



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF SPECIAL PROJECTS

SUPPORTING AMENDMENT NO. 148 TO FACILITY OPERATING LICENSE NO. DPR-33

AMENDMENT NO. 144 TO FACILITY OPERATING LICENSE NO. DPR-52

AMENDMENT NO. 119 TO FACILITY OPERATING LICENSE NO. DPR-68

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2 AND 3

DOCKETS NOS. 50-259, 50-260 AND 50-296

1.0 INTRODUCTION

By letter dated January 14, 1988 (TS 237), the Tennessee Valley Authority (TVA or the licensee) requested amendments to Facility Operating Licenses Nos. DPR-33, DPR-52, and DPR-68 for the Browns Ferry Nuclear Plant (BFN), Units 1, 2 and 3. The proposed amendments involve two similar changes, both of which are corrections to references to footnotes applicable to instrumentation tables.

The first change is applicable to BFN Units 1 and 2 only. It is to correct a footnote referenced in Table 3.2.B, Instrumentation that Initiates or Controls the Core and Containment Cooling Systems. The table entry (page 3.2/4.2-14) for reactor low water level, which in conjunction with other signals will initiate the automatic depressurization system (ADS), is changed to reference note 16 instead of 14.

The second change applies to all three BFN units. It will delete the reference to footnote 4 in Table 4.2.K, Radioactive Gaseous Effluent Instrumentation Surveillance, for entry number 5 (offgas hydrogen analyzer). This change affects pages 3.2/4.2-62 for units 1 and 2, and page 3.2/4.2-61 for Unit 3.

2.0 EVALUATION

In the current Technical Specification (TS) Table 3.2.B, Instrumentation that Initiates or Controls the Core and Containment Cooling Systems, for BFN Units 1 and 2, the footnote on the Minimum No. Operable per Trip System column for the Instrument Channel - Reactor Low Water Level trip switch which initiates ADS, is footnote number 14. This is an incorrect footnote. Footnote 14 states "RHRSW pump would be inoperable." There is no correlation between the reactor low water level switch which initiates ADS and the RHRSW system. The correct footnote is footnote 16 which states, "The ADS circuitry is capable of

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accomplishing its protective action with one operable trip system. Therefore one trip system may be taken out of service for functional testing and calibration for a period not to exceed eight hours."

Footnote 16 is necessary in the Minimum No. Operable per Trip System column for this and several other instrumentation switches to provide the licensee the ability to take the instrumentation out of service (inoperable) to perform functional testing and calibration while establishing a time limit for this condition to exist. Footnote 16 is already referenced for other ADS instrumentation in this table and is currently referenced in BFN Unit 3 TS for this particular instrument channel. Footnote 16 is the appropriate footnote for this application and is therefore acceptable.

In the current Technical Specification (TS) Table 4.2.K, Radioactive Gaseous Effluent Instrumentation Surveillance, for BFN TS Units 1, 2 and 3, the note on the Functional Test column for Instrument No. 5, Offgas Hydrogen Analyzer, is note number 4. This is an incorrect note. Note 4 states that the functional test performed on this instrument will demonstrate that automatic isolation of the offgas line will occur when this instrument channel trips. This instrument channel was not designed to produce an isolation signal. However, any hydrogen analyzer abnormality will be annunciated in the Main Control Room.

The Final Safety Analysis Report does not take credit for or mention an isolation signal coming from the hydrogen analyzers on the offgas system. It only refers to a control room annunciation which does exist for high hydrogen concentrations. Also, NUREG-0483, Revision 3, "Standard Radiological Effluent Technical Specifications for Boiling Water Reactors," which provides model TS for this table, does not require such an isolation signal. Furthermore, it would not be an appropriate action to isolate the offgas system on an increasing hydrogen concentration for two reasons. First, hydrogen is not toxic or radioactive and therefore would not pose any threat to the public if released. Second, isolating the offgas system with an increasing hydrogen concentration could produce an explosive atmosphere in the condenser or offgas system, while continuing to operate the system would dilute and disperse the hydrogen, thereby reducing the possibility of explosion. Note 4 is not appropriate for the application and the staff, therefore, finds the proposed change acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

The amendments involve a change to a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant

to 10 CFR 51.22(b), no environmental impact statement nor environmental assessment need be prepared in connection with the issuance of these amendments.

4.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendments will not be inimical to the common defense and security nor to the health and safety of the public.

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Dated: May 4, 1988