ARKANSAS POWER & LIGHT COMPANY
FIRST NATIONAL BUILDING/P.O. BOX 551/LITTLE ROCK, ARKANSAS 72203/(501) 371-4422

November 9, 1982

WILLIAM CAVANAUGH, III
Senior Vice President
Energy Supply

1CAN118201

Director of Nuclear Reactor Regulation
ATTN: Mr. J. F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Arkansas Nuclear One - Unit 1
Docket No. 50-313
License No. DPR-51
Proposed License Amendment/
Request for Additional Information
Concerning Secondary Water Chemistry

Gentlemen:

Please refer to your letter (1CNA088204) to Mr. William Cavanaugh III dated August 31, 1982, which requests a suitable proposed license condition and additional information concerning secondary water chemistry monitoring for Arkansas Nuclear One, Unit 1 (ANO-1). The following response and proposed amendment to the ANO-1 license is provided pursuant to your subject correspondence.

Item I:

The information you have provided is insufficient for us to evaluate the secondary water chemistry control program. Provide a summary of operative procedures to be used for the steam generator secondary water chemistry control and monitoring program, addressing the following:

1. Sampling frequency for the critical chemical and other parameters and of control points or limits for these parameters for each mode of operation: normal operation, hot startup, cold startup, hot shutdown, cold wet layup;

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2. Procedures used to measure the values of the critical parameters;

3. Location of process sampling points;

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4. Procedure for the recording and management of data;

5. Procedures defining corrective actions for off-control point chemistry conditions detailing time allowed at off-chemistry conditions; and

6. The procedures identifying (a) the authority responsible for the interpretation of the data and (b) the sequence and timing of administrative events required to initiate corrective action.

Response:

The requested information necessary to respond to this item is contained in Attachment 1 to this letter, which is a copy of ANO Procedure 1000.42 entitled, "Steam Generator Water Chemistry Monitoring - Unit One." This procedure addresses all of the above items directly, with the exception of Item I.3. In clarification of that Item, the following information is provided.

Process samples and their sampling points are:

1. Feedwater Sample - Samples are obtained downstream of the demineralizer units;

2. Final Feedwater Sample - Samples are obtained downstream of the feedwater heaters and upstream of the steam generators;

3. Steam Generator Sample - Samples are obtained from the steam generators; and

4. Condensate Sample - Samples are obtained from the discharge of the condensate pumps, upstream of the demineralizer units.

Item II:

Verify that the steam generator secondary water chemistry control program incorporates technical recommendations of the NSSS. Any significant deviations from NSSS recommendations should be noted and justified technically.

Response:

After reviewing NSSS vendor recommendations, two differences from those recommendations have been noted. The first difference involves the establishment of procedures for placing the feedwater heaters in wet layup. At ANO-1, only steam generator wet layup is covered by procedure. Although the feedwater heaters are initially placed in wet layup, this condition is not maintained. The secondary system is recirculated through the demineralizers and condenser prior to startup and prior to bringing the steam generators back on line, thus insuring both steam generator and secondary chemistry integrity. We do not believe additional procedures are required.

The second difference identified pertains to the performance of chemical analysis for lead in the steam generators and secondary system. The procedure for performing this analysis is currently under review.

Item III:

In addition to the secondary water chemistry monitoring and control program, we require monitoring of the steam condensate at the effluent of the condensate pump. The monitoring of the condensate is for the purpose of detecting condenser leakage. Verify that the steam condensate at the effluent of the condensate pump is monitored.

Response:

As mentioned in the response to Item I, condensate samples are taken at the discharge of the condensate pumps. Condensate is continuously monitored via in-line analyzers for sodium content (which is primarily for leakage detection) and dissolved oxygen.

Item IV:

If demineralizers are used, explain how you prevent resin breakthrough into the steam generator.

Response:

The Unit 1 condensate polisher units contain strainers which remove solid pieces of resin from the condensate effluent.

The proposed license amendment desired to formally implement the secondary water chemistry program for ANO-1 is submitted as Attachment 2 to this letter for your review and approval. Pursuant to the requirements of 10CFR170.22, we have determined our amendment request to require a Class III fee of $4,000, as it involves a single issue which does not require significant hazards determination. Accordingly, a check in the amount of $4,000 is remitted.

Very truly yours,

William Cavanaugh III

WC:DLL:sl

Attachments

STATE OF ARKANSAS)
) SS
COUNTY OF PULASKI)

I, William Cavanaugh III, being duly sworn, subscribe to and say that I am Senior Vice President for Arkansas Power & Light Company; that I have full authority to execute this oath; that I have read the document numbered 1CAN118201 and know the contents thereof; and that to the best of my knowledge, information and belief the statements in it are true.

William Cavanaugh III

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for the County and State above named, this 9th day of November, 1982.

Sharon Kaye Hendrix
Notary Public

My Commission Expires:
9-19-89