UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N.W. SUITE 1217
ATLANTA, GEORGIA 30303

Report Nos.: 50-259/77-26, 50-260/77-26 and 50-296/77-26

Docket Nos.: 50-259, 50-260 and 50-296

License Nos.: DPR-33, DPR-52 and DPR-68

Licensee: Tennessee Valley Authority
830 Power Building
Chattanooga, Tennessee 37401

Facility Name: Browns Ferry Units 1, 2 and 3

Inspection at: Browns Ferry site, Athens, Alabama

Inspection conducted: December 13-16, 1977

Inspectors: W. H. Bradford
D. J. Burke

Reviewed by: C. E. Alderson 12/30/77
C. E. Alderson, Acting Chief Date
Nuclear Support Section No. 2
Reactor Operations and Nuclear Support Branch

Inspection Summary
Inspection on December 13-16, 1977 (Report Nos. 50-259/77-26, 50-260/77-26 and 50-296/77-26
Areas Inspected: Routine, unannounced inspection of the plant fire prevention and protection systems and certain plant operations. The inspection involved 54 inspector-hours on site by two inspectors.
Results: In the three areas inspected, no items of noncompliance were found in two areas and one apparent item of noncompliance (infraction - vital area gate open and unattended (77-26-01) - Details II) was identified in the other.

MATERIAL TRANSMITTED HEREWITH
CONTAINS 2.790 INFORMATION

DETAILS I

Prepared by: _____ 12/30/77
D. J. Burke, Reactor Inspector Date
Nuclear Support Section No. 2
Reactor Operations and Nuclear
Support Branch

_____ 12/30/77
W. H. Bradford, Reactor Inspector Date
Nuclear Support Section No. 2
Reactor Operations and Nuclear
Support Branch

Dates of Inspection: December 13-16, 1977

Reviewed by: _____ 12/30/77
C. E. Alderson, Acting Chief Date
Nuclear Support Section No. 2
Reactor Operations and
Nuclear Support Branch

1. Persons Contacted (TVA)

*J. G. Dewease, Plant Superintendent
*J. B. Studdard, Operations Supervisor
R. Hunkapiller, Assistant Operations Supervisor
*G. Campbell, Outage Director
D. Jent, Mechanical Engineer
D. B. Thompson, Electrical Engineer
R. E. Porterfield, Safety Engineer/Fire Marshall
W. Kinsey, Mechanical Engineer, Results Section
J. Teague, Assistant Maintenance Supervisor
R. McGee, QA Engineering Aide
Several Shift Engineers, Assistant Shift Engineers,
and Unit Operators

*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

Not inspected.

3. Unresolved Items

None identified during this inspection.

4. Exit Interview

The inspectors met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on December 16, 1977. The inspectors summarized the scope and findings of the inspection, and specifically addressed the station fire prevention and protection program as described in Paragraph 5, Details I, and the item of noncompliance described in Details II.

5. Fire Prevention and Protection

The inspectors reviewed certain licensee actions and fire equipment installations which are described in the Browns Ferry Units 1 and 2 Safety Evaluation Report (SER) published in March, 1976, and Supplements, and in the Recovery Plan, Part X. A facility inspection of the installed fire prevention and protection systems of Units 1, 2, and 3 was also conducted. The fire protection program inspection included plant design features, personnel, equipment, and procedures. The findings were compared to licensee commitments, Appendices A and B to 10 CFR 50, Regulatory Guides, including RG 1.120, "Fire Protection Guidelines for Nuclear Power Plants," and RG 1.39, "Housekeeping Requirements for Water-Cooled Nuclear Power Plants," and the facility Technical Specifications, Sections 3.11 and 4.11. Within the areas inspected, no items of noncompliance or deviations were identified.

a. Fire Restoration Commitments - The inspectors reviewed TVA commitments, made to the NRC, to have certain fire protection system (FPS) installed and operable prior to the end of the first refueling outage. Many of these FPS installations or modifications are described in the SER dated March, 1976, and its Supplements, as well as the BFNP Recovery Plan, Part X. The inspectors verified that the plant modifications and work plans were properly documented and reviewed; at the time of the inspection, several FPS installations or modifications, including post-modification testing, were in progress. The licensee stated that his commitments will be fulfilled prior to startup of Unit 1. The inspectors also verified that certain fire stops and floor dams have been installed, that many additional heat and smoke detectors have been installed and tested, and that cable trays and Flamemastic coated cables (cocoons) have been inspected as described in the SER. The inspectors had no further questions.

b. Fire Protection Systems (FPS) Technical Specifications - The inspectors verified that proper Surveillance Instructions (SI) or tests were performed over the past year to demonstrate operability of the FPS as required by Section 4.11 and Table 3.11.A of the Browns Ferry Technical Specifications.

One question was identified with regard to Section 3.11.D of the Technical Specifications which states, "A roving fire watch will tour each area in which automatic fire suppression systems are to be installed (as described in the Recovery Plan, Part X) at intervals no greater than two hours." The Unit 1 and 2 cable spreading room (A) is to have an automatic CO_2 fire suppression system and a manually actuated pre-action water sprinkler system as described in the Recovery Plan, Part X. At the time of the inspection, the automatic initiation logic of the CO_2 system was not operable due to the potential hazard of asphyxiation to personnel working on installations or modifications in the cable spreading rooms. In addition, the manually actuated pre-action sprinkler system is still in the process of being installed. Thus, according to TS 3.11.D, it appears that a roving fire watch should tour the cable spreading room (CSR) every two hours. The licensee stated that the fire (heat and smoke) detectors in the CSR are operable and serve to monitor this area. When work is in progress in the CSR, a fire watch is established. In addition, a roving fire watch tours the area just outside the secured CSR every hour; however, entry into the CSR during these tours could not be verified by the inspectors. The licensee stated that the roving fire watch will tour the CSR every two hours until the CSR fire suppression systems are installed. The inspectors stated that the fire watch tours will be re-examined during subsequent inspections, and had no further questions.

c. General Tour of Fire Areas

During a tour of the various plant areas, the inspectors observed the following with regard to fire protection and prevention:

(1) Combustible polyurethane type foam material was found sealing spacings between structural members (I-beams and concrete walls) in the "A" cable spreading room (CSR). The licensee also observed some polyurethane type foam in the metal ceiling of the CSR, and has generated a trouble report to remove and replace all combustible materials in these vital areas.

(2) Duct tape was found around certain cables and on certain cable trays in the cable spreading room (A). Since this tape is combustible, the licensee stated that the tape would be removed from these areas.

(3) The Unit 1 and 2 emergency diesel/generator building upper level has pipe or conduit sleeves in the floor which are not sealed. The inspectors noted that about half of the several floor sleeves observed were sealed with RTV compound. Since these upper levels are protected by CO_2 fire suppression systems, the licensee stated that the open floor sleeves or penetrations would be sealed to prevent loss of CO_2 through the sleeves if the system were to be activated.

6. Plant Operations

The inspectors toured the reactor control rooms and observed general plant operations. Certain nuclear and process instrumentation indications were reviewed, and the inspectors continued the followup on the shoe cover which was lost into the Unit 1 reactor vessel during the outage. No items of noncompliance or deviations were identified. Other Region II inspectors are continuing to follow licensee actions with regard to the lost shoe cover.