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SUBJECT: Responds to NRC 971124 ltr re violations noted in insp repts
50-259/9710, 50-260/97-10 & 50-296/9710. Corrective actions:
involved SROs were counseled.

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Christopher M. (Chris) Crane
Vice President, Browns Ferry Nuclear Plant

December 23, 1997

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

10 CFR 2.201

Gentleman:

In the Matter of)	Docket Nos.	50-259
Tennessee Valley Authority)		50-260
			50-296

BROWNS FERRY NUCLEAR PLANT (BFN) - NRC INSPECTION REPORT
50-259, 50-260, 50-296/97-10 - REPLY TO NOTICE OF VIOLATION
(NOV)

This letter provides TVA's reply to the subject NOV transmitted by letter from Jon R. Johnson, NRC, to O. J. Zeringue, TVA, dated November 24, 1997. In the letter, a violation of NRC requirements was identified. The violation involved the failure to complete a technical specification action for an inoperable containment isolation valve. TVA admits this violation.

The enclosure contains TVA's reply to the NOV. No commitments are contained within this reply. If you have any questions, please contact me at (205) 729-3675.

Sincerely,


C. M. Crane

9712310071 971223
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Enclosure

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ENCLOSURE

TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT (BFN)
UNITS 1, 2, AND 3

INSPECTION REPORT NUMBER 50-259, 50-260, 50-296/97-10
REPLY TO NOTICE OF VIOLATION (NOV)

RESTATEMENT OF VIOLATION A

"During an NRC inspection conducted on September 14 - October 25, 1997, one violation of NRC requirements was identified. In accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions," NUREG-1600, the violations is listed below:

Browns Ferry Technical Specification (TS) Limiting Condition for Operation (LCO) 3.7.D states that when primary containment integrity is required, all primary containment isolated valves shall be operable and in the event any primary containment isolation valve becomes inoperable, reactor operation may continue provided at least one valve, in each line having an inoperable valve is operable and within 4 hours either: a. The inoperable valve is restored to operable status. or b. Each affected line is isolated by use of at least one deactivated containment isolation valve secured in the isolated position.

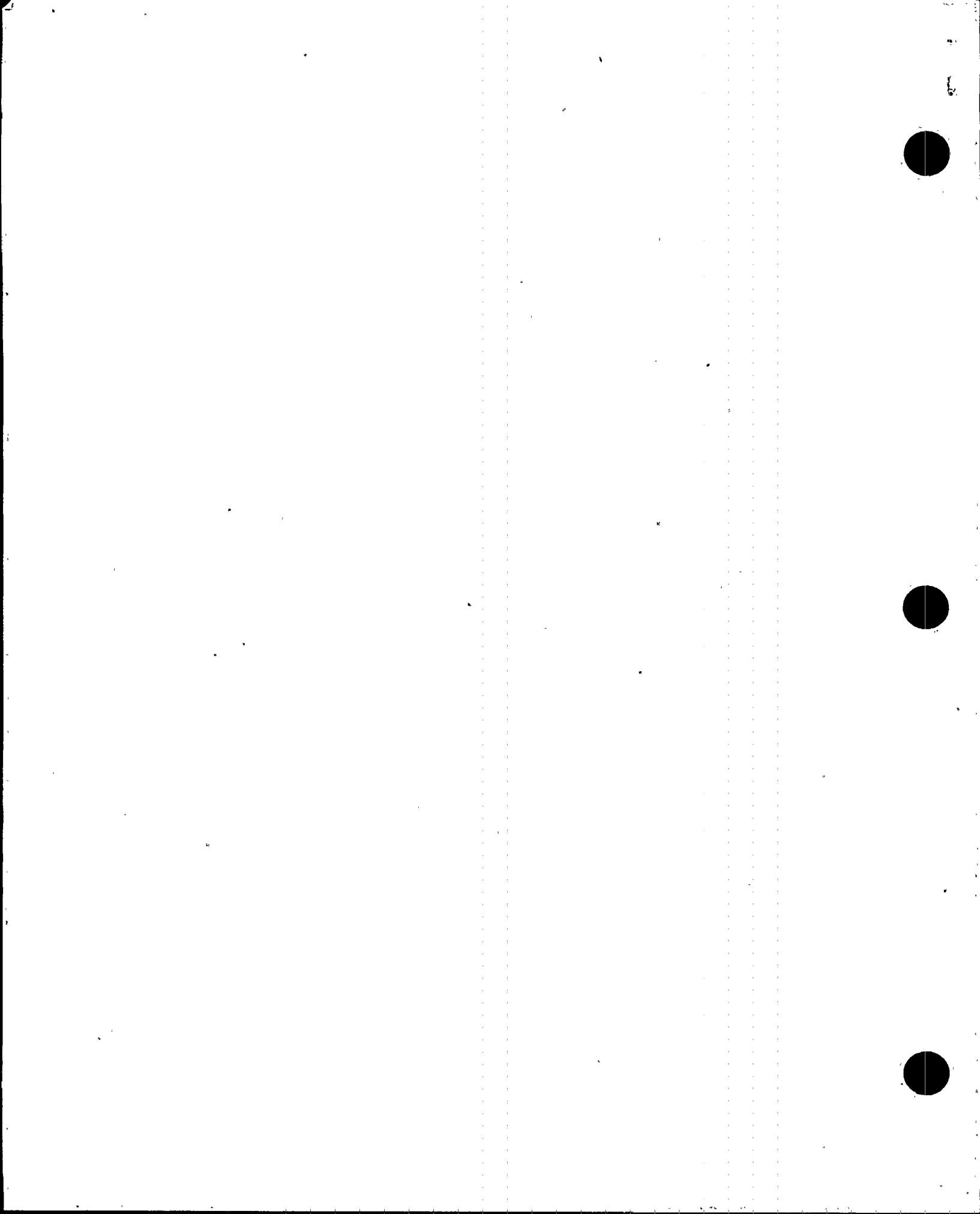
Contrary to the above, between August 24 and 28, 1997, while in a condition requiring primary containment integrity, inoperable containment isolation valve 3-FCV-64-34 was not restored to an operable status, nor was the affected line isolated within 4 hours. The valve failed to close during testing at 7:45 p.m., [CDT] on August 24, 1997. The valve was repaired on August 28, 1997. The affected line remained unisolated during this period.

