

From: Thomas Alexion
To: STEVE A BENNETT
Date: 12/3/04 4:52PM
Subject: RAI FOR REVIEW OF ANO-1 SG ISI REPORT FOR 1R18 - Docket 50-313

Steve,

Can you pass this on to Fred Van Buskirk. He is listed as the contact, but I don't have his e-mail. See the attached.

Tom

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50-313
Creation Date: 12/3/04 4:52PM
From: Thomas Alexion
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REQUEST FOR ADDITIONAL INFORMATION
SPRING 2004 ONCE-THROUGH STEAM GENERATOR TUBE INSERVICE INSPECTIONS
ARKANSAS NUCLEAR ONE, UNIT 1
DOCKET NO. 50-313

By letters dated May 10, 2004 (ADAMS Accession No. ML041340444), and August 3, 2004 (ADAMS Accession No. ML042240207), Entergy Operations, Inc. (Entergy), the licensee for Arkansas Nuclear One, Unit 1 (ANO-1), provided their Spring 2004 (1R18) C-3 and 90-day once-through steam generator (OTSG) tube inspection reports. In order for the NRC staff to complete its reviews of the two reports, we request that you respond to the attached questions.

1. On page 5 of the C-3 submittal regarding the upper tubesheet original roll transitions, it was stated that the 172 total indications found in OTSG-A and OTSG-B included axial, circumferential, and volumetric indications, and that all of the tubes with these indications were re-rolled.

Provide a breakdown of these indications in terms of the number of axial, circumferential, and volumetric indications for each OTSG. Describe your assessment concerning the defect mechanism and cause of the volumetric indications.

2. On page 5 of the C-3 submittal regarding the upper tubesheet re-roll transitions, it was stated that the 33 total indications found in OTSG-A and OTSG-B included volumetric and axial/mixed mode indications, and that these indications were repaired by installing a second re-roll below the initial re-roll.

Confirm that re-rolls were performed only during the 1R14 and 1R15 outages. Provide a breakdown of these indications in terms of: (a) the outage in which the re-roll was performed, and (b) the number of volumetric and axial/mixed mode indications for each OTSG. Describe your assessment concerning the defect mechanism and cause of the volumetric indications.

3. In Table 2 of the 90-day submittal, it is reported that a total of 64 upper tubesheet crevice indications were detected. Describe the indications in more detail, including a more detailed description of each indication (i.e., single axial indication, single circumferential indication, volumetric indication, etc.), and a defect mechanism (i.e., ODSCC, intergranular attack, etc.).
4. In the 90-day submittal, the condition monitoring leakage estimates for upper tube end cracking (Tables 4 and 5) and upper tubesheet ODIGA (Table 10) were given. Identify any other mechanisms and their contributions to total condition monitoring estimate of accident-induced leakage. State the condition monitoring estimate of total accident-induced leakage from all mechanisms.
5. The cover letter for the 90-day submittal states that the calculated total best estimate LBLOCA leakage during 1R18 is estimated to be 2.57 gpm for the initial two minutes and 1.49 gpm for the remaining 30 days. Provide a summary of the flaws used in the LBLOCA leakage evaluation and discuss their individual contributions to the leak rate. Discuss whether the general approach used to evaluate LBLOCA leakage for 1R18 was the same as that used during 1R17, and describe any differences.