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May 23, 1979

1-059-33

Director of Nuclear Reactor Regulation
ATTN: Mr. R. W. Reid, Chief
Operating Reactor Branch #4
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Arkansas Nuclear One - Unit 1
Docket No. 50-313
License No. DPR-51
Information To Support Post
May 17, 1979, Order Startup Effort
(File: 1510)

Gentlemen:

To address questions of the NRC staff as a result of the May 17, 1979, Order, the following is provided.

Question:

What savings are realized from anticipatory trips based on past plant experience for feedwater and turbine trips resulting in reactor trips.

Response:

Past records do not allow AP&L to identify time intervals in terms of seconds from feedwater or turbine trips to final reactor trips. The information we do have illustrates the heat input savings and will show the advantage of not lifting the electromatic relief valve on anticipatory trips.

For main feedwater trips resulting in a reactor trip we have data on April 25, 1977 MFW trip at 100% reactor power which resulted in reactor trip. The initial RCS conditions were 601°F and 2140 psi which spiked to 2315 psi during the event. A reactor leading trip which is considered in a class with the present anticipatory trip arrangement discussed in our May 17, 1979 letter occurred on May 9, 1977. This event resulted in an immediate down turn of RCS pressure and temperature which would be the case in anticipatory trips.

For turbine trips resulting in a reactor trip we have data on a January 6, 1975 turbine trip at 98% reactor power which resulted in a reactor trip. The initial RCS conditions were 600.5°F

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and 2155 psi which spiked to 2325 psi during the event. Again a reactor leading trip similar to anticipatory trips would result in an immediate down turn of RCS pressure and temperature.

The expected savings in heat input for anticipatory trips would be shown in the reduction of peak RCS pressure by approximately 200 psi. This pressure rise is caused by temperature increase alone. The anticipatory trips would prevent electromatic relief valve operation as well.

Question:

What evolutions will be included in the Emergency Feedwater flow-test that will be conducted immediately following startup?

Response:

The test procedure is undergoing a final review by the plant safety committee. The final procedure will be made available to the onsite NRC staff inspection team and will be sent to the NRC staff in Washington.

Very truly yours,

David C. Trimble

David C. Trimble
Manager, Licensing

DCT:vb