



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

ENCLOSURE 1

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

PROPOSED TECHNICAL SPECIFICATIONS

TENNESSEE VALLEY AUTHORITY

BROWNS FERRY NUCLEAR UNITS 1, 2, and 3

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

1.0 INTRODUCTION

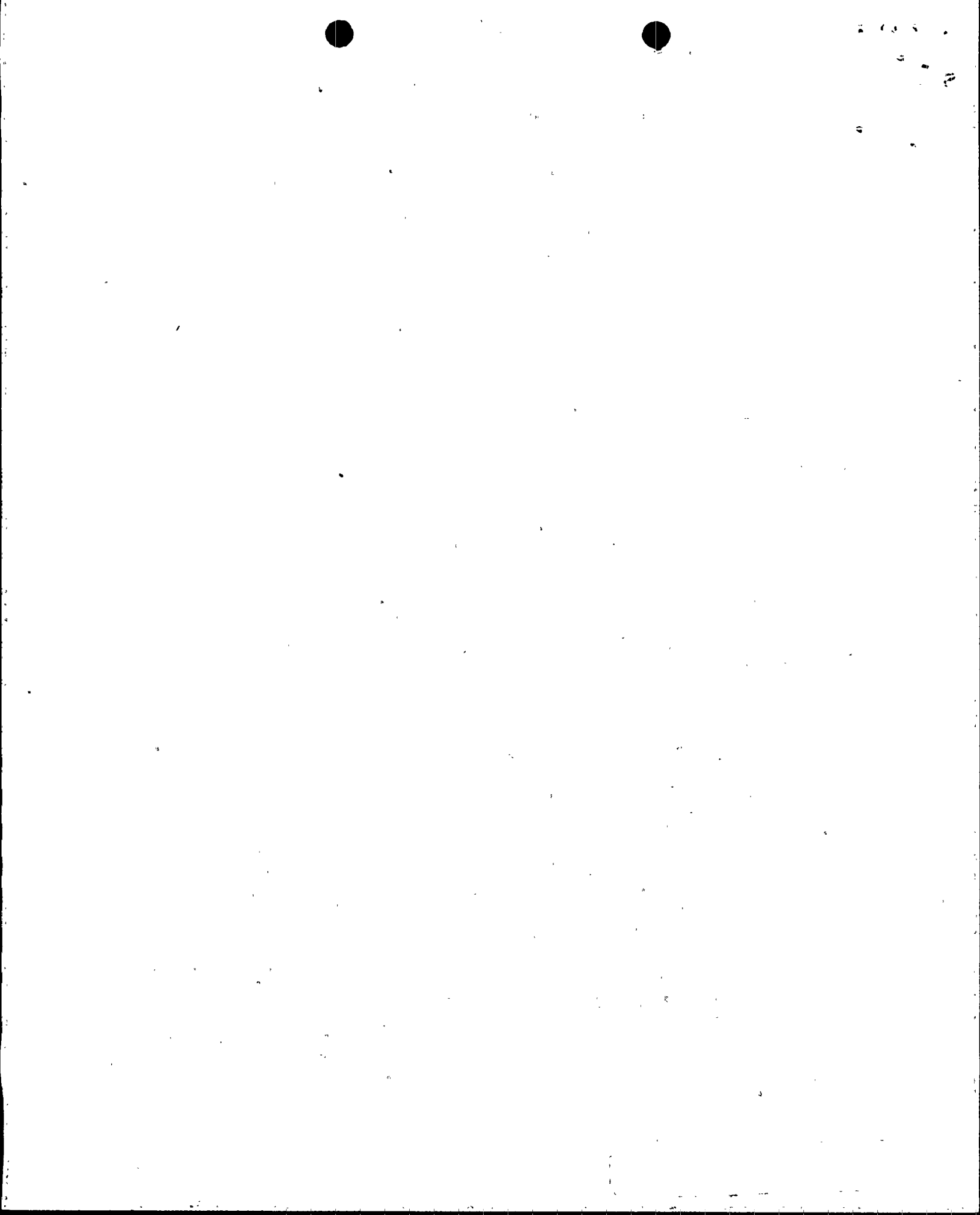
The Browns Ferry Nuclear Plant (BFN) Units 1, 2 and 3 share certain plant systems such as the Standby Gas Treatment System (SGTS), Control Room Emergency Ventilation System (CREVS), and the emergency diesel generators (EDGs). Specifically, three Unit 3 EDGs are required to support Units 1 and 2 by providing a source of emergency power. The present Technical Specifications (TS) only address the condition where Unit 3 EDGs are required to be operable to support equipment for Unit 2 operation and were written to specifically address the present condition where Unit 3 is de-fueled and Unit 2 requires operability of SGTS and/or CREVS.

