(ii)			50.36(c)(2)			50.73(a)(2)(vii) OTHER (Specify in		
			20.405(a)(1)(iii)			X 50.73(a)(2)(i)(B)			50.73(a)(2)(viii)(A) Abstract below and in		
			20.405(a)(1)(iv)			50.73(a)(2)(ii)			50.73(a)(2)(viii)(B) Text, NRC Form 366A		
			20.405(a)(1)(v)			50.73(a)(2)(iii)			50.73(a)(2)(x)		
LICENSEE CONTACT FOR THIS LER (12)											
NAME M. R. Johnson, Compliance Licensing Engineer						TELEPHONE NUMBER 2 0 5 7 2 9 - 7 8 5 9					
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)											
CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO NPRDS		REPORTABLE TO NPRDS	
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)											

On December 30, 1992, Control Room Emergency Ventilation (CREV) system train B was declared inoperable upon determination that required surveillance testing was not performed after maintenance.

A new preventive maintenance activity was performed on the train B CREV unit in which the charcoal adsorber filter tray was removed and re-installed to gain access to instrumentation for calibration. Subsequently, CREV train B was returned to service on November 29, 1992, without performing a test required by technical specifications.

The root causes for failure to perform the required surveillance testing are, 1) issuing the work order without sufficient details and 2) insufficient procedural controls which allowed inappropriate removal of the charcoal adsorber tray.

Procedures will be revised to provide information on the configuration changes associated with this maintenance activity and prevent disassembly of major plant equipment during maintenance. TVA will review this event with appropriate personnel.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)										PAGE (3)			
Browns Ferry Unit 1				SEQUENTIAL				REVISION							
			YEAR	NUMBER				NUMBER							
		05000215191912	--	0	0	6	--	0	0	0	2	OF	07		

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

I. PLANT CONDITIONS

Unit 2 was in reactor power operation at approximately 72 percent power in a normal coastdown to a refueling outage. Units 1 and 3 were shut down and defueled.

II. DESCRIPTION OF EVENT

A. Event:

On December 30, 1992, at 1100 hours, upon determination that required surveillance testing had not been performed after maintenance activities, Control Room Emergency Ventilation (CREV) system [VI] train B was declared inoperable. The CREV system charcoal halogenated hydrocarbon test was not performed prior to returning CREV train B to operable status after maintenance.

On November 28, 1992, CREV train B was declared inoperable at 0350 hours for preventive maintenance. Craftsmen (utility, nonlicensed) disassembled the train B CREV unit [AHU] for calibration of the charcoal filter temperature indicator [TI] and to remove the charcoal heater temperature controller [TC]. The CREV unit access door was removed and the charcoal adsorber filter tray [ADS] was removed to gain access to the instruments. After successful calibration, the CREV unit was reassembled. A smoke test was performed to verify CREV unit integrity. A pressure drop test was performed for the combined HEPA filters [FLT] and charcoal adsorber bank and a system flow test was also performed. CREV train B was declared operable on November 29, 1992, at 2115 hours.

On December 26, 1992, after completion of similar maintenance on CREV train A, a system engineer's (utility, nonlicensed) review of the work performed identified the need for additional testing. Specifically, the removal of the charcoal tray also required performance of halogenated hydrocarbon testing for bypass leakage for the charcoal adsorbers in addition to the smoke, pressure drop and system flow tests. The tests were successfully performed and CREV train A was returned to service on December 27, 1992.

Questions were raised about the testing performed previously on CREV train B. Operations was notified of the discovery of the problem on December 30, 1992, and declared CREV train B inoperable at 1100 hours, entering the required seven-day limiting condition for operation (LCO). The necessary tests were performed without incident and CREV train B was returned to operable status at 1715 hours.

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Browns Ferry Unit 1			SEQUENTIAL	REVISION					
		YEAR	NUMBER	NUMBER					
	0150000215992	0060000307							

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

This event is reported in accordance with 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by technical specifications (TS).

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

None.

C. Dates and Approximate Times of Major Occurrences:

November 29, 1992, at 2115 CST
CREV train B declared operable without performing the halogenated hydrocarbon test

December 30, 1992, at 1100 CST
CREV train B declared inoperable due to inadequate surveillance testing

December 30, 1992, at 1715 CST
CREV train B declared operable after successful completion of proper surveillance testing

D. Other Systems or Secondary Functions Affected:

None.

E. Method of Discovery:

Upon review of the work order for the CREV train B, it was determined that the halogenated hydrocarbon testing had not been performed prior to declaring CREV train B operable. The system engineer then notified Operations.

F. Operator Actions:

None.

G. Safety System Responses:

None.

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Browns Ferry Unit 1			SEQUENTIAL	REVISION					
		YEAR	NUMBER	NUMBER					
	05000215191912	00600004	07						

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

III. CAUSE OF THE EVENT

A. Immediate Cause:

A halogenated hydrocarbon test was not performed prior to returning CREV train B to operable status after maintenance activities which included removal of the charcoal adsorber tray. TS require halogenated hydrocarbon testing after each complete or partial replacement of the charcoal adsorber.

