



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
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April 24, 2000

Tennessee Valley Authority  
ATTN: Mr. J. A. Scalice  
Chief Nuclear Officer and  
Executive Vice President  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: NRC INTEGRATED INSPECTION REPORT NO. 50-259/2000-02,  
50-260/2000-02, AND 50-296/2000-02

Dear Mr. Scalice:

This refers to the inspection conducted on February 20, through April 1, 2000, at the Browns Ferry Nuclear facility. The enclosed report presents the results of this inspection.

During the inspection period, your conduct of activities at the Browns Ferry Nuclear facility was generally characterized by safety-conscious operations, sound engineering and maintenance practices, and appropriate radiation controls and security measures.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be placed in the NRC Public Document Room. Should you have any questions concerning this letter, please contact us.

Sincerely,

*/RA/*

Paul E. Fredrickson, Chief  
Reactor Projects Branch 6  
Division of Reactor Projects

Docket Nos. 50-259, 50-260, 50-296  
License Nos. DPR-33, DPR-52, DPR-68

Enclosure: NRC Inspection Report

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-259, 50-260, 50-296  
License Nos: DPR-33, DPR-52, DPR-68

Report Nos: 50-259/2000-02, 50-260/2000-02, 50-296/2000-02

Licensee: Tennessee Valley Authority (TVA)

Facility: Browns Ferry Nuclear Plant, Units 1, 2, & 3

Location: Corner of Shaw and Browns Ferry Roads  
Athens, AL 35611

Dates: February 20 through April 1, 2000

Inspectors: W. Smith, Senior Resident Inspector  
J. Starefos, Resident Inspector  
E. DiPaolo, Resident Inspector

Approved by: P. E. Fredrickson, Chief  
Reactor Projects Branch 6  
Division of Reactor Projects

Enclosure

## EXECUTIVE SUMMARY

Browns Ferry Nuclear Plant, Units 1, 2, and 3  
NRC Inspection Report 50-259/2000-02, 50-260/2000-02, 50-296/2000-02

This integrated inspection included aspects of licensee operations, maintenance, engineering, and plant support. The report covers a 6-week period of resident inspection.

### Operations

- Plant operators demonstrated a lack of understanding of the Technical Specification Surveillance-required equipment airlock door configuration by leaving the inner door open during periods when there was no entry or exit occurring. During the identified occurrences, however, the secondary containment allowed outage time was not exceeded (Section O1.1).

### Maintenance

- Work activities observed during the inspection period were performed in a professional manner (Section M1.1).
- Surveillance testing observed was performed satisfactorily during this inspection period (Section M1.2).

### Plant Support

- Plant Security continued to be well-implemented (Section S1.1).

## Report Details

### Summary of Plant Status

Unit 1 has been shut down since March 19, 1985, and remained in a long-term lay-up condition with the reactor defueled.

Unit 2 operated at or near full power with the exception of scheduled brief reductions in power to adjust control rods and perform routine testing. In addition, on February 20, 2000, power was reduced to 85% for approximately 5 hours when the operators initiated a manual runback in response to a trip of reactor feedwater pump 2C.

Unit 3 operated at or near full power with the exception of scheduled brief reductions in power to adjust control rods and perform routine testing.

## I. Operations

### **O1 Conduct of Operations**

#### **O1.1 Maintaining Secondary Containment**

##### **a. Inspection Scope (71707)**

The inspectors reviewed the licensee's implementation of Technical Specification (TS) Surveillance Requirement (SR) 3.6.4.1.2 and the control of the secondary containment main equipment access door.

##### **b. Observations and Findings**

During the period, the inspectors questioned the licensee's control of the main equipment access door which was addressed by TS SR 3.6.4.1.2. The SR requires the licensee to verify that each secondary containment access door is closed, except when the access opening is being used for entry and exit, then at least one door shall be closed. The TS bases section describes that maintaining secondary containment operability requires verifying that each door in the access opening is closed, except when the access opening is being used for normal transient entry and exit (then at least one door must remain closed). For extended periods of time, the licensee left the inside main equipment airlock door open for purposes other than those described in the TS surveillance requirement and TS bases and during which the licensee should have recognized that they were in a limiting condition for operation (LCO) due to the secondary containment being inoperable. However, no time in excess of the LCO-prescribed outage time was identified when one door was open and TS-allowed activities were not in progress.

