

December 31, 1996

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO INSERVICE INSPECTION
OF THE ONCE THROUGH STEAM GENERATOR (OSTG) TUBES AT ARKANSAS
NUCLEAR ONE, UNIT 1 (ANO-1) (TAC NO. M97485)

Dear Mr. Hutchinson:

By letter dated November 21, 1996, Entergy Operations, Inc. submitted a report on the results of the inservice inspection of the once through steam generator (OSTG) tubes at Arkansas Nuclear One, Unit 1 (ANO-1). The Technical Specification 4.1.18.6 requires the complete results of each inservice inspection of the OSTG tubes to be submitted to the Nuclear Regulatory Commission within 45 days of the completion of the inspection. As a result of a review of your letter dated November 21, 1996, the staff identified areas where additional information is needed to clarify the results of the inspection.

Please provide your response to the enclosed questions within 30 days so that our review of the this matter can proceed on schedule. If you need clarification of the staff's request, please contact me at (301) 415-1367.

Sincerely,

ORIGINAL SIGNED BY:

K. Salehi, Acting Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosure: Request for Additional Information

cc w/encl: See next page

DISTRIBUTION:

| | | |
|--------------------|--------------|-----------|
| <u>Docket File</u> | PUBLIC | PD4-1 r/f |
| K. Salehi | C. Hawes | OGC |
| ACRS | J. Dyer, RIV | J. Roe |
| E. Adensam (EGA1) | | |

Document Name: AR97485.RAI

| | | |
|------|-------------|-------------|
| OFC | (A)PM/PD4-1 | (A)LA/PD4-1 |
| NAME | KSalehi/vw | CHawes CMH |
| DATE | 12/31/96 | 12/30/96 |
| COPY | YES/NO | YES/NO |

OFFICIAL RECORD COPY

NRC FILE CENTER COPY

DOF01/1



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20585-0001

December 31, 1996

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION RELATED TO INSERVICE INSPECTION
OF THE ONCE THROUGH STEAM GENERATOR (OSTG) TUBES AT ARKANSAS
NUCLEAR ONE, UNIT 1 (ANO-1) (TAC NO. M97485)

Dear Mr. Hutchinson:

By letter dated November 21, 1996, Entergy Operations, Inc. submitted a report on the results of the inservice inspection of the once through steam generator (OSTG) tubes at Arkansas Nuclear One, Unit 1 (ANO-1). The Technical Specification 4.1.18.6 requires the complete results of each inservice inspection of the OSTG tubes to be submitted to the Nuclear Regulatory Commission within 45 days of the completion of the inspection. As a result of a review of your letter dated November 21, 1996, the staff identified areas where additional information is needed to clarify the results of the inspection.

Please provide your response to the enclosed questions within 30 days so that our review of the this matter can proceed on schedule. If you need clarification of the staff's request, please contact me at (301) 415-1367.

Sincerely,

A handwritten signature in black ink, appearing to read "K. Salehi".

K. Salehi, Acting Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-313

Enclosure: Request for Additional Information

cc w/encl: See next page

Mr. C. Randy Hutchinson
Entergy Operations, Inc.

Arkansas Nuclear One, Unit 1

cc:

Executive Vice President
& Chief Operating Officer
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286-199

Vice President, Operations Support
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

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

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

Manager, Rockville Nuclear Licensing
Framatone Technologies
1700 Rockville Pike, Suite 525
Rockville, MD 20852

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

REQUEST FOR ADDITIONAL INFORMATION
RELATED TO INSERVICE INSPECTION REPORT
OF THE ONCE THROUGH STEAM GENERATORS
ENERGY OPERATIONS INC.
ARKANSAS NUCLEAR ONE, UNIT 1 (ANO-1)
DOCKET NO. 50-313

1. Please discuss the types of coils used in the motorized rotating pancake coil probe (MRPC)(e.g., mid-range 0.115-inch pancake coil).
2. For the tubes in the "A" and "B" OTSG with free-span axial indications at dented locations, please state whether these indications were found during routine examinations using bobbin coil probe and/or the MRPC probe. Please discuss the nature and the size estimates made for these degraded indications (i.e., address the structural and leakage integrity of these indications). For the dents with degraded indications, discuss the "size" of the dents with indications in comparison with the size of other dents in the steam generators. Discuss the expansion criteria used and the technical basis for the criteria.
3. Discuss the nature of the indications detected in the sleeved portion of the tubes (including both parent tube and the sleeve) and at the upper roll transition (e.g., an axially oriented defect indicative of primary water stress corrosion cracking). Discuss the structural and leakage integrity of these indications.
4. Discuss the nature of the axial indications at the lower tubesheet as determined from non-destructive examination. For example, address whether the indications were in the sludge pile region, above the top of the tubesheet, in the tubesheet crevice region, etc. Discuss the structural and leakage integrity of these indications.
5. The inspection report stated that the sleeve indications were considered as artifacts from the sleeve installation and/or also due to the enhanced eddy current testing method. It also stated that the sleeve inspection techniques prior to 1995 were not considered to be adequate for detection of these type of indications. Provide the basis for the two statements. Provide any laboratory testing and/or available laboratory test data which would support the above statements.
6. The staff recognizes that several tube sections were removed for destructive examination during this outage and that the results will be provided to the NRC when available. However, the above questions apply to the results from the non-destructive examination of the tubes. Discuss the schedule for the examination of the pulled tube sections. As discussed during a telephone conversation during the outage, discuss whether detailed non-destructive examination results for the pulled tubes will be provided prior to commencing destructive examination.

ENCLOSURE