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

ENCLOSURE 4

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 185 TO FACILITY OPERATING LICENSE NO. DPR-33,

AMENDMENT NO. 198 TO FACILITY OPERATING LICENSE NO. DPR-52,

AND AMENDMENT NO. 157 TO FACILITY OPERATING LICENSE NO. DPR-68

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2, AND 3

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

1.0 INTRODUCTION

By letter dated October 30, 1990, the Tennessee Valley Authority (the licensee) submitted a request for changes to the Browns Ferry Nuclear Plant, Units 1, 2, and 3 Technical Specifications (TS). The proposed amendment would change the BFN technical specifications administratively and revise the bases section for flood protection to be consistent with the FSAR. The changes are being made to resolve open issues from NRC inspection reports, to resolve an open item in an NRC safety evaluation, and to correct errors in previous technical specification submittals and implementation.

2.0 EVALUATION

Each change is itemized below, followed by the staff evaluation.

Change 1 - Def. 1.0.II (Dose Equivalent I-131) was added to the technical specifications by Amendments 132, 128, and 103 to Units 1, 2, and 3 respectively. The approved definition included the units "micro-Curie per gram" for the concentration of I-131. The current technical specifications for all three units erroneously have "mCi/gm" for the concentration of I-131. This change corrects the technical specifications to be as approved by the NRC. The staff finds this acceptable.

Change 2 - Note 2 is being deleted from the Notes for Table 3.2.A for all three units. Note 2 has been in the notes since the original issuance of the Unit 1 technical specifications (TS). However, this note has never been attached to any item in the table. TVA has researched the similar sections of TSs for six other Boiling Water Reactors (BWRs) with custom TSs and has not found a similar note which requires testing of other channels. Also, the General Electric BWR Standard TSs (NUREG 0123) do not have a similar note or requirement for isolation actuation instrumentation in Table 3.3.2-1. Operations takes the actions in Note 1 whenever instrument channels are tripped so Note 2 is unnecessary. Functional testing of the instrument channels within the required surveillance intervals provides reasonable assurance that the

instrument channels are OPERABLE. Additional testing prior to tripping a channel is unnecessary. The note is therefore being deleted from the table. The staff finds this acceptable.

Note 5 is also being deleted from the Notes for Table 3.2.A. This note appeared in the original technical specifications for Unit 1 and was associated with "Instrument Channel - Reactor High Water Level." When the Unit 2 technical specifications were issued (Amendment 3 for Unit 1), this reactor high water level setpoint was deleted because it was not required for BWRs similar to BFN. However, the note was never deleted from the Notes for Table 3.2.A. This change removes this unnecessary note for all three units. The staff finds this acceptable.

Change 3 - Amendments 108, 102, and 75 for Units 1, 2, and 3, respectively, were issued by NRC on August 13, 1984 and added Note 13 to Table 3.2.A (Instrument Channel - High Radiation Main Steam Line Tunnel). TVA did not receive the amendment until about August 22, 1984. On August 23, 1984, TVA sent a letter (TS 199) to NRC requesting another change to the same page in Table 3.2.A. Because the amendments approved August 13, 1984 had not been received when the letter TS 199 was in the approval cycle, it went to NRC without the reference to Note 13. NRC approved the change requested in TS 199 on August 19, 1986 (Amendment 125 for Unit 2) utilizing the "old" version of the page from Table 3.2.A. Therefore, the reference to Note 13 was inadvertently deleted. The staff finds the proposed correction to be acceptable.

That same August 23, 1984 submittal included the "<" symbol in front of the "3" for Unit 2. Amendment 102 for Unit 2 did not include this symbol so it should be deleted. Units 1 and 3 are correct as is. Unit 2 must be revised to match Units 1 and 3 and to meet the intent of Amendment 102. The staff finds this acceptable.

