

**From:** John Minns  
**To:** INternet:SBenne2@entergy.com  
**Date:** 12/5/03 10:13AM  
**Subject:** Fwd: RAI

Enclosed RAIs

**Mail Envelope Properties (3FD0A0A9.1D6 : 24 : 20023)**

**Subject:** Fwd: RAI  
**Creation Date:** 12/5/03 10:13AM  
**From:** John Minns

**Created By:** JLM3@nrc.gov

**Recipients**

entergy.com

SBENNE2 (Internet:SBenne2@entergy.com)

**Post Office****Route**

entergy.com

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
Mail MESSAGE	512	12/05/03 10:13AM

**Options**

**Expiration Date:** None  
**Priority:** Standard  
**Reply Requested:** No  
**Return Notification:** None

**Concealed Subject:** No  
**Security:** Standard

**From:** John Minns  
**To:** INternet:SBenne2@entergy.com  
**Date:** 12/4/03 4:04PM  
**Subject:** RAI

Enclosed are RES, please review expeditiously so that I can close out this item.

**Mail Envelope Properties (3FCFA144.5A0 : 24 : 20023)**

**Subject:** RAI  
**Creation Date:** 12/4/03 4:04PM  
**From:** John Minns

**Created By:** JLM3@nrc.gov

**Recipients**

entergy.com

SBENNE2 (INternet:SBenne2@entergy.com)

**Post Office****Route**

entergy.com

<b>Files</b>	<b>Size</b>	<b>Date &amp; Time</b>
ML033004.WPD	6928	12/04/03 04:02PM
MESSAGE	523	12/04/03 04:04PM

**Options**

**Expiration Date:** None  
**Priority:** Standard  
**Reply Requested:** No  
**Return Notification:** None

**Concealed Subject:** No  
**Security:** Standard

REQUEST FOR ADDITIONAL INFORMATION  
STEAM GENERATOR INSPECTION REPORT FOR  
ARKANSAS NUCLEAR ONE - UNIT 1

Reference: Letter (1CAN010301) dated January 17, 2003 from Sherrie R. Cotton, Entergy Operations, Inc. to NRC transmitting the 1R17 Once Through Steam Generator Inservice Inspection 90 Day Report.

1. In Table 2.1 of the referenced report, volumetric indications are reported at the lower re-roll transitions. What is your assessment concerning the defect mechanism and cause of these indications? Were these indications present during previous inspections or are they new indications? If these volumetric indications are potentially intergranular attack (IGA) related, why are these indications considered a separate population from those indications labeled in Table 2.1 as "volumetric IGA indications in the UTS" which you have shown are not exhibiting growth at the present time?
2. In Table 2.1, please provide a breakdown of "upper roll/transition cracking" in terms of number of axial and circumferential indications. Similarly, please provide a breakdown of "re-roll cracking - Upper Transition (OPB)" and "re-roll cracking - other re-roll indications within the pressure boundary" in terms of the number of axial, circumferential, and volumetric indications."
3. Table 3.1 refers to "TSP cracking circumferential" for which 0.025 gallon per minute (gpm) leakage is projected for the end of the current operating cycle. Table 2.1 makes no mention of this circumferential cracking mechanism at the tube support plates, nor is there any discussion of this mechanism in the report. Were any circumferential indications identified during 1R17, apart from those at the tube ends, tube hard rolls, or tube re-rolls? If so, provide the number, size, and location of these circumferential indications.
4. Tables 2.3 and 2.4 report the condition monitoring leakage estimates for the upper tubesheet tube end cracking (TEC). Table 2.9 reports the condition monitoring leakage estimates for upper tubesheet IGA. Were there other mechanisms that also contributed to total condition monitoring estimate of accident induced leakage? If so, what were the contributions from these other mechanisms? What was the condition monitoring estimate of total accident induced leak rate from all mechanisms?
5. The January 17, 2003 letter reports that the calculated maximum total best estimate LBLOCA leakage is 1.87 gpm. Describe the basis by which this leakage was determined to be acceptable; i.e., that this best estimate leakage would not result in a significant increase of radionuclide release (e.g., in excess of 10 CFR 100 limits). In addition, please provide a summary of the assessment performed for the circumferential cracks found during 1R17 in the original tube-to-tubesheet rolls, tube-to-tubesheet re-roll repairs, and heat affected zones of seal welds to establish their contribution to the calculated 1.87 gpm leakage.