TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

December 8, 1980

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

This is in response to R. C. Lewis' November 12, 1980, letter, RII:RFS 50-259/80-35, 50-260/80-29, and 50-260/80-29, concerning activities at Browns Ferry Nuclear Plant which appeared to be in noncompliance with NRC requirements. If you have any questions, please call Jim Domer at FTS 857-2014.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

8102200593

ENCLOSURE

NRC INSPECTION REPORT NOS. 50-259/80-35, 50-260/80-29, AND 50-296/80-29, RII:RFS, R. F. SULLIVAN'S AND J. W. CHASE'S INSPECTION ON SEPTEMBER 1-SEPTEMBER 30, 1980 - LETTER TO H. G. PARRIS FROM R. C. LEWIS DATED NOVEMBER 12, 1980

The following is our response to the findings of the referenced inspection report.

Infraction

A. As required by Technical Specification 3.11.E.2, an inspection and audit by an outside qualified fire consultant will be performed at intervals no greater than three years.

Contrary to the above, on September 1, 1980, greater than three years had elapsed since the last fire inspection and audit by an outside agency.

This is an infraction applicable to units 1, 2, and 3.

Corrective Steps Taken and Results Achieved

The required fire inspection and audit by an outside agency was conducted September 15-19, 1980. The report was submitted to TVA on October 2, 1980.

Corrective Action Steps Taken to Avoid Further Noncompliance

The responsibility for ensuring the required inspection and audit is completed in a timely manner is assigned to an offsite organization within the Division of Nuclear Power. The system used onsite to track compliance with all technical specification requirements had some deficiencies which allowed the due date to pass without the site staff being aware of the situation. In addition, there were some administrative difficulties in negotiating the necessary contract for the outside services. Since the time of the infraction, several steps have been taken to avoid further noncompliance.

1. An appendix has been added to the onsite surveillance program (SI 1) identifying all surveillance instructions to be performed by nonplant personnel.

2. A data cover sheet has been added to this surveillance instruction (SI-4.11.E-2) for the plant to use for reviewing the report from the outside agency. This allows the Plant Services Staff to track and close out completion of the requirement in a manner identical to that for closing out all other technical specification requirements and provides a method for disposition of any findings or recommendations.

3. A review was made by the Plant Services Staff of all surveillance instructions to ensure data sheets were available to track and ensure completion. No other discrepancies were found.

Date Full Compliance Achieved

Full compliance was achieved on October 2, 1980, when the report from the inspection agency was submitted to TVA.

Infraction

B. As required by Technical Specification 6.3.D.1, each high radiation area in which intensity of radiation is greater than 100 mrem/hr, entrance shall be controlled by issuance of special work permit.

Contrary to the above, on September 21-22, 1980, six TVA personnel entered a high radiation area measuring 300 mrem/hr without the control of a special work permit.

This is an infraction applicable to unit 1.

Corrective Steps Taken and Results Achieved

When health physics personnel were notified by the NRC resident inspector of the infraction, a special work permit (SWP) was immediately issued for access to the area in question. Also, a memorandum was issued to all plant personnel regarding compliance with SWP's and the necessity for using SWP's and dose rate meters for entering high radiation areas.

Corrective Steps Taken to Avoid Further Noncompliance

Plant procedures are being revised to provide for periodic issuance and posting of a memorandum to all plant perso nel concerning high radiation areas and the use of SWP's.

Date Full Compliance Achieved

Full compliance will be achieved by December 12, 1980.

Infraction

C. As required by Technical Specification 6.3.A.2, detailed written procedures, including applicable checkoff lists, are required for refueling operation. General Operation Instruction 100.3, Refueling Operations, requires verification of proper fuel assembly orientation after loading of each fuel assembly and a verification of each fuel

assembly after the core has been fully loaded. In addition, Technical Instruction-14, Special Nuclear Materials Control and Accountability System, requires a full core verification for proper fuel assembly orientation by a minimum of two parties.

Contrary to the above, personnel failed to verify proper orientation of two fuel assemblies on unit 2 during the May 1979 refueling as evidenced by the finding, during the current refueling, on September 14, 1980, that the assemblies were misoriented by 90°. Subsequently, on September 19, 1980, with unit 1 at power, the licensee determined that one fuel assembly was also misoriented by 90°.

This is an infraction applicable to units 1 and 2.

Corrective Steps Taken and Results Achieved

The misoriented fuel assemblies on unit 2 were removed during the refueling outage as scheduled. Analyses performed by the Reactor Engineering Branch concluded that for the fuel assembly at location 15-26 during unit 2, cycle 3, the highest LHGR rate was 15.22 kW/ft, compared to a technical specification limit for mode 8 of 18.34 kW/ft, and the lowest CPR was 1.259 compared to a technical specification limit of 1.33. However, this was still well within the safety limit of 1.07. This was the worst case fuel assembly.

Analyses were also performed by the Reactor Engineering Branch for continued operation of unit 1 during cycle 4 with the assembly at location 11-06 misoriented 90°. These analyses showed the impact of the misoriented assembly is much less than the worst case conditions analyzed and accounted for in the licensing submittal for unit 1, cycle 4 and that a large margin exists when compared to the technical specification operating MCPR limit of 1.23. Therefore, this does not constitute an unreviewed safety question as defined in 10 CFR 50.59 and continued operation is within the operating license basis.

Corrective Steps Taken to Avoid Further Noncompliance

Plant procedures for special nuclear material control and accountability (TI-14) have been revised to provide the following:

1. A break period for the personnel viewing core verification video tapes.

2. Requirements to make a second verification tape from a point high enough that entire control cells can be viewed for verification of bundle orientations.

3. A complete reverification of both fuel assembly serial numbers and assembly orientations when more than eight errors are found during a core verification.

4. An entire core verification for fuel assembly serial numbers, as well as a local orientation verification, for any less than eight errors. This is required when any assembly is moved or reoriented.

5. A signoff for each person viewing verification tapes indicating beginning and ending points.

6. Documentation of errors found so corrective action will be taken.

In addition, plant procedures for fuel handling (GOI-100-3) have been revised to provide for second party verification of fuel location and orientation.

Date Full Compliance Achieved

Changes to plant procedures were completed on December 1, 1980.