



ARKANSAS POWER & LIGHT COMPANY
CAPITOL TOWER BUILDING/P. O. BOX 551/LITTLE ROCK, ARKANSAS 72203/(501) 377-3525

T. GENE CAMPBELL
Vice President - Nuclear

August 31, 1988

1CAN088803

U. S. Nuclear Regulatory Commission
Document Control Desk
Mail Station P1-137
Washington, D.C. 20555

Attn: Mr. Jose A. Calvo, Director
Project Directorate IV
Division of Reactor Projects
III, IV, V and Special Projects

SUBJECT: Arkansas Nuclear One - Unit 1
Docket No. 50-313
License No. DPR-51
Reactor Protection System Trip Setpoint
Technical Specification Change Request

Dear Mr. Calvo:

Attached for your review and approval are proposed Technical Specification changes revising the Variable Low Pressure Trip Setpoint of the ANO-1 Reactor Protection System (RPS). These Technical Specification changes are requested for support of Cycle 9 operation.

Our letter, dated July 20, 1988 (1CAN078803), submitted to you the Cycle 9 Reload Report and associated Technical Specification changes. AP&L has subsequently determined that the reload report analyses also support a change to the RPS Variable Low Pressure Trip Setpoint. The proposed change will provide additional operating margin which will enhance the availability of ANO-1 by potentially reducing unnecessary reactor trips.

The revised RPS trip setpoint is based on the analyses performed for the Cycle 9 Reload Report, and the attached Technical Specification changes are consistent with those submitted with the reload report. AP&L consequently, suggests that the joint review of this change with the reload report and issuance of a single amendment would be the most effective use of NRC resources.

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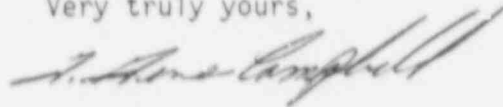
August 31, 1988

AP&L has evaluated the proposed changes in accordance with 10CFR50.91(a)(3) using the criteria in 10CFR50.92(c) and has determined that these changes involve no significant hazards consideration. The bases for these determinations are included in the enclosed submittal. The circumstances of this proposed amendment is not exigent or emergency. However, we do request your prompt review as our current projections are for an ANO-1 Cycle 9 startup on approximately October 30, 1988.

A copy of this amendment request and enclosure has been sent to Ms. Greta Dicus, Director, Division of Radiation Control and Emergency Management, Arkansas State Department of Health in accordance with 10CFR50.91(b)(1).

A check in the amount of \$150.00 is included herewith as an application fee in accordance with 10CFR170.12(c).

Very truly yours,



T. Gene Campbell


TGC/lg

Attachments/Enclosures

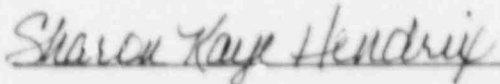
cc: Ms. Greta Dicus, Director
Division of Radiation Control
and Emergency Management
Arkansas Department of Health
4815 West Markham Street
Little Rock, Arkansas 72201

STATE OF ARKANSAS)
)
COUNTY OF PULASKI) SS

I, T. Gene Campbell, being duly sworn, subscribe to and say that I am Vice President, Nuclear for Arkansas Power & Light Company; that I have full authority to execute this oath; that I have read the document numbered 1CAN088803 and know the contents thereof; and that to the best of my knowledge, information and belief the statements in it are true.


T. Gene Campbell

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for the County and State above named, this 31st day of August, 1988.


Notary Public

My Commission Expires:

9-19-89

ENCLOSURE
PROPOSED TECHNICAL SPECIFICATION
AND
RESPECTIVE SAFETY ANALYSES
IN THE MATTER OF AMENDING
LICENSE NO. DPR-51
ARKANSAS POWER & LIGHT COMPANY
ARKANSAS NUCLEAR ONE, UNIT 1
DOCKET NO. 50-313

PROPOSED CHANGES

The proposed amendment would change the Reactor Protection System (RPS) Variable Low Pressure Trip Setpoint in ANO-1 Technical Specification 2.3. Revised copies of the affected pages are included in this attachment.

