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

June 1, 2001

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

10 CFR 50.73

Gentlemen:

In the Matter of)
Tennessee Valley Authority)

Docket No. 50-260

BROWNS FERRY NUCLEAR PLANT (BFN) - UNIT 2 - DOCKET NO. 50-260 - FACILITY OPERATING LICENSE DPR-52 - LICENSEE EVENT REPORT (LER) 50-260/200101

The enclosed report provides details concerning a reactor scram during a refueling outage on Unit 2. All control rods were initially "full in" and no control rod movement occurred. All plant safety systems operated as designed in response to this event.

This report is submitted in accordance with 10 CFR 50.73 (a)(2)(iv) as an event that resulted in a automatic actuation of an engineered safety feature, including the reactor protection system. In accordance with NRC RIS 2001-05, only one paper copy of this document is being sent to the NRC Document Control Desk. There are no commitments contained in this letter.

Sincerely,

for Karl W. Singer

Karl W. Singer
Site Vice President

cc: See page 2

IE22

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NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Browns Ferry Nuclear Plant Unit 2	05000260	1 of 4

TITLE (4)

Reactor Scram while shutdown due to high scram discharge instrument volume caused by scram outlet valve leakby.

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER				FACILITY NAME	DOCKET NUMBER
									NA	
04	03	01	2001	001	000	06	01	01	NA	DOCKET NUMBER

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
POWER LEVEL (10)	0		20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)(B)		50.73(a)(2)(viii)
			20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
			20.2203(a)(2)(ii)		20.2203(a)(4)	X	50.73(a)(2)(iv)		OTHER
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Ted G Achorn, BFN Licensing Supervisor	(256) 729-3612

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
X	AA	SHV	G080	Y						

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On April 3, 2001 2351 CDT, during a refueling outage, Unit 2 received a reactor scram signal due to a west scram discharge volume high water level signal. All expected alarms and actuations were received. All control rods [AA] were initially in the "full in" position, therefore, no control rod movement occurred. The applicable immediate and subsequent actions specified in Abnormal Operating Instruction 2-AOI-100-1 were carried out.

The cause of the scram was the Scram Discharge Volume (SDV) exceeding the high level setpoint due to scram outlet valve leakby and the SDV vent and drain valves being shut to support plant maintenance. The leaking scram outlet valves have been repaired and the SDV vent and drain valves returned to service.

TVA is reporting this event in accordance with 10 CFR 50.73 (a)(2)(iv) as an event that resulted in a automatic actuation of an engineered safety feature, including the reactor protection system.

I. PLANT CONDITIONS

Prior to the event , Unit 2 was in a refueling outage. Unit 3 was at 100 percent power. Unit 1 was shutdown and defueled.

II. DESCRIPTION OF EVENT

A. Event:

On April 3, 2001, during a Unit 2 refueling outage, the water level in the scram discharge volume (SDV) [AA] instrument volume started to rise. This level increase occurred following the removal of a clearance for maintenance and was due to leakage through eight scram outlet valves. The applicable annunciators alarmed and at 2351 an automatic reactor scram occurred due to high SDV level. All expected alarms and actuations were received. All control rods were already fully inserted, therefore, no control rod motion occurred.

The immediate and subsequent actions specified in Abnormal Operating Instruction 2-AOI-100-1 were carried out without exception.

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

None.

C. Dates and Approximate Times of Major Occurrences:

April 3, 2001, at 0743 hours CDT Initiated clearance that shut SDV vent and drain valves.

April 3, 2001, at 2338 hours CDT Received west SDV level rod block.

April 3, 2001, at 2351 hours CDT Received reactor scram due to west SDV high water level.

April 4, 2001, at 0006 hours CDT Placed SDV high level bypass switch in bypass and reset the scram per Abnormal Operating Instruction AOI-100-1.

April 4, 2001, at 0622 hours CDT A eight-hour non-emergency report was made to the NRC pursuit of 10 CFR 50.72 (b) (3) (iv) (B).

D. Other Systems or Secondary Functions Affected:

None.

E. Method of Discovery:

Operators received alarms indicating west SDV was nearing high level.

F. Operator Actions:

Operations personnel responded to the event in accordance with applicable plant procedures.

G. Safety System Response:

All required safety systems operated as designed.

III. CAUSE OF THE EVENT

A. Immediate Cause:

West scram discharge volume high water level resulted in receipt of a reactor scram signal.

B. Root Cause:

The cause of the event was leakage through eight scram outlet valves while maintenance isolation prevented opening of the SDV vent and drain valves to allow draining.

C. Contributing Factors:

An equipment clearance requiring the SDV vent and drain valves to be closed precluded draining of the SDV.

IV. ANALYSIS OF THE EVENT

On April 3, 2001, at 0743 hours, a clearance was issued to allow packing replacement of the vent valves for both of Unit 2 SDVs. This maintenance required isolating the control air to both SDV vent valves and all scram outlet valves. In addition, a clearance was issued to repair an air line leak downstream of the SDV vent and drain valves. This clearance isolated control air to the vent and drain valves for both Unit 2 SDVs. The vent and drain valves fail closed on loss of control air. This condition precluded draining of any water that may enter the SDV.

On April 3, 2001, at 1831 hours, maintenance was completed on the SDV vent valves. The return to normal alignment called for reopening the 185 scram outlet valves. Leaking scram outlet valves introduced water into the SDV. Since the SDV drain and vent valves remained closed to support other maintenance, there was no method to drain the SDV allowing level to rise to the SDV high level scram setpoint.

The cause of this event was leaking scram outlet valves allowing the SDV to fill to the high level scram setpoint. Contributing to this event was an equipment clearance leaving the SDV vent and drain valves closed precluding draining of the SDV.

V. ASSESSMENT OF SAFETY CONSEQUENCES

The evaluation of plant system and component responses to the event concluded that responses were as designed and within the time-frames expected. The normal shutdown decay heat removal path was not affected during this event.

There were no equipment failures during or following the scram. In addition, there was no radioactive material released and no actual or potential safety consequences as a result of this event. Therefore, this event did not adversely affect the safety of plant personnel or the public.

VI. CORRECTIVE ACTIONS

A. Immediate Corrective Actions:

Operators carried out the requirements specified in the appropriate instructions.

B. Corrective Action to Prevent Recurrence:

Maintenance has repaired the leaking scram outlet valves.

Operations will coordinate with outage scheduling to ensure that future activities that require isolation of the SDV vent and drain valves will occur when the scram outlet valves remain shut.[1]

VII. ADDITIONAL INFORMATION

A. Failed Components:

Scam outlet valves. General Electric Part Number 729E244P001.

B. Previous Similar Events:

None.

C. Additional Information:

None

D. Safety System Functional Failure:

This event did not result in a safety system functional failure in accordance with NEI 99-02.

VIII. COMMITMENTS

None.

[1]TVA does not consider this corrective action a regulatory commitment. The completion of this item will be tracked in TVA's Corrective Action Program.