

April 2, 2004

Mr. Jeffrey S. Forbes
Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
1448 S. R. 333
Russellville, AR 72801

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT NO. 1 (ANO-1) - REVIEW OF STEAM
GENERATOR (SG) INSPECTION RESULTS DURING REFUELING OUTAGE
1R18 (TAC NO. MC2431)

Dear Mr. Forbes:

Inservice inspections of SG tubes play a vital role in ensuring that adequate structural integrity of the tubes is maintained. As required by the ANO-1 technical specifications, reporting requirements range from submitting a written report prior to resumption of plant operation, describing the investigations conducted to determine cause of the tube degradation and corrective measures taken to prevent recurrence; to submitting a written report within 90 days following completion of the inspection, that provides the complete results of the SG tube inservice inspections.

A telephone conference will be arranged with members of your staff to discuss the SG tube inspections to be conducted during the upcoming ANO-1 refueling outage. Enclosed is a list of discussion points to facilitate the telephone conference. We would like to have the telephone conference after the majority of the tubes have been inspected, but before the SG inspection activities have been completed. The preferable time would be when the SG inspection is approximately 70 percent complete and the data has been analyzed. The staff plans to document a brief summary of the telephone conference as well as any material that you may have provided to the staff in support of the telephone conference.

This activity has been discussed with Mr. Steve Bennett of your staff. The staff appreciates your support on this matter. If you have any questions concerning this telephone conference, please contact me on (301) 415-1326.

Sincerely,

/RA/

Thomas W. Alexion, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosure: As stated

cc w/encl: See next page

April 2, 2004

Mr. Jeffrey S. Forbes
Site Vice President
Arkansas Nuclear One
Entergy Operations, Inc.
1448 S. R. 333
Russellville, AR 72801

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT NO. 1 (ANO-1) - REVIEW OF STEAM GENERATOR (SG) INSPECTION RESULTS DURING REFUELING OUTAGE 1R18 (TAC NO. MC2431)

Dear Mr. Forbes:

Inservice inspections of SG tubes play a vital role in ensuring that adequate structural integrity of the tubes is maintained. As required by the ANO-1 technical specifications, reporting requirements range from submitting a written report prior to resumption of plant operation, describing the investigations conducted to determine cause of the tube degradation and corrective measures taken to prevent recurrence; to submitting a written report within 90 days following completion of the inspection, that provides the complete results of the SG tube inservice inspections.

A telephone conference will be arranged with members of your staff to discuss the SG tube inspections to be conducted during the upcoming ANO-1 refueling outage. Enclosed is a list of discussion points to facilitate the telephone conference. We would like to have the telephone conference after the majority of the tubes have been inspected, but before the SG inspection activities have been completed. The preferable time would be when the SG inspection is approximately 70 percent complete and the data has been analyzed. The staff plans to document a brief summary of the telephone conference as well as any material that you may have provided to the staff in support of the telephone conference.

This activity has been discussed with Mr. Steve Bennett of your staff. The staff appreciates your support on this matter. If you have any questions concerning this telephone conference, please contact me on (301) 415-1326.

Sincerely,

/RA/

Thomas W. Alexion, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-313
Enclosure: As stated
cc w/encl: See next page

DISTRIBUTION:

PUBLIC RidsAcrcAcnwMailCenter RidsNrrLADBaxley
PDIV-1 Reading RidsNrrDlpmLpdiv1 (RGramm) RidsRgn4MailCenter (AHowell)
RidsOgcRp RidsNrrPMTAlexion RidsNrrLADJohnson
LLund

Accession No.:ML040970514

*see previous concurrence

OFFICE	PDIV-1/PM	PDIV-1/LA	EMCB/SC	PDIV-1/SC
NAME	TAlexion	DBaxley	LLund	RGramm
DATE	4/1/04	4/1/04	03/29/04*	4/2/04

STEAM GENERATOR (SG) TUBE INSPECTION DISCUSSION POINTS

PREPARED BY THE OFFICE OF NUCLEAR REACTOR REGULATION

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT NO. 1 (ANO-1)

DOCKET NO. 50-313

The following discussion points have been prepared to facilitate the phone conference arranged with the licensee to discuss the results of the SG tube inspections to be conducted during the Spring 2004 ANO-1 refueling outage. This telephone conference is scheduled to occur towards the end of the planned SG tube inspection interval, but before the unit exits its refueling outage.

The staff plans to document a brief summary of the telephone conference as well as any material that the licensee may have provided to the staff in support of the call.

1. Discuss whether any primary to secondary leakage existed in this unit prior to shutdown.
2. Discuss the results of secondary side pressure tests.
3. For each SG, provide a description of areas examined, including the expansion criteria utilized and type of probe in each area. Also, be prepared to discuss your inspection of the tube within the tubesheet, particularly the portion of the tube below the expansion/transition region.
4. Discuss any exceptions taken to the industry guidelines.
5. Provide a summary of the number of indications identified to-date of each degradation mode and SG tube location (e.g., tube support plate, top-of-tubesheet, etc.). Also, provide information, such as voltages, and estimated depths and lengths of the most significant indications.
6. Describe repair/plugging plans for the SG tubes that meet the repair/plugging criteria.
7. Discuss the previous history of SG tube inspection results, including any "look backs" performed, specifically for significant indications or indications where look backs are used in support of dispositioning (e.g., manufacturing burnish marks).
8. Discuss, in general, new inspection findings (e.g., degradation mode or location of degradation new to this unit).
9. Discuss your use or reliance on inspection probes (eddy current or ultrasonic) other than bobbin and typical rotating probes, if applicable.
10. Describe in-situ pressure test plans and results, if applicable and available, including tube selection criteria.

11. Describe tube pull plans and preliminary results, if applicable and available; include tube selection criteria.
12. Discuss the assessment of tube integrity for the previous operating cycle (i.e., condition monitoring).
13. Discuss an assessment of tube integrity for the next operating cycle (i.e., operational assessment).
14. Provide the schedule for SG-related activities during the remainder of the current outage.
15. With regard to loose parts, discuss the following:
 - what inspections are performed to detect loose parts,
 - a description of any loose parts detected and their location within the SG,
 - if the loose parts were removed from the SG,
 - indications of tube damage associated with the loose parts, and
 - the source or nature of the loose parts, if known.
16. Once-Through SGs: If you have Babcock and Wilcox (B&W) welded plugs installed in the SGs, be prepared to discuss the actions taken in response to Framatome's notification of the effect of tubesheet hole dilation on the service life of B&W welded plugs.
17. Once-Through SGs: Describe your inspection/plugging plans with respect to the industry-identified severed tube issue (NRC Information Notice (IN) 2002-02 and IN 2002-02, Supplement 1).

Arkansas Nuclear One

cc:

Executive Vice President
& Chief Operating Officer
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286-1995

Director, Division of Radiation
Control and Emergency Management
Arkansas Department of Health
4815 West Markham Street, Slot 30
Little Rock, AR 72205-3867

Winston & Strawn
1400 L Street, N.W.
Washington, DC 20005-3502

Mr. Mike Schoppman
Framatome ANP, Richland, Inc.
Suite 705
1911 North Fort Myer Drive
Rosslyn, VA 22209

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 310
London, AR 72847

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

County Judge of Pope County
Pope County Courthouse
Russellville, AR 72801

Vice President, Operations Support
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286-1995

Wise, Carter, Child & Caraway
P. O. Box 651
Jackson, MS 39205

November 2003