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

April 10, 1981

Docket No. 50-368

Mr. William Cavanaugh, III
Senior Vice President
Energy Supply Department
Arkansas Power & Light Company
P. O. Box 551
Little Rock, Arkansas 72203

Dear Mr. Cavanaugh:

The staff has reviewed your February 20, 1981 and March 5, 1981 submittals on the ANO-2 Cycle 2 reload and has identified a need for additional information as set forth in the enclosure.

Please contact us if you have questions regarding the items noted in the enclosure.

Sincerely,

Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Enclosure:
As stated

cc: See next page

P

Arkansas Power & Light Company

cc:

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REQUEST FOR ADDITIONAL INFORMATION REGARDING THE ANO-2 CYCLE 2 RELOAD REPORT AND OTHER MATTERS

Introduction

The following request for additional information is based on primarily on our review of the ANO-2 Cycle 2 Reload Report submitted in two parts on February 20, 1981, and March 5, 1981. It also includes questions on several other matters which we feel are suitable for resolution during this refueling outage review of the technical specifications.

Part I concerns that Reload Report. Each of these questions is identified with the applicable section of the Reload Report. Question 10 identifies information needed for the review of the proposed new Technical Specification pages.

Part II identifies concerns which have developed as a result of our review of ANO-2 Cycle 1 operating experience and as a result of our review of your letters dated September 3, 1980 and February 28, 1981 on the CPC/CEAC data links.

Part III identifies other issues which we feel are suitable for resolution during this overall refueling outage review.

PART ONE - RELOAD REPORT

Q-1 (4.1) Discuss whether or not the internal fuel rod pressures are predicted to be equal to or greater than coolant pressure throughout Cycle 2.

Q-2 (4.2) Discuss your plans and procedures for the submission of CEA guide tube surveillance results pursuant to license condition number 2.C.3.1. Note that this is required prior to startup of Cycle 2.

Q-3 (7.0) Discuss your plans for the submission of the CESEC code verification information pursuant to license condition 2.C.3.g. This information should be provided to support the use of the CESEC - II code.

Q-4 (7.1.4) Discuss the value of initial steam generator pressure in Table 7.1.4-1 for Cycle 2 relative to the expected values for operation.

Q-5 (7.1.8) Discuss the degree of similarity of the methods used, computer codes used, etc., in the Cycle 1 analysis relative to the Cycle 2 analysis, i.e., define "consistent". Are the Cycle 2 methods and codes identical to the Cycle 1 methods and codes, except for CETOP?

Q-6 (7.2.3) The time required for the automatic initiation of emergency feedwater pump operation had also been the subject of AP&L Co., letters dated August 1, 1980 and July 4, 1979. Please clarify the value of the parameter specified in Technical Specification Table 3.3-5 items 7a and 8a which were used in all safety analysis. Identify and discuss the intervals of time which when added together result in the value specified in Table 3.3-5. Address the 65 second and 118 second values in your August 1, 1980 letter relative to the values currently specified in the Technical Specifications.

Q-7 (7.2.5) Identify the number of pins expected to experience DNB due to the siezed RCP shaft event for the Cycle 1 analysis and the Cycle 2 analysis.

Q-8 (8.0) Reference the letter of approval for the latest version of each of the CE topical reports and codes listed in Sections 8.0 through 8.5.

Q-9 (8.3) Provide a figure or table showing the values of the steam cooling heat transfer coefficient versus axial location for the Cycle 1 analysis and for the Cycle 2 analysis.

Q-10 (11.0) Comments on proposed Technical Specification changes are identified below by their change # and TS page number as they appear in Section 11 of the Reload Report.

9 (2-4) Address the effects of the setpoint change on those events which are calculated to reach the Linear Power Level - High trip setpoint.

9 (2-4) Discuss the uncertainties associated with the Fisher Porter versus the Rosemount transmitters which necessitated these setpoint changes. List the trip value required by the safety analyses followed by the various uncertainty contributions necessary to arrive at the instrument trip setpoint.

9 (2-4) The pressurizer pressure-high trip setpoint was also the subject of your letter dated November 27, 1979 wherein you proposed an increase from 2345 to 2368 to eliminate a dynamic allowance imposed prior to operation. Does the now proposed value of 2362 reflect deletion of that dynamic allowance or is it solely due to the Fisher Porter/Rosemount transmitter changeout?

If the value of 2362 reflects deletion of the dyanamic allowance please describe the physical phenomena associated with this allowance and provide justification for its deletion.

25, 26 (3/4 2-1 3/4 2-2 3/4 2-3) It is understood that COLSS displays a power operating limit value in percent (or percent over power) which could be achieved without violating the steady state limit of 14.5 KW/ft. and that COLSS does not display values of KW/ft. Therefore with COLSS in service the new proposed Figure 3.2.-1 is governing. With COLSS in service the CPC's may display a KW/ft. value in excess of 14.5 based on the greater uncertainties in the CPC's than in COLSS. With COLSS out of service operation is governed by the CPC KW/ft. output which must be implemented per the proposed Figure 3.2-2.

