



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 130 TO FACILITY OPERATING LICENSE NO. DPR-33

AMENDMENT NO. 126 TO FACILITY OPERATING LICENSE NO. DPR-52

AMENDMENT NO. 101 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 April 8, 1986 (TVA BFNP TS-219), the Tennessee Valley Authority (the licensee or TVA) requested amendments to Facility Operating Licenses Nos. DPR-33, DPR-52 and DPR-68 for the Browns Ferry Nuclear Plant, Units 1, 2 and 3. The proposed amendments would change the Technical Specifications (TS) to delete references to one of the two electrical heaters in each of the three Standby Gas Treatment System (SGTS) trains in Brown Ferry Technical Specification Tables 3.2.A and 4.2.A (pages 56 and 86 for Units 1 and 2; pages 58 and 89 for Unit 3). Specifically, the licensee proposes to delete the charcoal adsorber heaters while retaining relative humidity control heaters by changing "heaters" in tables from plural to singular for each SGTS train.

The licensee stated in its submittal that the charcoal filter heaters have been deenergized and are being removed from the SGTS under the provisions of 10 CFR 50.59. We did not concur with the licensee's interpretations of 10 CFR 50.59. The staff called the Licensee and informed it that deenergizing the heaters prior to the TS change being approved by the staff would be a violation of the Browns Ferry Technical Specification. Further, since the change involves a TS change it cannot be done under 10 CFR 50.59. Based on this conversation the licensee will not remove the heaters under 10 CFR 50.59 but, wait for NRC approval of the amendment request.

2.0 EVALUATION

The Browns Ferry SGTS serves Units 1, 2, and 3, and consists of three filtrations trains. Each train contains an electric heater (40 kw) to reduce the relative humidity of the influent air to less than 70 percent. The heater is energized automatically with startup of the SGTS and remains energized throughout SGTS operation. Upon receipt of a DBA signal, all three SGTS trains should start. The operator may shutdown manually one of the three trains.

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In addition to the above relative humidity control heaters, each of three SGTS trains is also provided with an electrical charcoal filter heater. The original purpose of these heaters was to ensure that the charcoal adsorber beds do not experience significant moisture buildup during SGTS standby conditions. The charcoal bed temperature is thermostatically controlled by the charcoal filter heaters, with high and low temperatures alarmed in the Main Control Room. These electrical charcoal filter heaters are automatically tripped upon startup of a SGTS train.

Subsequently, the licensee has determined that operation of each train, with its associated relative humidity control heater on for 10 hours each month, as required in the Browns Ferry Technical Specification, is sufficient to control moisture buildup in the charcoal adsorber bed. This determination is consistent with the staff's guidance in Regulatory Guide 1.52, Section c.4.d, which states that "Each ESF atmosphere cleanup train should be operated at least 10 hours per month, with heaters on (if so equipped), in order to reduce the buildup of moisture on the adsorbers and HEPA filters."

The Standard Technical Specification (STS) for GE/BWRs in its Basis Section 3/4.7.2 also states that cumulative operation of the system with the heaters on for 10 hours over a 31 day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters.

The staff does not require either a separate heater for the charcoal adsorbers or more than one heater in each train, so long as the installed heater is capable of reducing the relative humidity of influent air to less than 70 percent. The staff further accepts that the operation of the SGTS with this heater on for 10 hours each month is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters.

The staff discussed with the licensee, the Browns Ferry Technical Specification Section 4.7.b.2.d to assure the inclusion of the relative humidity control heaters in the SGTS surveillance test. In addition, the Browns Ferry Test Procedure SI-4.7.B, Revision 2, and the schematic wiring diagram 45N771-2 show that the SGTS surveillance tests are performed with the relative humidity control heaters on automatic control mode. The information assists in resolving the staff's concerns regarding the inclusion of the heaters in the SGTS surveillance tests.

On the basis of the above evaluation, and the fact that the proposed amendments are consistent with (1) Regulatory Guide 1.52, Rev. 1, "Design, Testing, and Maintenance Criteria for Post Accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants" and (2) GE Standard Technical Specifications, BWR/4 and BWR/5. The staff finds that the licensee's requested amendments are acceptable.

3.0 ENVIRONMENTAL CONSIDERATIONS

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and in surveillance requirements. 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 should be no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the 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 or environmental assessment need be prepared in connection with the issuance of the amendments.

4.0 CONCLUSION

We have 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 or to the health and safety of the public.

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Dated: November 17, 1986

