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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

November 19, 1999

Mr. C. Randy Hutchinson  
Vice President, Operations ANO  
Entergy Operations, Inc.  
1448 S. R. 333  
Russellville, AR 72801

SUBJECT: RELIEF AUTHORIZATION FOR ALTERNATIVE TO THE REQUIREMENTS OF  
ASME SECTION XI FOR A REPAIR AND FLAW EVALUATION  
METHODOLOGY FOR ARKANSAS NUCLEAR ONE, UNIT NO. 1  
(TAC NO. MA6525)

Dear Mr. Hutchinson:

In your application dated September 26, 1999 (1CAN099907), Entergy Operations, Inc. submitted a request seeking approval for an alternative methodology for the repair and evaluation of a flaw discovered in the decay heat removal/low pressure injection pump casing for Arkansas Nuclear One, Unit No. 1 (ANO-1).

A system pressure test was performed on the "B" loop of the ANO-1 decay heat removal system during the 1R15 refueling outage. As a result of this test, a pin-hole leak was identified in the casing of the affected decay heat removal/low pressure injection pump. The metal area around this flaw was excavated in an effort to characterize the extent of the flaw and to prepare the casing for a qualified repair in accordance with the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code). ANO-1 is currently licensed to the 1992 Edition with portions of the 1993 Addenda as listed in the ANO-1 inservice inspection program for the ASME Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components." ASME Code, Section XI, Paragraph IWA-4170 requires the repair to be performed in accordance with the original construction code with provisions to use later editions of the construction code or ASME Code, Section III, "Rules For Construction of Nuclear Power Plant Components." During the repair effort, you determined that the repair could not be completely executed in accordance with the requirements of the ASME Code. Consequently, you requested the NRC staff to review and approve an alternative repair and flaw evaluation methodology which was performed in accordance with Appendix C of the ASME Code, Section XI, 1998 Edition.

The staff has reviewed and evaluated the information in your request and finds that your proposed alternative provides an acceptable level of quality and safety. Therefore, this proposed alternative is authorized pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(a)(3)(i). The staff's authorization of this alternative was based, in part, on your proposal to conduct quarterly VT-2 visual inspections of the pump casing during this cycle. The staff's conclusions are detailed in the enclosed Safety Evaluation.

The "B" loop decay heat removal/low pressure injection pump casing flaw was identified during the 1R15 refueling outage. As a result of this flaw, the decay heat removal/low pressure injection pump would not be considered operable if the plant were in a condition in which the performance of this component was required by the technical specifications. ANO-1 Technical

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Specification 3.8.3.b requires both decay heat removal/low pressure injection pumps to be operable prior to draining down the fuel transfer canal. The draindown was scheduled for September 30, 1999, at the time you submitted your request on September 26, 1999. Therefore, the Commission chose to authorize this alternative in verbal form due to the undue regulatory burden that would have result from the delay inherent in a written authorization. This verbal authorization was made at approximately 4:00 p.m. eastern daylight time on September 29, 1999. The principal NRC staff members who participated in the telephone conversation were Mr. Robert A. Gramm, Chief, Section 1, Project Directorate IV & Decommissioning and Mr. M. Christopher Nolan, Project Manager, Section 1, Project Directorate IV & Decommissioning. Mr. Keith R. Wichman, Chief, Component Integrity Section, Material and Chemical Engineering Branch, provided his endorsement prior to the call. The enclosed Safety Evaluation documents the basis on which the staff verbally authorized this alternative on September 29, 1999.

Sincerely,

ORIGINAL SIGNED BY

Robert A. Gramm, Chief, Section 1  
 Project Directorate IV & Decommissioning  
 Division of Licensing Project Management  
 Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosure: Safety Evaluation

cc w/encls: See next page

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