Change 4 - A typographical error exists in the range of the noble gas monitors as currently listed. The units currently listed (Ci/cc) would be too high and would not provide the required monitoring range information. The error exists because TVA's submittal to NRC dated June 20, 1989, TS 266 Supplement 1 - Correction to Tables 3.2.F and 4.2.F, erroneously omitted the "μ" symbol. This change would reflect the correct range (μCi/cc) of the instruments. The staff finds this acceptable.

Change 5 - The calibration frequency for instruments PI-3-74A&B for Unit 2 is being corrected to be once per six months. Amendment 167 to the BFN Unit 2 technical specifications was approved by NRC on July 7, 1989. That amendment revised the calibration frequency for the reactor pressure instruments (Page 3.2./4.2-54) to a more conservative interval of 6 months. This was based on the recommendation of Tobar, Inc., the manufacturer of these instruments. The staff finds this acceptable.

Amendment 171 to the BFN Unit 2 technical specifications was approved by NRC on August 22, 1989. An overleaf page for this amendment was Page 3.2/4.2-54, the page which includes the reactor pressure instruments. The clean pages for Amendment 171 were sent to NRC on July 25, 1989. The BFN technical specification clerk had apparently not yet received Amendment 167 and therefore sent a clean Page 3.2/4.2-54 with the old calibration frequency of 12 months on it.

When Amendment 171 was issued, it had the incorrect calibration frequency (12 months) which had been transmitted on the clean page. This proposed change revises Pages 3.2/4.2-54 to correctly indicate that the calibration frequency for the Reactor Pressure instruments is 6 months as approved by Amendment 167. The staff finds this acceptable.

Change 6 - Table 4.2.L (Anticipated Transient Without Scram [ATWS] - Recirculation Pump Trip [RPT] Instrumentation Surveillance) is being revised to correct the title and to incorporate the correct instrument numbers into the table. The staff finds this acceptable.

Change 7 - The statement in the bases for Technical Specification 3.2 that "...however, the plant flood protection is always in place and does not depend in any way on advanced warning..." is being deleted to agree with the plant Final Safety Analysis Report (FSAR). The flood doors to the reactor and radwaste buildings are the flood protection referred to as always being in place in the technical specification 3.2 bases. The FSAR was revised in 1987 by Amendment 5 to reflect the practice of leaving the flood doors open under normal circumstances. The FSAR had previously indicated that these doors are normally closed. The Unreviewed Safety Question Determination in support of the FSAR revision concluded that because of the constant surveillance and control exercised by TVA over the Tennessee River and the relatively short amount of time required to close the flood doors, leaving them normally open would not degrade plant flood protection. Administrative controls are in place to ensure the flood doors are closed when they are needed to provide flood protection. The staff finds this acceptable.

Changes 8 and 9 - The paragraphs in Bases Section 3.5.E (HPCI) and 3.5.F (RCIC) regarding net positive suction head for the HPCI and RCIC systems were inadvertently deleted by TVA when TS 274 was submitted to NRC. Amendments 173, 176, and 144 were therefore approved for Units 1, 2, and 3 respectively with these paragraphs deleted. They are still applicable and are therefore being re-inserted. The staff finds this acceptable.

Change 10 - A statement is being added to Bases Section 3.6.F/4.6.F (Recirculation Pump Operation) to note the intention to scram the reactor if the operating recirculation pump trips when in single loop operation. TVA's committment to make this change was documented in NRC's safety evaluation supporting Unit 2 Amendment 174 (TAC 73435). The staff finds this acceptable.

Change 11 - Paragraph 3.7.A.1.F (Primary Containment) for Unit 1 only is being revised to correct the "greater than" symbol (>) to a "less than" symbol (<) to reflect the requirement to depressurize the reactor to less than 200 psig. This change corrects a typographical error and makes this paragraph consistent with the equivalent Unit 2 and 3 requirements. The staff finds this acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Alabama State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes 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 NRC staff has determined that the amendment involves 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (56 FR 27049). Accordingly, the amendment meets 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.

5.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: August 23, 1991