



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 139 TO

FACILITY OPERATING LICENSE NO. DPR-51

ENERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NO. 1

DOCKET NO. 50-313

1.0 INTRODUCTION

By letter dated September 20, 1990, as supplemented by letter dated October 19, 1990, Entergy Operations, Inc. (the licensee) requested an amendment to the Technical Specifications (TSs) appended to Facility Operating License No. DPR-51 for Arkansas Nuclear One, Unit No. 1 (ANO-1). The proposed amendment would change TS Surveillance Requirement (SR) 4.6.1.5 by replacing the existing requirement to periodically (once every 18 months) verify the charging capability of each Emergency Diesel Generator (EDG) starting air compressor with a requirement to periodically (once every 31 days) verify that the starting air receiver tanks are at or above the required minimum pressure.

2.0 BACKGROUND

The licensee is performing modifications to the starting air systems for the EDGs during the ongoing refueling outage. The modifications are intended to increase the overall reliability of the starting air systems. As part of the modifications, the existing air receivers will be replaced with new and larger air receivers (i.e., each new receiver capacity is 83 cubic feet compared to the old receiver capacity of 32 cubic feet).

The existing ANO-1 Technical Specification (TS) Surveillance Requirement (SR) 4.6.1.5 requires periodic (18 month) verification of the capability of each starting air compressor to charge the air receivers from 0 to 225 psig within 2 hours. The new EDG starting system will operate at a lower nominal system pressure. However, because of its increased capacity, it will require longer to charge. The licensee has determined that this specific SR is no longer necessary. They consider periodic verification of actual starting air receiver pressure to be a more appropriate way of assuring the ability of the starting air system to perform its function of starting the EDG. Accordingly, by letter dated September 20, 1990, the licensee submitted a request to change the ANO-1 TS. The licensee's October 19, 1990 supplement provided additional clarifying information regarding the background and post-modification testing of the EDG starting air system.

3.0 EVALUATION

The starting air system for each EDG consists of two sets of air starter motors. The air required for each starter motor is supplied from a pair of air receivers which are maintained at a predetermined minimum pressure by a dedicated air compressor. The receivers should have sufficient capacity for five EDG starts in accordance with the guidelines described in Standard Review Plan, Section 9.5.6, "Emergency Diesel Engine Starting System."

Existing TS Section 4.6.1.5 states: "Once every 18 months, the capacity of each starting air compressor to charge air receivers from 0 - 225 psig within 2 hours shall be verified."

The proposed TS change will revise Section 4.6.1.5 to state: "Once every 31 days the pressure in the starting air receiver tanks shall be verified to be greater than 175 psig."

The licensee has performed an analysis to demonstrate that by maintaining a minimum air receiver pressure of 175 psig, there will be enough air for five EDG starts as described in SRP 9.5.6. In addition, by letter dated October 19, 1990, the licensee stated that the post-modification testing of the EDG starting air system will verify that the design capacity of the starting air receivers can fulfill the recommended five start capability.

Based on its review, the staff agrees with the licensee that periodic verification of actual starting air receiver pressure is a more appropriate way of assuring the ability of the starting air system to perform its function of starting the EDG. Therefore, the staff finds that the licensee's proposed TS change is acceptable.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment involves a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. The 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 exposures. 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. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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 amendment.

5.0 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 amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: November 21, 1990

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