

Mr. Craig G. Anderson
Vice President, Operations ANO
Entergy Operations, Inc.
1448 S. R. 333
Russellville, AR 72801

May 12, 2000

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 2 - PROPOSED LICENSE CHANGE FOR
CYCLE 14 RISK-INFORMED OPERATION, REVIEW STATUS AND REQUEST
FOR INFORMATION (TAC NO. MA8418)

Dear Mr. Anderson:

By letter dated March 9, 2000, as supplemented by letters dated April 11 and 28, 2000, you submitted the subject license amendment application for Arkansas Nuclear One, Unit 2 (ANO-2). The application requests permission to use a risk-informed analysis of the eggcrate axial flaws of the steam generator (SG) tubes in order to conclude that the ANO-2 SGs are safe to operate until the September 2000 refueling and SG replacement outage.

Your risk-informed application is well organized in presenting an appropriate risk perspective and very comprehensive in its coverage of the accident sequences that contribute to the risk. Your initial submittal is a good start. However, it is incomplete in that it lacks the information necessary to support our staff's review of the accuracy of its numerical results. Our staff has been working with your technical and licensing personnel to obtain the additional information needed, which has resulted in the two supplements referenced above. This work has revealed serious deficiencies in the bases for your risk estimates. In particular, repeated attempts to estimate the strength of flawed SG tubes as a function of time during the current operating period have failed our staff's checks for consistency with known information. In addition, your technical personnel indicated recently that in order for you to meet Regulatory Guide 1.174 numerical risk guidance, it may be necessary to advance the state-of-the-art for predicting the effects of tube leakage during severe accident conditions. Also, additional issues involving thermal-hydraulic behavior of the plant during severe accidents and the frequency of various accident sequences may need to be resolved after the characterization of the flaws becomes sufficient to determine which issues are pertinent. Until the flaw characterization issue, and perhaps others are resolved, we cannot project when our review will be completed nor what our conclusion will be.

Review of this application was expected to be difficult, because guidance is not available for preparation of applications on this subject, and because we have not previously reviewed nor approved the industry's general methodology. As we explained last November when you first mentioned that you were considering a risk-informed application, your situation raises several issues that were not pertinent to our review of the Farley Unit 1 application. That is why we urged you to make an early application if you chose to pursue this option. However, delay of your application until March 9, 2000, and your subsequent pace of addressing our review issues was not sufficient to support a staff decision by your requested date of May 1, 2000. Our staff is willing to continue to work on the application provided that you respond to our request for an estimate of the strength of flawed SG tubes that is consistent with known information, as

discussed above. However, advancing the state-of-the-art in this area is not a realistic objective considering the time constraints of this review. The proper approach for doing that would be for the industry to submit its proposed methodology for staff review, independent of the time constraints associated with a licensing action.

If you have any questions on this matter, please contact Robert A. Gramm at 301-415-1010.

Sincerely,

/RA/

Stuart A. Richards, Director
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-368

cc: See next page

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