The licensee also planned maintenance to be performed on a degraded seal on the inner door which was not allowed by the current wording of the TS without declaring secondary containment inoperable. The licensee subsequently submitted a TS change to allow the maintenance. (Note: The inside door repair was completed after the inspection period by declaring the secondary containment inoperable and completing the work within the LCO-allowed outage time.)

c. Conclusion

Plant operators demonstrated a lack of understanding of the Technical Specification Surveillance-required equipment airlock door configuration by leaving the inner door open during periods when there was no entry or exit occurring. During the identified occurrences, however, the secondary containment allowed outage time was not exceeded.

## II. Maintenance

### **M1 Conduct of Maintenance**

#### M1.1 Maintenance Observations

a. Inspection Scope (62707, 71750)

The inspectors observed portions of the following maintenance activities:

- Work Order (WO) 99-011544-000, MOVATS testing of CS A/C miniflow Valve 3-MVOP-75-009 before and after maintenance (Unit 3)
- WO 99-008946-000, Eddy Current Analysis (Data Collection) of 3C diesel generator heat exchangers
- WO 99-001437-000, Install Unit 3 fuel pool cooling system orifices to prevent pump runout per Design Change T-40644A

b. Observations and Findings

Work activities observed during the inspection period were conducted in a professional manner. Work documents were located at the job site and were properly referenced. Operations and engineering support of the maintenance, where applicable, was good.

c. Conclusions

Maintenance activities observed during the inspection period were conducted in a professional manner.

#### M1.2 Surveillance Observations

a. Inspection Scope (61726, 71707)

The inspectors observed all or portions of the following SRs and surveillance instructions (SIs) during this inspection period:

- 3-SR-3.3.1.1.8(7A/A), Revision 2, Reactor protection and rod block high water level in scram discharge tank functional test

- 3-SR-3.3.6.1.2(ATU C and D), Revision 3A, Reactor protection and primary containment isolation systems analog trip unit functional tests
- 0-SI-4.5.C.1(4), Revision 0032, Emergency equipment cooling water system annual flow rate test

b. Observations and Findings

The inspectors found that the observed surveillances were conducted in accordance with regulatory requirements.

c. Conclusions

Surveillance testing observed was performed satisfactorily during this inspection period.

#### **IV. Plant Support**

##### **S1 Conduct of Security and Safeguards Activities**

###### **S1.1 General Comments (71750)**

On two occasions, the inspectors observed prompt alarm response by security officers. Security personnel demonstrated alertness and responsiveness to possible security violations. Both involved unintentional vital area door alarms.

#### **V. Management Meetings**

##### **X1 Exit Meeting Summary**

The resident inspectors presented inspection findings and results to licensee management on April 6, 2000. The licensee acknowledged the findings presented. The licensee did not identify any of the materials reviewed during this inspection as proprietary.

#### **PARTIAL LIST OF PERSONS CONTACTED**

##### Licensee

T. Abney, Licensing Manager  
 A. Bhatnagar, Site Support Manager  
 R. Coleman, Radiological Control Manager  
 J. Corey, Radiation Protection and Chemistry Manager  
 J. Grafton, Site Quality Assurance Manager  
 J. Herron, Site Vice President  
 R. Jones, Plant Manager  
 R. LeCroy, Site Security Manager  
 R. Rogers, Maintenance Superintendent  
 G. Little, Operations Manager

R. Moll, System Engineering Manager  
W. Nurnberger, Chemistry Superintendent  
D. Olive, Operations Superintendent  
D. Sanchez, Training Manager  
J. Schlessel, Maintenance Manager  
J. Shaw, Design Engineering Manager  
R. Wiggall, Site Engineering Manager

**INSPECTION PROCEDURES USED**

IP 37551	Engineering
IP 61726	Surveillance Observations
IP 62707	Maintenance Observations
IP 71707	Plant Operations
IP 71750	Plant Support Activities