



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 168 TO

FACILITY OPERATING LICENSE NO. NPF-6

ENERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NO. 2

DOCKET NO. 50-368

1.0 INTRODUCTION

The Arkansas Nuclear One, Unit 2 (ANO-2) core protection calculator (CPC) system is a subsystem of the reactor protection system. The CPCs are dedicated minicomputers that calculate the departure from nucleate boiling ratio (DNBR) and local power density (LPD) and issue a reactor trip command if these fuel design limits are exceeded. Each of the four channels of CPCs is mounted in a dedicated cabinet. The cabinets are in the CPC room of the reactor auxiliaries building. The CPC room temperature and humidity are controlled to provide a suitable environment for reliable computer operations. A failure of the CPC room cooling system could result in high CPC cabinet temperatures, which could affect the reliability of the CPC minicomputers.

The original CPC cabinets were not equipped with high temperature alarm switches; therefore, CPC room temperature was monitored to ensure a suitable environment for the CPCs. Since individual cabinet temperatures were not available, the technical specifications (TSs) required a channel functional test of all four CPC channels after a valid high room temperature alarm.

The new CPC cabinets have individual cabinet temperature monitoring devices and alarm switches, which allow the operator to monitor the temperature in each CPC cabinet. By letter dated March 17, 1995, the licensee proposed a TS amendment to reflect the enhanced temperature monitoring capability of the new CPC cabinets.

2.0 DISCUSSION

The current ANO-2 TS requires a channel functional test of all four CPC channels to verify CPC operability within 12 hours of a valid high CPC room temperature alarm. This TS surveillance requirement is based on the original system installation. The ability to monitor each CPC cabinet temperature is an enhancement of the original system design, in that the CPC cabinet temperature indications more accurately reflect the operating environment of the CPC minicomputers. The amended TS requires a channel functional test of the affected CPC cabinet temperature monitoring channel within 12 hours of receiving a valid cabinet high temperature alarm.

The TS amendment will also revise the room temperature alarm setpoint to a value that will alert the operators to restore CPC room cooling before operability of the CPC minicomputers is affected.

3.0 TECHNICAL CONCLUSION

The proposed TS change enhances the capability to monitor individual CPC cabinet temperatures, thereby more closely controlling the operating environment of the CPC minicomputers. The amended TS requires a channel functional test only on the affected CPC channel. This provides a more direct verification of the CPC operating environment. This change is consistent with the criteria of the "Standard Technical Specifications for Combustion Engineering Plants", NUREG-1432, Rev. 0. Therefore, the staff finds the proposed change to the Arkansas Nuclear One, Unit 2 TSs acceptable.

4.0 STATE CONSULTATION

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

5.0 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 and changes surveillance requirements. 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 (60 FR 39437). 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 amendment.

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

Principal Contributor: Sang Rhow

Date: October 11, 1995