



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENTS NOS. 93 AND 61 TO FACILITY OPERATING LICENSES

NOS. DPR-51 AND NPF-6

ARKANSAS POWER & LIGHT COMPANY

ARKANSAS NUCLEAR ONE, UNITS 1 AND 2

DOCKET NOS. 50-313 AND 50-368

Introduction

By letter dated October 31, 1980, supplemented by letters dated December 2, 1980, August 23, 1983, and July 11, 1984, Arkansas Power & Light Company (the licensee or AP&L) requested amendments of the Technical Specifications (TS), Appendix A, appended to Facility Operating Licenses Nos. DPR-51 and NPF-6 for Arkansas Nuclear One, Units Nos. 1 and 2 (ANO-1&2), respectively. The proposed amendments would change the TS to incorporate hydrogen/oxygen concentration limitations and hydrogen/oxygen monitoring requirements in the radioactive waste gas systems. The proposed TS would establish hydrogen/oxygen concentration limits in the Waste Gas Surge Tanks and Waste Gas Decay Tanks such that the likelihood of the formation of explosive gas mixtures in the radioactive waste gas systems would be small. The proposed revision would also provide the additional requirement of continuous monitoring of waste gas to the waste gas decay tanks by redundant waste gas analyzers. If both redundant analyzers would become inoperable during waste gas operation, the proposed change would require suspension of all additions of waste gas to the decay tanks or allow continued operation if grab samples would be taken every four hours followed by analysis within eight hours.

Background and Discussion

The proposed TS changes are a result of our review of the licensee's proposed amendment to the license for ANO-1 dated March 9, 1979, which would incorporate Radiological Effluent Technical Specifications (RETS) into the ANO-1 Appendix A TS. The licensee's submittal was in response to NUREG-0472, Revision 2, Standard Radiological Effluent Technical Specifications for PWRs. Our concern was focused on the absence of any hydrogen/oxygen concentration limits in the licensee's proposed RETS and in the sampling capabilities and analysis provisions for potential explosive mixtures in the waste gas system. Such limits were needed to prevent the formation of flammable or explosive mixtures in the waste gas systems. The Waste Gas Surge Tanks and Waste Gas Decay Tanks are not designed to withstand hydrogen explosions. As a result of this concern, the licensee established operating limits in procedures and installed redundant hydrogen/oxygen analyzers in both ANO-1&2 waste gas systems and submitted the proposed amendments to ANO-1&2 operating licenses.

### Evaluation

We have reviewed the licensee's submittals, particularly the submittal dated July 11, 1984, which was a total revision of the original proposed amendment. The licensee has proposed a 4 volume percent operation action limit for oxygen and hydrogen at ANO-1&2 waste gas systems. We have determined this to be acceptable since it would reduce the likelihood of the formation of flammable or explosive mixtures in the waste gas systems. The installation of redundant hydrogen/oxygen analyzers resolve and satisfied our concerns on sampling capabilities and analysis provisions for potential explosive mixtures in the gaseous radwaste systems. We have determined this modification to be acceptable. We also find that the proposed action statements and surveillance requirements meet the intent of NUREG-0472 and do not remove or relax any existing RETS.

### Environmental Consideration

These amendments involve changes in the installation or use of facility components located within restricted areas as defined in 10 CFR Part 20 and changes in surveillance requirements. The 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 these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these 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 these amendments.

### Conclusion

We have 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: January 14, 1985

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