

October 9, 2003

Mr. Michael A. Krupa, Director  
Nuclear Safety & Licensing  
Entergy Operations, Inc.  
1340 Echelon Parkway  
Jackson, MS 39213-8298

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 2 (ANO-2) - RELAXATION REQUEST  
FROM U.S. NUCLEAR REGULATORY COMMISSION (NRC)  
ORDER EA-03-009 FOR THE CONTROL ELEMENT DRIVE MECHANISM  
NOZZLES (TAC NO. MB9542)

Dear Mr. Krupa:

By letter dated August 27, 2003, as supplemented by letters dated September 12, September 25, October 2, and October 8, 2003, Entergy Operations, Inc. (Entergy, the licensee) requested relaxation to implement an alternative to the requirements of Section IV, Paragraph C.(1)(b)(i), of the Order for all control element drive mechanism (CEDM) nozzles at ANO-2. The August 27, 2003, relaxation request supersedes a request made on June 11, 2003.

Specifically, pursuant to the process specified in Section IV, Paragraph F of the Order, you requested relaxation from the requirement specified in Section IV, Paragraph C, Item (1)(b)(i), to instead perform inspections using a three-step alternative, which involves the use of an analysis technique, ultrasonic testing, and augmented surface examination.

The NRC staff has completed its review and concludes that the proposed alternative examination of the reactor pressure vessel (RPV) head provides reasonable assurance of structural integrity of the head. Further inspection of the head surface in accordance with Section IV.C.(1)(b)(i) of the Order would result in hardship without a compensating increase in the level of quality and safety. Thus, you have demonstrated good cause for the requested relaxation. Therefore, pursuant to Section IV, Paragraph F of the Order, I authorize, for one operating cycle commencing with the startup from the Fall 2003 refueling outage, the proposed alternative inspection for all CEDM head penetration nozzles at ANO-2 are subject to the following condition:

If the NRC staff finds that the crack-growth formula in MRP-55 is unacceptable, Entergy shall revise its analysis that justifies relaxation of the Order within 30 days after the NRC informs Entergy of an NRC-approved crack-growth formula. If Entergy's revised analysis shows that the crack growth acceptance criteria are exceeded prior to the end of the operating cycle which follows the current refueling outage, this relaxation is rescinded and Entergy will, within 72 hours, submit to the NRC written justification for continued operation. If the revised analysis shows that the crack growth acceptance criteria are exceeded during the subsequent operating cycle, Entergy shall, within 30 days, submit the revised analysis for NRC review. If the revised analysis shows that the crack growth acceptance criteria are not exceeded during either the upcoming

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operating cycle or the subsequent operating cycle, Entergy shall, within 30 days, submit a letter to the NRC confirming that its analysis has been revised. Any future crack-growth analyses performed for the upcoming operating cycle and future cycles for RPV head penetrations will be based on an NRC-acceptable crack growth rate formula.

The staff's related Safety Evaluation (SE) is enclosed.

Pursuant to 10 CFR 2.790, we have determined that the enclosed SE does not contain proprietary information. However, we will delay placing the SE in the public document room for ten working days from the date of this letter to provide you with the opportunity to comment on the proprietary aspects only. If you believe that any information in the enclosure is proprietary, please identify such information line by line and define the basis pursuant to the criteria of 10 CFR 2.790.

Be aware that when vessel head inspections are performed using American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) requirements, acceptance criteria, or qualified personnel, those activities and all related activities fall within the jurisdiction of the ASME Code. Therefore, Order-related inspection activities may be subject to third party review, including those by the Authorized Nuclear Inservice Inspector.

Sincerely,

***/RA/***

Herbert N. Berkow, Director  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-368

Enclosure: Safety Evaluation

cc w/o Encl: See next page

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Herbert N. Berkow, Director  
Project Directorate IV  
Division of Licensing Project Management  
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Docket No. 50-368

Enclosure: Safety Evaluation

cc w/o Encl: See next page

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Arkansas Nuclear One

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March 2001