The revised setpoint appears in Bases Section C, in Figure 2.3-1, and in Table 2.3-1. The third paragraph of Bases Section C has also been modified to present a more meaningful description of how the calibration and instrument errors associated with the setpoint are accounted for in the Safety Analysis. The change indicates that the safety analyses are based on the Pressure/Temperature Safety Limit of Technical Specification 2.1.1 which is error adjusted to develop the RPS trip setpoint.

Page 13 of Technical Specifications was also modified by the changes proposed in the Cycle 9 Reload Report submittal. Those changes were also included on page 13 of this submittal. The attached page 13, therefore, supersedes the corresponding page of the earlier submittal. The other two attached pages were not affected by the earlier submittal.

DISCUSSION

The RPS Variable Low Pressure Trip, in conjunction with the Low Pressure and High Temperature Trips, prevent reactor operation with the Reactor Coolant System pressure and temperature conditions outside the core protection safety limit of Technical Specification 2.1.1. This core protection safety limit provides a conservative margin to the pressure/temperature conditions at which departure from nucleate boiling (DNB) would occur. The limit provides a 95% probability at a 95% confidence factor that DNB will not occur during steady-state operation, normal operational transients, and anticipated transients.

The core protection safety limit of Technical Specification 2.1.1 has been revised to reflect the cycle specific analyses for Cycle 9. This proposed change was submitted earlier with the reload report. At the time of the analyses, the current RPS Variable Low Pressure Trip Setpoint was demonstrated to be conservative and no detailed setpoint calculations were performed. When the potential benefits of making a corresponding change to the RPS trip setpoint were realized, the additional calculations were initiated.

The revised RPS setpoint was derived by error adjusting the core protection safety limit which was used in the safety analyses for the Cycle 9 Reload Report. Therefore, the revised RPS trip setpoint is consistent with the Cycle 9 Reload Report analyses and conclusions. Changing the setpoint has no negative impact on the safe operation of ANO-1 for Cycle 9.

DETERMINATION OF SIGNIFICANT HAZARDS

Arkansas Power & Light Company has performed an analysis of the proposed change in accordance with 10CFR50.91(a)(1) regarding no significant hazards consideration using the standards in 10CFR50.92(c). A discussion of those standards as they relate to this amendment request follows:

Criterion 1 - Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated

The Cycle 9 Reload Report presented the results of an evaluation of accidents addressed in the ANO-1 SAR. The evaluation demonstrated that changes in the fuel cycle design and the corresponding proposed Technical Specification changes do not involve a significant increase in the probability or consequences of an accident previously evaluated. Since the safety limit of Technical Specification 2.1.1 provides the assumed RCS pressure and temperature operating limits for the evaluation of applicable steady state and transient conditions, the change to the RPS Variable Low Pressure Trip Setpoint does not affect these evaluations. Consequently, this change does not involve a significant increase in the probability or consequence of an accident previously evaluated.

Criterion 2 - Does Not Create the Possibility of a New or Different Kind of Accident from any Accident Previously Evaluated

The proposed change would not create the possibility of a new or different kind of accident from any previously analyzed. The change is to an RPS setpoint only and will result in no significant change to the operation of the unit. Similar changes in the RPS Variable Low Pressure Trip Setpoint, resulting in increased operating margin have been reviewed and accepted by the NRC for other B&W units.

Criterion 3 - Does Not Involve a Significant Reduction in a Margin of Safety

The proposed change does not involve a significant reduction in a margin of safety. The RPS Variable Low Pressure Trip prevents operation at pressure/temperature conditions beyond the core protection safety limit of Technical Specification 2.1.1. This safety limit provides the margin of safety to DNB which is not affected by this proposed setpoint change.

The Commission has provided guidance concerning the application of these standards by providing examples. Since this setpoint change is typically associated with changes supporting a fuel cycle change and the related analyses, the proposed amendment is most closely encompassed by Example (iii): "A change resulting from a core reloading, if no fuel assemblies significantly different from those found previously acceptable to the NRC for a previous core at the facility in question are involved. This assumes that no significant changes are made to the acceptance criteria for the Technical Specifications, that the analytical methods used to demonstrate

conformance with the Technical Specifications and regulations are not significantly changed, and the NRC has previously found such methods acceptable.

Therefore, based on the reasoning presented above and the previous discussion of amendment request, AP&L has determined that the requested changes do not involve a significant hazards consideration.

PROPOSED TECHNICAL SPECIFICATION CHANGES