

July 24, 1987

Docket No. 50-313

Mr. T. Gene Campbell
Vice President, Nuclear
Operations
Arkansas Power and Light Company
Post Office Box 551
Little Rock, Arkansas 72203

Dear Mr. Campbell:

SUBJECT: ISSUANCE OF AMENDMENT NO. 108 TO FACILITY OPERATING LICENSE
NO. DPR-51 - ARKANSAS NUCLEAR ONE, UNIT NO. 1 (TAC NO. 60702)

The Commission has issued the enclosed Amendment No. to Facility Operating License No. DPR-51 for the Arkansas Nuclear One, Unit No. 1 (ANO-1). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated January 17, 1986 (1CAN018602) as supplemented June 24, 1986 (1CAN068602) and January 15, 1987 (1CAN018705).

The amendment approves a change to the low Reactor Coolant System pressure setpoint for initiation of High Pressure Injection and Low Pressure Injection. The setpoint may be changed from 1500 psig to 1526 psig.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's next Bi-weekly Federal Register notice.

Sincerely,

JS

George F. Dick, Jr., Project Manager
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 108 to DPR-51
2. Safety Evaluation

cc w/enclosures:
See next page

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*See Previous Concurrences:

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PNoonan	GDick:sr		JCalvo
7/09/87	7/09/87	7/14/87	7/24/87

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7/9/87

WJ OGC-Bethesda
My Young
7/14/87

PD4/D
JCalvo
7/ /87

Mr. G. Campbell
Arkansas Power & Light Company

Arkansas Nuclear One, Unit 1

cc:

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Honorable William Abernathy
County Judge of Pope County
Pope County Courthouse
Russellville, Arkansas 72801



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

ARKANSAS POWER AND LIGHT COMPANY

DOCKET NO. 50-313

ARKANSAS NUCLEAR ONE, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 108
License No. DPR-51

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Arkansas Power and Light Company (the licensee) dated January 17, 1986 as supplemented June 24, 1986 and January 15, 1987, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.c.(2) of Facility Operating License No. DPR-51 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Jose A. Calvo

Jose A. Calvo, Director
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 24, 1987

ATTACHMENT TO LICENSE AMENDMENT NO.108
TO FACILITY OPERATING LICENSE NO. DPR-51
DOCKET NO. 50-313

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

Remove

49
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Insert

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3.5.3 Safety Features Actuation System Setpoints

Applicability

This specification applies to the safety features actuation system actuation setpoints.

Objective

To provide for automatic initiation of the safety features actuation system in the event of a breach of reactor coolant system integrity.

Specification

The safety features actuation setpoints and permissible bypasses shall be as follows:

<u>Functional Unit</u>	<u>Action</u>	<u>Setpoint</u>
High Reactor Building Pressure*	Reactor Building Spray	≤30 psig (44.7 psia)
	High Pressure Injection	≤4 psig (18.7 psia)
	Start of Reactor Building Cooling and Reactor Building Isolation	≤4 psig (18.7 psia)
	Reactor Bldg. Ventilation	≤4 psig (18.7 psia)
	Low Pressure Injection	≤4 psig (18.7 psia)
	Penetration Room Ventilation	≤4 psig (18.7 psia)
	Low Reactor Coolant System Pressure**	High Pressure Injection
	Low Pressure Injection	≥1526 psig
	Start of Reactor Building Cooling and Reactor Building Isolation	≥1526 psig

*May be bypassed during reactor building leak rate test.

**May be bypassed below 1750 psig and is automatically reinstated above 1750 psig.

With the safety features actuation setpoints less conservative than the above values, declare the channel inoperable and apply the applicable Action requirements of Table 3.5.1-1 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the trip setpoint value.

Bases

High Reactor Building Pressure

The basis for the 30 psig and 4 psig setpoints for the high pressure signal is to establish a setting which would be reached in adequate time in the event of a DBA, cover a spectrum of break sizes and yet be far enough above normal operation maximum internal pressure to prevent spurious initiation.

Low Reactor Coolant System Pressure

The basis for the 1526 psig low reactor coolant pressure setpoint for high and low pressure injection initiation is to establish a value which is high enough such that protection is provided for the entire spectrum of break sizes and is far enough below normal operating pressure to prevent spurious initiation. (1)

REFERENCE

- (1) FSAR, Section 14.2.2.5
- (2) B&W Calculation 32-1158581



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 108 TO

FACILITY OPERATING LICENSE NO. DPR-51

ARKANSAS POWER AND LIGHT COMPANY

ARKANSAS NUCLEAR ONE, UNIT NO. 1

DOCKET NO. 50-313

INTRODUCTION

By letters dated January 17 and June 24, 1986 (1CAN018602 and 1CAN068602), Arkansas Power and Light Company (AP&L or the licensee) requested 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 the low Reactor Coolant System (RCS) pressure setpoint for initiation of High Pressure Injection (HPI) and Low Pressure Injection. The setpoint would be changed from 1500 psig to 1526 psig.

BACKGROUND

NUREG-0737 Item II.K.3.30 required licensees to substantiate with experimental data their method for analyzing the small break loss of coolant accident (SBLOCA) and revise these methods accordingly. To respond to this action the Babcock & Wilcox Owners Group (BWOOG) submitted modifications to the CRAFT-2 computer program.

The use of the modified version of the CRAFT-2 program showed that the setpoint in the ANO-1 Technical Specifications for the initiation of HPI, upon the loss of RCS pressure, was too low to assure conformance with 10 CFR 50.46. The licensee had the Babcock & Wilcox Company (B&W) perform a loop error analysis for the low pressure initiation signal and submitted a proposed change to its Technical Specifications which would raise this setpoint from 1500 psig to 1526 psig.

In response to questions from the staff, the licensee provided, in letter dated January 15, 1987 (1CAN018705), a copy of the detailed loop error calculation upon which the setpoint change request was based. This was also reviewed. The submittal provided supplemental information which did not alter the action noticed in the Federal Register on August 27, 1986 or affect the staff initial determination concerning the application.

EVALUATION

B&W performed the loop error analysis two ways:

- (1) a linear method with maximum tolerance.
- (2) a statistical, square root of the sum of the squares (SRSS) method.

The linear method with maximum tolerances gave a higher setpoint (1558 psig). The SRSS method gave the 1526 psig setpoint.

The staff finds the loop error analysis acceptable. The SRSS method is appropriate and adequately conservative for determining the setpoint which will permit the initiation of high pressure injection such that peak cladding temperature will not exceed 2200°F. Therefore, the proposed Technical Specification changing this setpoint from 1500 to 1526 psig is acceptable and will provide assurance that ANO-1 meets the criteria of 10 CFR 50.46.

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.

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: July 24, 1987

Principal Contributor: E. Lantz