B. Root Cause:

The root causes for failure to perform the required surveillance testing are (1) issuing the work order without sufficient details and (2) insufficient procedural controls which allowed inappropriate removal of the charcoal adsorber tray.

System Instrument Maintenance Index (SIMI) documents generally provide notes on any special requirements or configuration changes involved in calibration of a component. These documents are often consulted during the preparation of maintenance work orders. It was assumed that since no special notes or disassembly information was provided, no disassembly was required and no further research was required. Consequently, the work order did not have sufficient instructions for disassembly of the CREV unit.

The work order specified use of a troubleshooting and configuration control of instrumentation procedure for control of system configuration while removing the instruments. This procedure requires documentation of configuration changes to equipment during maintenance. As with the work order planners, the craftsmen were accustomed to referring to the SIMI for special requirements or configuration changes involved in the activity. Since the applicable SIMI for the components contained no specific information, it was assumed that no configuration changes were involved. The charcoal adsorber tray was removed to gain access to the instruments without documenting the activity as a configuration change as required by the procedure.

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Browns Ferry Unit 1		YEAR	NUMBER
		NUMBER	

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

C. Contributing Factors:

Calibration of these instruments is a new preventive maintenance activity, and at the time of the activity, no information on disassembly or special requirements was provided in the SIMI. No detailed maintenance procedure existed for disassembly of the CREV units. These factors contributed to both root causes.

IV. ANALYSIS OF THE EVENT

On December 30, 1992, CREV train B was declared inoperable and placed in a seven-day LCO due to failure to perform the halogenated hydrocarbon test after removal and re-installation of the charcoal adsorber tray. The preventive maintenance activity was concluded on November 29, 1992. The halogenated hydrocarbon test was satisfactorily completed on December 30, 1992, without any adjustment to the charcoal tray. Therefore, the charcoal adsorber tray re-installation was satisfactorily performed during the preventive maintenance. During the period from November 29, 1992 to December 30, 1992, when the condition existed, CREV train B would have functioned as required. Therefore, this event had no impact on nuclear safety, and did not compromise the safety of plant personnel and the public.

V. CORRECTIVE ACTIONS

A. Immediate Corrective Actions:

1. Upon being informed of the condition, operators declared CREV train B inoperable and a seven-day LCO was entered.
2. The required surveillance testing was initiated. The halogenated hydrocarbon test was satisfactorily completed. CREV train B operability was re-established.

B. Corrective Actions to Prevent Recurrence:

1. The applicable SIMI for the temperature controllers will be revised to include information on the configuration changes associated with calibrating the instruments.
2. Procedures for performing both troubleshooting and configuration control of instrumentation and troubleshooting configuration control of electrical equipment will be revised, as necessary, so that intrusive disassembly of major plant equipment is no longer allowed without proper administrative control.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)	PAGE (3)
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		YEAR	NUMBER
TEXT (If more space is required, use additional NRC Form 366A's) (17)			

3. The preventive maintenance task files were revised to include specific steps for disassembly of each of the CREV units.
4. Training will be conducted with maintenance personnel concerning the circumstances surrounding this event.
5. TVA will evaluate preventive maintenance tasks to determine if the Containment Purge [BB] or Standby Gas Treatment [BH] systems have similar calibration activities that require disassembly of major components. This evaluation will include recommendations for appropriate recurrence control.

VI. ADDITIONAL INFORMATION

A. Failed Components:

None.

B. Previous LERs on Similar Events:

Work order deficiencies resulted in two events involving violations of TS (reference LER 50-296/89002 Rev. 1 and LER 50-259/91008) and two events involving engineered safety features actuations (reference LER 50-259/90015 and LER-260/88010). These previous events resulted from a failure to properly identify the impact of work on TS equipment. The previous events did not involve insufficient work order detail or work performed outside the planned work order scope. In this event, however, the equipment impact was identified and the CREV unit was properly removed from service. Insufficient work order detail and insufficient procedural guidance led to the failure to perform the post maintenance testing.

VII. COMMITMENTS

1. The applicable SIMI for the temperature controllers will be revised to include information on the configuration changes associated with calibrating the instruments. TVA expects this activity to be completed by March 5, 1993.
2. Procedures for performing both troubleshooting and configuration control of instrumentation and troubleshooting configuration control of electrical equipment will be revised, as necessary, so that intrusive disassembly of major plant equipment is no longer allowed without proper administrative control. TVA expects the procedure revisions to be completed by March 5, 1993.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

3. Training will be conducted with maintenance personnel concerning the circumstances surrounding this event. TVA expects the training to be completed by April 15, 1993.
4. TVA will evaluate preventive maintenance tasks to determine if the Containment Purge or Standby Gas Treatment systems have similar calibration activities that require disassembly of major components. This evaluation shall include recommendations for appropriate recurrence control. TVA expects the evaluation to be completed by April 5, 1993.

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].