



ARKANSAS POWER & LIGHT COMPANY

FIRST COMMERCIAL BUILDING/P.O. BOX 551/LITTLE ROCK, ARKANSAS 72203/(501) 371-7901

July 31, 1986

T. GENE CAMPBELL  
Vice President  
Nuclear Operations

1CAN078604

Mr. John F. Stolz, Director  
PWR Project Directorate No. 6  
Division of PWR Licensing - B  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

SUBJECT: Arkansas Nuclear One - Unit 1  
Docket No. 50-313  
License No. DPR-51  
Technical Specification Request to Allow Increasing the  
Turbine Trip Anticipatory Reactor Trip (ART) Threshold

Dear Mr. Stolz:

Pursuant to 10CFR50.90, Arkansas Power and Light Company requests changes to the Arkansas Nuclear One - Unit 1 (ANO-1) Technical Specifications. The revised Technical Specification pages are attached for your review and approval.

The purpose of these changes is to increase the arming threshold for the turbine trip ART from its current value of 20% power to 45% power and to correct errors in the item and table numbers referenced in the Specification. Justification for increasing the turbine trip ART threshold to 45% power is provided by the Babcock and Wilcox Topical Report BAW-1893 and its associated Safety Evaluation Report contained in the April 25, 1986 letter from Mr. D.M. Crutchfield to Mr. J.H. Taylor.

We have determined that the proposed amendments have no significant hazards considerations and are including the basis of our determination as part of this amendment package. A copy of this amendment package has been sent to Mr. E. Frank Wilson, Director, Division of Environmental Health Protection, State Department of Health.

In accordance with 10CFR170.12(c), we are including payment in the amount of \$150 for the processing of this amendment package.

8608110070 860731  
PDR ADDCK 05000313  
P PDR

Acc'd  
1/1

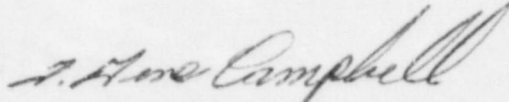
Mr. John F. Stolz

-2-

July 31, 1986

The circumstances of these proposed amendments to the ANO-1 Technical Specifications are not exigent or emergency. However, we request your prompt review of this amendment request as our plans are to implement these changes before November 3, 1986.

Very truly yours,

A handwritten signature in cursive script, appearing to read "T. Gene Campbell".

T. Gene Campbell

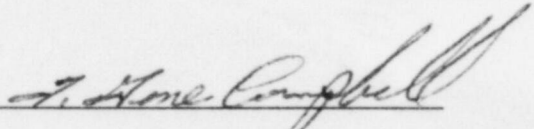
TGC:MJS:ji

Attachments

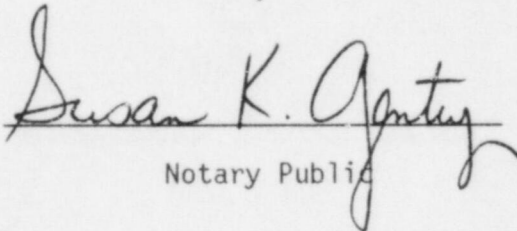
STATE OF ARKANSAS )  
 )  
COUNTY OF PULASKI )

SS

I, T. Gene Campbell, being duly sworn, subscribe to and say that I am Vice President, Nuclear Operations for Arkansas Power & Light Company; that I have full authority to execute this oath; that I have read the document numbered 1CAN078604 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 5 day of August, 1986.

  
Notary Public

My Commission Expires:

May 7, 1993

NO SIGNIFICANT HAZARDS DETERMINATION



## NO SIGNIFICANT HAZARDS DETERMINATION

The proposed amendment would change Arkansas Nuclear One - Unit 1 (ANO-1) Technical Specifications 3.5.1.9.2, 3.5.1 Bases and Table 3.5.1-1 to allow increasing the arming threshold for the turbine trip anticipatory reactor trip (ART) from its current value of 20% power to 45% power.

The purpose of the ART is to provide a reactor trip signal in those cases where a loss of secondary heat sink would likely result in a reactor trip on some other parameter. The ART limits reactor heat input to the system after a loss of heat sink, reducing the amount of heat that must be removed after the trip.

The current value of the arming threshold for the turbine trip ART (20% power) was based on changes required by the Commission subsequent to the TMI-2 accident to reduce challenges to and opening of the power operated relief valve (PORV). (ANO-1 utilizes an electromatic relief valve which serves the same purpose as a PORV.) Although this and other pertinent TMI-required modifications have met the objectives of reducing challenges to and opening of the PORV during anticipated high pressure transients, they have increased the frequency of reactor trips. Each reactor trip results in a challenge to plant safety systems and any reduction in reactor trip frequency will contribute to overall plant safety as well as plant availability.

