



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 83 TO

FACILITY OPERATING LICENSE NO. NPF-6

ARKANSAS POWER AND LIGHT COMPANY

ARKANSAS NUCLEAR ONE, UNIT NO. 2

DOCKET NO. 50-368

1.0 INTRODUCTION

By letter dated November 30, 1987 (2CAN118702), Arkansas Power and Light Company (AP&L or the licensee) requested an amendment to the Technical Specifications (TSs) appended to Facility Operating License No. NPF-6 for Arkansas Nuclear One, Unit No. 2 (ANO-2). The proposed amendment would permit the licensee to render eight of the ten main steam code safety valves inoperable and reset the remaining two in Mode 3 so that the 10 year hydrostatic test on the main steam system may be performed. Supplemental information was submitted by licensee letter dated March 7, 1988 (2CAN038803). The supplemental information did not change the nature of the amendment application and thus did not affect the staff's proposed no significant hazards determination.

2.0 DISCUSSION

The licensee will be performing the 10 year hydrotest on the ANO-2 main steam system as required by Section XI of the ASME Boiler and Pressure Vessel Code. The test will be performed with the reactor in hot standby (Mode 3) using reactor coolant pump heat, and steam as the pressurizing medium.

The Inservice Inspection Program for ANO-2 is based on the 1974 Edition of Section XI of the ASME Code (The Code), through Summer 1975 Addendum, which requires Class 2 systems to be hydrostatically tested at 1.05 times the design pressure of the system if the test temperature is above 500°F. The main steam system is unisolated from the main steam code safety valves and the hydrostatic test pressure is higher than the set pressures of the main steam code safety valves. Therefore, to accomplish the test requirements, the licensee proposes to gag (render the valves such that they will not open) eight of the ten safety valves, reset two at a higher pressure than the test pressure, and utilize reactor coolant pump heat to produce steam as the pressurizing medium as allowed by the 1980 Edition of Section XI of the Code.

As presently written, ANO-2 Technical Specification 3/4.7.1.1 requires that all ten of the main steam line code safety valves be operable if the

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reactor is at or above Mode 3. The proposed change would make an exception to this specification when the reactor is in Mode 3 and the secondary system hydrostatic test is being performed. Additionally, the proposed change would require that the reactor trip breakers be open for the duration of the hydrostatic test. This is intended to assure that adequate protection will be maintained for design basis events such as Uncontrolled Control Element Assembly (CEA) Withdrawal, CEA Ejection, and Main Steam Line Break (MSLB), by requiring that all CEAs are inserted in the reactor core and effectively preventing their withdrawal.

### 3.0 EVALUATION

The staff has reviewed the proposed changes to the hydrostatic test and the Technical Specification. The hydrostatic test will be performed in accordance with the requirements of the 1974 Edition of Section XI except that steam in lieu of water will be used to pressurize the secondary system. This is allowed in the later edition of the Code which has been approved by the Commission. The relieving capacity of the two relief valves is greater than the energy generated by decay heat and reactor coolant pump heat thereby providing overpressure protection in accordance with Section III of the Code. The higher RCS average temperature (about 20°F) associated with the elevated mainstream system pressure for the hydrostatic test was evaluated for effects on related Chapter 15 events, MSLB, uncontrolled CEA withdrawal from a subcritical condition, and CEA ejection. The licensee concluded that the consequences of any of these events with the higher RCS temperature would be bounded by the FSAR accident analysis. Additionally the TS procedures will require that the reactor trip breakers be open for the duration of the test to effectively prevent CEA withdrawal. The staff, therefore, finds that the proposed Technical Specification change to accommodate the performance of the hydrostatic test will not affect plant safety and is acceptable.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment relates to changes in installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: April 6, 1988

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