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March 30, 2006

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555-0001

SUBJECT: Arkansas Nuclear One, Unit 2
Docket No. 50-368
License No. NPF-6
Advance Notice of Forthcoming Request for Relaxation to NRC Order EA 03-09 Regarding the Bare Metal Visual Inspection on the ANO-2 Reactor Vessel Head

Dear Sir or Madam:

On February 20, 2004, the Nuclear Regulatory Commission (NRC) issued a revised Order addressing interim inspection requirements for reactor pressure vessel (RPV) heads at pressurized water reactors. The NRC stated that the actions in the Order are interim measures, necessary to ensure that licensees implement and maintain appropriate measures to inspect and, as necessary, repair RPV heads and associated penetration nozzles. On May 8, 2003, Entergy Operations, Inc. (Entergy) requested relaxation from Section IV.C(1)(a) of the Order to perform a bare metal visual (BMV) inspection of 100 percent of the RPV head surface for Arkansas Nuclear One, Unit 2 (ANO-2). The NRC granted relaxation from the Order on October 9, 2003 to allow Entergy not to perform a BMV inspection of the RPV head for the fall 2003 (2R16) refueling outage.

During the subsequent 2R17 refueling outage in the spring of 2005, Entergy performed a BMV inspection of the RPV head and verified that the surface of the head had not experienced any signs of degradation. In addition to the BMV of the RPV head, the ANO-2 head has also received three consecutive nondestructive examinations over the last three refueling outages. The ANO-2 RPV head has not experienced any primary water stress corrosion cracking (PWSCC) degradation, to date.

To accommodate future BMV inspections with substantially reduced occupational radiological exposure, Entergy designed a new cooling shroud and insulation package which was to be installed during the most recent 2R17 outage. This shroud and insulation package was designed to be used on the existing RPV head as well as the replacement head. However, due to fit-up concerns experienced during the installation outage, Entergy was unable to implement the new shroud package. Entergy had to reinstall the existing cooling

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shroud and insulation in order to commence startup from the outage. This was a significant setback in being able to efficiently meet the NRC Order without unnecessary dose and to minimize the risk of equipment damage. In order to ensure the effectiveness of further modifications of the cooling shroud and lift rig, Entergy needs to obtain additional critical measurements during the upcoming fall 2006 refueling outage (2R18).

To perform another BMV inspection of the ANO-2 RPV head in the upcoming refueling outage will result in similar difficulties and dose due to not having a more accessible cooling shroud and insulation package design installed. Shroud and insulation removal would be required to perform the bare metal visual inspection. Entergy estimates that a dose savings of 17 Rem will be obtained by not performing the BMV inspection during the upcoming refueling outage. Since the integrity of the reactor vessel head was demonstrated during the last outage and the nondestructive examinations have been effective in identifying penetration flaws, the BMV could be deferred for one cycle without compromising reactor safety. Therefore, Entergy intends to seek a Relaxation to the Order for not performing an inspection of the ANO-2 RPV head BMV during the fall 2006 refueling outage.

Entergy will continue to perform nondestructive examinations with the previously demonstrated technology to meet the Order. Entergy will also perform visual inspections of accessible head penetrations through the cooling shroud periphery as well above the shroud. Even though we have not experienced any nozzle or weld failures on the ANO-2 RPV head to date, Entergy is prepared to take the appropriate actions to meet the intent of the Order if nozzle failures or other conditions are experienced that can degrade the integrity of the carbon steel. These actions will include:

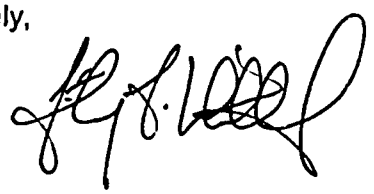
1. If a throughwall flaw is detected, Entergy will perform a bare metal visual examination to the extent necessary to assure the structural integrity of the RPV head.
2. If boric acid accumulation is identified during visual inspections of the RPV head periphery, further inspection and evaluation will be performed to ensure that no degradation of the RPV head has occurred.
3. Any findings will be addressed through the ANO corrective action program and will be discussed with the NRC staff. A report of our findings and resolution will be submitted to the NRC prior to startup from the outage

Additionally, Entergy is continuing to focus resources on reactor coolant system leakage concerns due to PWSCC. In the forthcoming 2R18 refueling outage, Entergy will be replacing the ANO-2 pressurizer with a like-for-like design using improved Alloy 690 materials along with other Alloy 600 nozzle modifications.

The purpose of this letter is to notify the NRC staff of our intent and to request Order Relaxation and to gain any NRC insights prior to the formal request for Order Relaxation. Entergy intends to submit the formal relaxation request to the NRC on or before April 28, 2006.

There are no commitments associated with this letter. If you require additional information, please contact Steve Bennett at 479-858-4626.

Sincerely,



JSF/sab

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