Justification for the turbine trip ART proposed threshold power level of 45% is provided by the Babcock & Wilcox Technical Report BAW-1893, the Commission's Safety Evaluation of BAW-1893 and the following no significant hazards determination.

In addition to changes to the ANO-1 Technical Specifications concerning the arming threshold for the turbine trip ART, administrative changes to Sections 3.5.1.9.1 and 3.5.1.9.2 are also proposed. The purpose of these administrative changes is to correct errors in the table referred to in the Specifications.

### BASIS FOR NO SIGNIFICANT HAZARDS DETERMINATION

The proposed change does not involve a significant hazards consideration because operation of ANO-1 in accordance with this change would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated.

Increasing the arming threshold for the turbine trip ART from its current value of 20% power to 45% power does not involve a significant increase in the probability or consequences of an accident previously evaluated. For ANO-1, successful runbacks on turbine trip have been demonstrated for a power level of 100%. An unsuccessful power runback will lead to a reactor trip on high pressure. (A Technical Specification amendment request to return the setpoint for reactor trip

on high pressure to the original value of 2355 psig has been submitted via letter 1CAN078608 dated July 18, 1986.) Since an unsuccessful power runback results in a high pressure reactor trip for which the original FSAR analyses remain applicable, increasing the arming threshold for the turbine trip ART to 45% power does not increase the consequences of analyzed accidents. Furthermore, the NRC SER for BAW-1893 states that the number of PORV openings per reactor-year for all events is negligibly affected by this change and that the requirements of Item II.K.3.2 and Item II.K.3.7 of NUREG-0737 are met even if a number of power runbacks are unsuccessful at the proposed turbine trip ART power threshold of 45%. Therefore, the probability of a previously evaluated accident is not significantly increased.

The administrative changes to Sections 3.5.1.9.1 and 3.5.1.9.2 of the ANO-1 Technical Specifications do not increase the probability or consequences of an accident previously evaluated. Correcting the referenced table number has no impact on the safety analyses of Chapter 14 of the ANO-1 FSAR.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated.

Increasing the turbine trip ART power threshold to 45% does not create the possibility of a new or different kind of accident. The function of the arming threshold for the turbine trip ART is not altered as a result of the change (i.e., the arming threshold still serves the purposes of providing a reactor trip signal in those cases where a loss of secondary heat sink would likely result in a reactor trip on some other parameter and limiting reactor heat input to the system after a loss of heat sink).

The administrative changes to Sections 3.5.1.9.1 and 3.5.1.9.2 of the ANO-1 Technical Specifications have no impact on plant operations. These changes are merely corrections to references given in the sections.

3. Involve a significant reduction in a margin of safety.

Raising the arming threshold for the turbine trip ART from its current value of 20% power to 45% power does not involve a significant reduction in a margin of safety. The NRC Safety Evaluation of BAW-1893 concludes that this power level threshold change meets the NRC requirements of NUREG-0737, Items II.K.3.2 and II.K.3.7 regarding PORV openings and PORV caused Small Break Loss of Coolant Accident (SBLOCA) while benefitting plants by potentially reducing the reactor trip frequency. Similarly, the requirements on this matter embodied in IE Bulletin 79-05B concerning PORV openings and limiting reactor heat input to the system after a loss of heat sink are also met.

The administrative changes to Sections 3.5.1.9.1 and 3.5.1.9.2 of the ANO-1 Technical Specifications does not involve a significant reduction in a margin of safety. The purpose of these changes is to reflect the correct item and table numbers referenced in the Specifications.

The Commission has provided guidance concerning the application of the standards for determining whether a significant hazards consideration exists by providing certain examples (48FR14870) of amendments that are considered not likely to involve significant hazards consideration. Example (iv) relates to a relief granted upon demonstration of acceptable operation from an operating restriction that was imposed because acceptable operation was not yet demonstrated. This assumes that the operating restriction and the criteria applied to a request for relief have been established in a prior review and that it is justified in a satisfactory way that the criteria have been met. Example (i) relates to a purely administrative change to Technical Specifications: for example, a change to achieve consistency throughout the Technical Specifications, correction of an error or a change in nomenclature.

The proposed amendment to raise the arming threshold for the turbine trip ART is similar to Example (iv) in that demonstration of acceptable operation with the 45% power threshold for ART is provided by BAW-1893. The Commission's review of BAW-1893 and the Safety Evaluation Report for BAW-1893 provide justification that the criteria applied to this request for relief have been met.

The proposed amendment to correct the item and table numbers referred to in Specifications 3.5.1.9.1 and 3.5.1.9.2 is similar to Example (i) in that these changes are corrections to errors.

Therefore, based on the above, AP&L has determined that these changes do not involve a significant hazards consideration.