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

April 25, 1984

U.S. Nuclear Regulatory Commission
Region II
ATTN: James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

Enclosed is our response to R. C. Lewis' March 28, 1984, letter to H. G. Parris transmitting Inspection Report Nos. 50-259/84-07, -260/84-07, -296/84-07 regarding activities at our Browns Ferry Nuclear Plant which appeared to have been in violation of NRC regulations. We have enclosed our response to the Notice of Violation as enclosure 1 and the Notice of Deviation as enclosure 2. If you have any questions, please call Jim Domer at FTS 858-2725.

To the best of my knowledge, I declare the statements contained herein are complete and true.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Licensing

Enclosure

RESPONSE - NRC INSPECTION REPORT NOS.
50-259/84-07, 50-260/84-07, AND 50-296/84-07
RICHARD C. LEWIS'S LETTER TO H. G. PARRIS
DATED MARCH 28, 1984

Enclosure 1

Item 1 - (259/84-07-02)

10 CFR 50, Appendix B, Criterion V requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

Contrary to the above, this requirement was not met in that Standard Practice 23.1 (Nuclear Digital Computer Software Systems) was not adequately accomplished to control the K_f breakpoint factor used in the determination of the Minimum Critical Power Ratio (MCPR) correction for reduced flow. This resulted in nonconservative calculations by the process computer of the MCPR limit from the beginning of cycle startup on December 29, 1983 until January 30, 1984. A factor of 0.75 was used instead of 0.80. MCPR requirements are specified in Technical Specification 3.5.K.

This is a Severity Level IV Violation (Supplement I) applicable to Unit 1.

1. Admission or Denial of the Alleged Violation

   TVA admits the violation occurred as stated.

2. Reasons For the Violation

   The problem was caused by a lack of administrative controls governing reinitializing the process computer. This event was caused by loading a core dump which was generated before correcting K_f. Inadequate procedures allowed the wrong computer tape to be used to reinitialize the process computer, thus overlaying the correct K_f with a previous fuel cycle K_f.

3. Corrective Steps Which Have Been Taken and the Results Achieved

   A review of thermal limit calculations for the period K_f in error was conducted. It was verified core maximum fraction of critical power did not exceed 0.90 during this period. This would result in a maximum core fraction of critical power of 0.92 if operating near 75 percent core flow. The error would be much less at lower flows and no error above 80 percent flow. This leaves at least an 8 percent margin to the

limiting value of 1.0. A comparison between the core dump for January 31, 1984, and the beginning of cycle core dump was made. This verified that all other nuclear system steam supply process computer constants are correct at this time.

4. Corrective Steps Which Will Be Taken To Avoid Further Violations

Since this event, a plant instruction (BF 23.3) delineating reinitializing the process computer has been issued. BF 23.3 requires documented approval by a plant nuclear engineer and a systems analyst any time nuclear system steam supply real time or rod worth minimizer sequence data is changed. These changes are reviewed by the reactor engineering unit supervisor and the computer unit supervisor when completed. A training class was given by the computer unit supervisor to all nuclear engineers and computer specialists concerning BF 23.3 on March 8, 1984.

5. Date When Full Compliance Was Achieved

Full compliance was achieved March 8, 1984, when Standard Practice BF 23.3 was revised and approved by PORC.

Item 2 - (259/260/84-07-04)

Technical Specification 3.7.G.2 requires that the Containment Atmosphere Dilution (CAD) System shall be operable whenever the reactor mode switch is in the "RUN" position.

Contrary to the above, this requirement was not met in that the two independent CAD systems were inoperable from January 25-27, 1984, for 40 hours due to isolation valves 0-84-506 and 0-84-556 in the CAD tank pressure buildup circuit being shut contrary to operating requirements. Units one and two were operating in the "RUN" mode during this time.

This is a Severity Level IV Violation (Supplement I) applicable to Units 1 and 2.

Item 3 - (259/260/84-07-05)

Technical Specification 6.3.A.1 requires that detailed written procedures shall be prepared, approved, and adhered to for normal startup, operation and shutdown of the reactor and of all systems and components involving nuclear safety of the facility.

Contrary to the above, this requirement was not met in that plant operating instruction OI-84 for the Containment Atmosphere Dilution (CAD) system was not followed on January 25, 1984, resulting in two valves (0-84-506 on

system 'A' and 0-84-556 on System 'B') being left misaligned in the shut position after a routine nitrogen addition to the two containment atmosphere dilution tanks. These valves isolated the CAD tank automatic pressure buildup control circuit.

This is a Severity Level IV Violation (Supplement I) applicable to Units 1 and 2.

1. Admission or Denial of the Alleged Violations

   TVA admits violations 2 and 3 occurred as stated.

2. Reasons for Violations 2 and 3 if Admitted

   The event occurred because of improper valve lineup by unlicensed operators either after a special test, or after filling the tanks following the special test, which occurred on January 25, 1984, during the 1500-2300 shift. However, the lineup of these valves after filling the tanks was not specifically addressed in the system operating instruction.

3. Corrective Steps Which Have Been Taken and the Results Achieved

   The operating instruction (OI-84) was changed on February 16, 1984, to address the proper operation. A caution order was placed on each valve and an information letter was sent to all operations personnel on February 2, 1984, describing the event and expressing the importance of logging abnormal valve lineup.

4. Corrective Steps Which Will Be Taken To Avoid Further Violations

   No additional corrective steps are planned.

5. Date When Full Compliance Was Achieved

   Full compliance was achieved February 16, 1984, when OI-84 was revised.

Enclosure 2

Notice of Deviation (259/260/84-07-01)

Tennessee Valley Authority's letter dated August 4, 1982, in response to Browns Ferry Inspection Report 82-11 of June 16, 1982, stated that, in regard to Appendix "A" violation, an evaluation of the Units 1 and 2 safety-related piping would be conducted to verify piping supports were adequate and the results would be reported to the NRC by January 17, 1984.

Contrary to the above, evaluation results have not been received as of February 25, 1984.

1. Corrective Action Regarding this Deviation

   A supplemental response to item 259/82-11-01 of NRC Inspection Report 82-11 was sent from L. M. Mills to J. P. O'Reilly on March 21, 1984 providing the details of the inspection of suspect safety-related piping in units 1 and 2 for possible inadequately supported test, vent, or drain connections.

2. Action Taken to Avoid Further Deviations

   In order to prevent further deviations of this type, our modification group is placing more emphasis on commitments and has added an additional person to handle their compliance items. To help ensure that all commitments are implemented in a timely manner, the compliance staff is now obtaining weekly an overdue items printout.

3. Date When These Actions Were or Will Be Completed

   Full compliance was achieved on March 21, 1984, when the supplemental response was transmitted.