By letter dated January 10, 1992, the licensee requested a change to the BFN TS for Units 1, 2, and 3 which addresses EDG availability for the plant shared systems of SGTS and CREVS. The proposed change addresses not only the Unit 3 EDGs required for Unit 2 operation, but also the Units 1 and 2 EDGs required for Unit 3 operation and the Unit 3 EDGs required for Unit 1 operation.

2.0 EVALUATION

The proposed TS changes specify each Unit's emergency power supply operability requirement when the SGTS and/or CREVS are required to be operable by one or more of the three BFN Unit TS. Unit 1/2 EDG A provides emergency power to the SGTS A train and the CREVS A train. Unit 1/2 EDG D provides emergency power to the SGTS B train. Electrical alignment can also be made to supply emergency power from Unit 1/2 EDG B for SGTS trains A and B, and for CREVS train A. Unit 3 EDG 3C provides emergency power to CREVS train B while Unit 3 EDG 3D supplies SGTS train C. Electrical alignment can also be made to supply emergency power from Unit 3 EDG 3B for CREVS train B. This change does not affect the EDG requirements for Residual Heat Removal Service Water (RHRSW) pumps A3 and C3.

The TS change establishes the requirement of BFN Units 1, 2, and 3 EDGs for the plant shared systems of SGTS and CREVS. TS Definition E currently requires operability of the normal and emergency power supplies in order to consider a piece of equipment operable. Definition 1.C.2 contains an exception to this requirement (that applies only when the Unit is not in cold shutdown or refueling) which allows the limiting condition for operation for EDGs to govern the required actions. These definitions do not explicitly address the situation where the unit(s) requiring operability of the SGTS



and/or CREVS is not in cold shutdown or refueling but one or more units are in cold shutdown, refuel, or de-fueled. Present Unit 2 and 3 TS address this condition by imposing an explicit 30-day allowed out-of-service limit for EDGs on Unit 3 required for SGTS and CREVS operability for Unit 2. The proposed TS change will address this condition for all three BFN units and will adopt the present Units 2 and 3, 30-day allowed out-of-service interval for an emergency power source that is inoperable on a unit(s) that is in cold shutdown, refuel, or is de-fueled when one or more units require operability of SGTS and/or CREVS. The proposed Limiting Conditions for Operation, Section 3.9.D, allows the EDG power source to be inoperable for 30 days provided the redundant train(s) of equipment and their normal and emergency power supplies are operable. If the required operability of the EDGs and corresponding off-site power sources for SGTS and/or CREVs is not met, proposed Specification 3.9.D requires the affected equipment to be declared inoperable. The proposed changes are consistent with current requirements and are, therefore, acceptable.

The proposed Surveillance Requirement 4.9.D implements testing provisions of the present 4.9.D in Units 2 and 3 TS with a clarification to the common accident signal testing requirement. The clarification will require the common accident signal for the test to originate only from units that require operability of SGTS and/or CREVS. This clarification meets the intent of present Surveillance Requirement 4.9.D.1.c which requires the test signal to originate from Unit 2 for testing of the automatic start feature of the Unit 3 EDGs while Unit 3 is de-fueled and does not require operability of SGTS or CREVS. The present provision in the Units 2 and 3 TS, that does not require the loss of off-site power/loss of coolant accident loads test for de-fueled units, is retained in the proposed change. These changes enact appropriate surveillance requirements to ensure diesel generators required for SGTS and CREVS are operable, and are therefore acceptable.