This is a Severity Level IV violation (Supplement I)".

TVA's REPLY TO THE VIOLATION

BACKGROUND

On July 26, 1997, a Primary Containment Isolation Flow Control Valve (PCIFCV) failed to close on its first attempt. After



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troubleshooting, the handswitch was cycled several times, and the valve eventually closed. The valve was cycled on a four-hour period. Based on troubleshooting and diagnosis of the problem, it was concluded that a control relay failed in the logic circuitry of the valve. It was determined that this failed relay only affected the manual operation of the PCIFCV and the automatic primary containment isolation function was not affected. Consequently, the valve was not declared inoperable.

On July 29, 1997, a Technical Operability Evaluation (TOE) was performed to formally document the operability determination. The TOE confirmed that automatic primary containment isolation function was not affected by a malfunction of the relay. The TOE recommended that the relay be replaced. On August 19, 1997, the control relay was replaced.

On August 24, 1997, TVA performed Surveillance Instruction-4.7.G.a-1 for testing the containment atmosphere dilution system valve operability. Again, the PCIFCV failed to close on the first attempt. The handswitch and valve were cycled two more times, and the PCIFCV closed each time. In a telephone conversation, an Engineering representative reassured the Shift Manager that the TOE determination (no automatic primary containment isolation system operability concern) still applied. As a result of this conversation, the valve was not declared inoperable, and the LCO was not entered.

On August 28, 1997, the PCIFCV was cycled and declared inoperable due to a slow closure time. LCO 3.7.D.2 was entered to repair or isolate the affected line. A solenoid valve in the logic circuitry was subsequently found sticking. The solenoid valve was replaced, the PCIFCV was declared operable, and the LCO was exited. However, a subsequent review of the series of PCIFCV failures revealed the need to enter LCO 3.7.D.2 on August 24, 1997.

1. Reason For Violation

The root cause of this event was that the Operations crew lacked a questioning attitude. SROs developed a mindset regarding the failure mechanism and did not fully assess new information for the effect on technical specifications. Consequently, the valve was not considered inoperable until the valve had a slow closure time on August 28, 1997. At that time, the PCIFCV was declared inoperable, and LCO 3.7.D. was entered.

There were four contributing factors to this event: (1) a mind set was established that the valve's automatic primary containment isolation function was not affected based on an



evaluation and consultation with Engineering, (2) inadequate troubleshooting and diagnosis of the problem which provided an incorrect assumption on which the evaluation was based, (3) a presumption that successful four-hour cycling of the valve ensured operability, and (4) management did not adequately monitor, assess, and intervene in a timely manner.

2. Corrective Steps Taken And Results Achieved

The involved SROs were counseled. This action was completed on September 15, 1997.

3. Corrective Steps That [Have Been Or] Will Be Taken To Prevent Recurrence

This event was incorporated in a training module (OPL73S202) as a simulator event. The simulator scenario challenged operations crew members for expected actions.

A discussion of this scenario included: (1) the identification of the valve's indicator locations, and (2) awareness of the crew to understand that if a valve failed to close automatically, the valve is inoperable until it is proven to close automatically. In other words, the ability to make a valve close manually and to subsequently cycle it successfully is not enough to determine the valve is operable.

Operations Management observed and participated in the discussion of the simulator scenarios and provided the background of the plant event. They also expressed management's expectation for any future similar events.

System Engineers were briefed on the details of the event.

4. Date When Full Compliance Will Be Achieved

TVA is in full compliance.