It is understood that Technical Specification change #25 does not change in any way the manner in which the plant is operated or the safety margins which are maintained but does provide clarification.

Confirm that the above understanding is correct in each of its elements or provide needed clarifications.

29 (3/4 2-7) As has been discussed in previous correspondence to AP&L Co., the Cycle 1 rod bow penalty defined in Technical Specification 4.2.4.4 shall continue in effect until an alternate penalty is justified.

36 (3/4 3-2, 3, 4, 5) The request for extended bypass times for one RPS channel will be addressed by the staff on a schedule independant of the Reload Report schedule.

40 (3/4 3-18) Justify the change in the Steam Generator differential pressure trip setpoint from 39 to 90 psi. Discuss the safety analyses in the FSAR and the reload report which are based on this trip setpoint. Provide the value of the trip setpoint utilized in the safety analysis and an explanation of the derivation of the proposed new value.

41 (3/4 4-1) The Reload Report, by stating that "part loop operation has not been approved by the NRC", may imply that application was made for part loop operation. Therefore it should be clarified that the application and bases for part loop operation has not been submitted on the ANO-2 docket.

44 (3/4 42) Discuss how the application of the proposed MODE 3 Technical Specification supports the steam line break analysis.

47 (3/4 7-5) Reference and/or provide the sections of ASME Section XI and the ANO-2 Inservice Inspection and Testing Plan which govern testing of the EFW pump. Does the plan require the monthly testing to verify a specified flow rate at a specified discharge pressure?

48 (3/4 7-8) Describe the bases for the change from less than or equal to 0.10 micro curies per gram dose equivalent I-131 to less than or equal to 0.046 micro curies per gram.

61 (B3/4 7-2) The recent problems you refer to with the electric driven feedwater pump suggest that the pumping capability, although capable of meeting revised safety analysis considerations, may have been reducted somewhat. Outline your plans for evaluating this matter and provide a schedule for reporting to the staff the results of your evaluation and corrective actions to be taken as required.

PART II - INSTRUMENTATION AND CONTROLS SYSTEM

Q-1. The staff feels that AP&L Co., should propose technical specifications to assure that the CPC is not considered operable when environmental conditions including cyclic or ramped temperature fluctuation exceed those for which the CPC has been qualified. Provide justification for the environmental limits proposed.

Q-2. Table 3-4 of CEN 147(s)-P contains upper and lower proposed allowed bounds on addressable constants. These bounds as currently proposed would restrict the values of addressable constants entered into the CPC to avoid only very gross errors. Other, smaller, yet unacceptable values could be entered. For example, a negative value of a diagonal element of the shape annealing correction matrix does not seem justified and such values should be rejected by the computer. Furthermore, there may be values of addressable constants within the current proposed bounds which if entered could lead to violation of DNBR or LPD limits even when the CPC is otherwise functioning properly.

Therefore, please adopt more restrictive bounds on the addressable constants to assure that values may not be entered which are physically unrealistic or which could lead to violation of DNBR or LPD limits even when the CPC is otherwise functioning properly.

Provide a commitment to so modify CPC addressable constant limits at the next CPC software change but not later than six months from the date of this letter.

Q-3. The staff feels that AP&L Co., should propose technical specifications to assure that (a) plant procedures shall be in effect to control modifications to CPC addressable constants (b) these procedures are consistent with Approved Physics and Thermal Hydraulic Methods; the approved methods should be referenced in the bases to the Technical Specifications (c) CPC Addressable constants and their allowed ranges (i.e., upper and lower bounds) are identified in the Technical Specifications (d) values of Addressable Constants outside the allowed range are not to be entered without approval of the Plant Safety Committee (e) An independent verification

shall be conducted to confirm that Addressable Constant Modifications have been made as approved by the Plant Safety Committee or the Engineering Staff (whichever is applicable) (f) Modifications to the CPC Addressable Constants based on information obtained through the Plant Computer Data Links shall not be made without approval of the Plant Safety Committee.

PART III - OTHER ISSUES

Q-1. Your letter of August 29, 1980 requested an extension from 12 to 24 hours for setting the pressurizer code safety valves during Mode 3. The following information is needed to enable our review.

a) Was the subject testing performed as part of the ANO-2 ASME Code Section XI inservice testing and inspection program?

b) How many tests have been conducted on these valves to date and what was the time required to do each of these tests?

c) How does AP&L Co's., experience with the testing of these valves compare to general industry practice?

d) During the testing are both valves rendered inoperable at the same time?