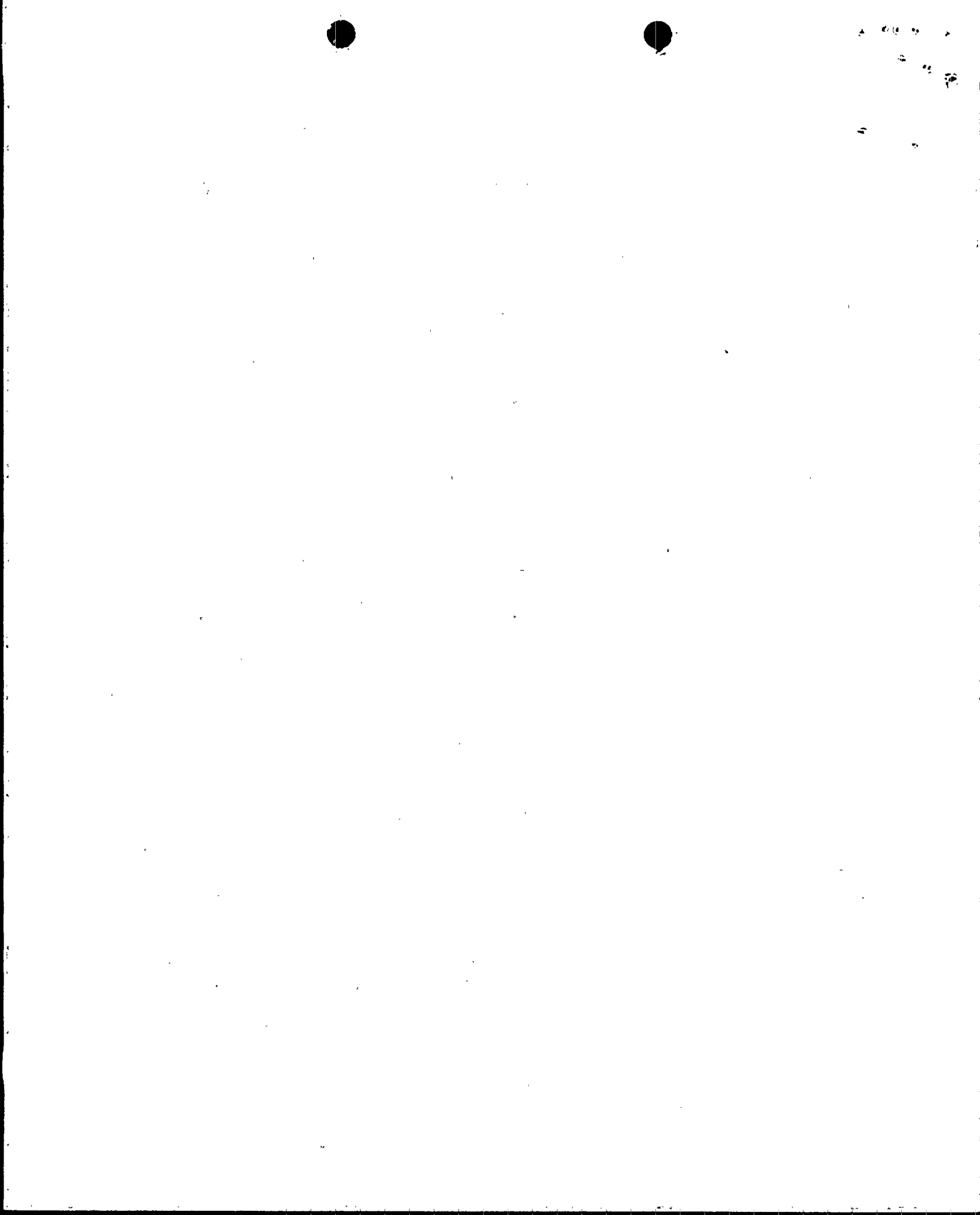
The proposed changes to Bases 3.9 and 4.9 are made to describe the changes to the affected specifications 3.9.D and 4.9.D.

### 3.0 CONCLUSION

The staff concludes that the proposed change addresses not only the Unit 3 EDGs required for Unit 2 operation but also the Unit 1/2 EDGs required for Unit 3 operation and Unit 3 EDGs required for Unit 1 operation. Therefore, the proposed changes to the Units 1, 2, and 3 TS to address the concern of EDG operability for the shared plant systems of SGTS and CREVS are acceptable.

### 4.0 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.



## 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change the Surveillance Requirements. The NRC 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 the amendments involve no significant hazards consideration, and there has been no public comment on such finding (57 FR 48827). 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.

## 6.0 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 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: March 9, 1994

