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Docket
NRC PDR
Local PDR
ORB #2 Reading
VStello
KRGoller
TJCarter
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OI&E (3)
DLZiemann
RPSnaider
RDSilver
RMDiggs
MMendonca
DEisenhut
TBAbernathy
JRBuchanan
ACRS (16)

Docket No. 50-313

JAN 21 1977

Arkansas Power & Light Company
ATTN: Mr. J. D. Phillips
Senior Vice President
Production, Transmission
and Engineering
Sixth and Pine Streets
Pine Bluff, Arkansas 71601

Gentlemen:

RE: ARKANSAS NUCLEAR ONE - UNIT NO. 1 (ANO-1)

We have commenced review of your December 1, 1976 reload analysis for ANO-1 and have determined that the additional information described in the attachment is required. Based on our preliminary review of your January 13, 1977 submittal concerning the B&W proposed Rod Bow Model and your December 30, 1976 submittal concerning the Fission Gas Release Analysis, we expect to need more information on these subjects. Your response to our December 7, 1976 letter regarding the B&W ECCS model nucleate heat transfer correlation, when received, may also require additional information.

Accordingly, to prevent adverse impact upon your schedule and to allow sufficient time for our review, we request that your response to this request reach the NRC no later than February 7, 1977.

Sincerely,

Original Signed by:
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosure:
Request for Additional
Information

cc w/enclosures:
See next page

THIS DOCUMENT CONTAINS
POOR QUALITY PAGES

OFFICE ➤	DOR:ORB #2	DOR:ORB #2				
SURNAME ➤	RPSnaider:ah	DLZiemann		8004210650		
DATE ➤	1/21/77	1/21/77				

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1977

cc w/enclosure:
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ARKANSAS POWER & LIGHT COMPANY
ARKANSAS NUCLEAR ONE - UNIT NO. 1 (ANO-1)
DOCKET NO. 50-313
REQUEST FOR ADDITIONAL INFORMATION

A. PHYSICS STARTUP TESTS

1. Provide a list of Physics Startup Tests and briefly describe each test to be performed for the cycle 2 reload. Also provide the acceptance criterion for each test and discuss how the measured parameter(s) relates to the values in the accident analysis.
2. Describe in detail the bank reactivity worth tests, the maximum deviations from calculated values expected, the criteria used for establishing the maximum permissible deviations, and the procedures to be followed if these deviations are exceeded.
3. State your schedule for submitting to the NRC a brief summary report of physics startup tests. This report should include both measured and predicted values. If the difference between the measured and predicted value exceed the acceptance criterion, the report should discuss the actions that were taken and justify the adequacy of these actions.

B. BAW - 1433, RELOAD REPORT

1. Discuss the implied conservatisms for the larger densified fuel stack, i.e., 141.12 inches (page 6-2).
2. Provide the DNBR sensitivity study for flux/flow setpoint inclusive of the minimum acceptable DNBR of 1.3 (pages 6-3 and 6-4). List the DNBR at which the analyses were conducted.
3. For the cold water accident, the report quoted an initial power of 50% of rated for 2 pump operation (page 7-3) as compared with the maximum permissible power level with 2 pump operation of 52.6% of rated power level (page 8-6). Provide the analysis of accident initiation from the maximum allowable setpoint of 52.6% thermal power level.
4. Provide the analysis which incorporates the effect of fuel rod bow on power peaking and core parameters (page 8-1).

C. TECHNICAL SPECIFICATIONS

1. Provide the analysis which was used to establish figure 2.1.3 and discuss this analysis in detail. Your discussion should include:
   a. The reasons for identical three and four pump operational curves for core protection safety limits on reactor coolant pressure and temperature; and

b. The means of incorporation of the fuel rod bow DNBR penalty (figure 2.1.3). Specifically, was this penalty imposed on all modes of operation (i.e., 2, 3, and 4 pump operational modes)? Discuss how the TEMP and CHATAH codes are used in the analysis.

2. Provide revised Technical Specifications for core vent valve test requirements as follows: The test requirements on the vent valves (page 73a) must include a test for that moment when the vent valves start to open. The vent valves must start to open at a differential pressure of $\leq$0.15 psi and must be fully open at $\leq$0.30 psid. If force equivalents are to be specified, a detailed analysis and documentation is required.

3. Discuss why the curves for core protection safety limit (figure 2.1.3) must be duplicated in figure 2.1-1. If this duplication is not required, we recommend that the figures be incorporated into a single figure.