

June 24, 2003

Mr. Garry L. Randolph  
Vice President and Chief Nuclear Officer  
Union Electric Company  
P.O. Box 620  
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT, UNIT 1 – REQUEST FOR ADDITIONAL INFORMATION  
ON THE NOVEMBER 2002 STEAM GENERATOR TUBE INSPECTION  
REPORT (TAC NO. MB8103)

Dear Mr. Randolph:

In the letters dated November 19, 2002 (ULNRC-04776 and -04778), November 21, 2002 (ULNRC-04777) and March 17, 2003 (ULNRC-04823), you submitted information on the results of the November 2002 steam generator inservice inspections performed at the Callaway Plant during the twelfth refueling outage. The letter dated March 17, 2003, provided the final report on the inspections. The staff has reviewed these letters and identified additional information needed to complete its review of the report attached to March 17, 2003, letter.

The enclosed questions were provided to your staff by e-mail on June 17, 2003, and it was agreed that a response would be provided within 60 days of receipt of this letter.

Sincerely,

*/RA/*

Jack Donohew, Senior Project Manager, Section 2  
Project Directorate IV  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-483

Enclosure: Questions

cc w/encl: See next page

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**NRR-088**

OFFICE	PDIV-2/PM	PDIV-2/LA	PDIV-2/SC
NAME	JDonohew	EPeyton	RGramm for SDembek
DATE	6/19/2003	6/18/03	6/23/03

DOCUMENT NAME: G:\PDIV-2\Callaway\RAI-MB8103-SG Tube inspection results.cw.wpd

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**REQUEST FOR ADDITIONAL INFORMATION**  
**NOVEMBER 2003 STEAM GENERATOR INSPECTION REPORT**  
**UNION ELECTRIC COMPANY**  
**CALLAWAY PLANT, UNIT 1**  
**DOCKET NO. 50-483**

The results of the Callaway Plant 2002 steam generator tube inspections were reported to the NRC in letters dated November 19 and 21, 2002, and March 17, 2003. In order for the staff to complete its review, responses to the following questions are needed:

1. Thermally treated Alloy 600 tubes were plugged both in Steam Generator A (Row 1, Column 34) and Steam Generator D (Row 5, Column 70). These tubes were plugged as a result of detecting volumetric indications. Please discuss the cause and the size (length, depth) of these indications. Address the implications of these findings including the technical basis for your conclusions regarding the cause of the indications (e.g., tube pull results, etc.).
2. Several mill annealed tubes in SG A were plugged due to the identification of single volumetric indications. Please discuss the cause and the size (length, depth) of these indications. Address the implications of these findings including the technical basis for your conclusions regarding the cause of the indications (e.g., tube pull results, etc.).
3. The March 12, 2003, letter (page 7) indicates that 5 tubes were repaired because of tube support plate wear at various locations. Provide more details about the location of the degradation and the size of the degradation including your basis for concluding that the indications were attributed to wear.
4. A tube in SG A (Row 25, Column 71) was plugged due to multiple circumferential indications near a Westinghouse laser welded sleeve. Page 5 of Attachment 1 to the March 17, 2003, letter states, in part, that there was no degradation detected in the sleeves. Clarify the location of the indication in tube R25C71 with respect to the sleeve including the possible relationship between the indication and the sleeve. Discuss whether this indication was service-induced degradation and the basis for this conclusion. If not service-induced, discuss the cause of the indication. Also address the implications of these findings.
5. The rotating probe inspection scope included examination of 20 PERCENT of the dents and dings within bobbin coil signals above 2 volts. Please explain how tubes with dent and ding signals greater than 2 volts were selected for rotating probe testing. For example, were all dents and dings greater than 5 volts selected? If not, why not? Discuss whether any cracks were found associated with dents/dings. If any were selected, discuss the size of the indications and of the dent/ding.

6. Clarify the statement on page 7 of Attachment 1 to the March 17, 2003 letter which indicates that "since through wall tearing and burst will not occur at  $3\Delta P$ , leakage integrity at an SLB differential pressure of 2560 psi is also demonstrated."
7. Licensee Event Report 2002-011-00, submitted November 19, 2002, states that the classification of Steam Generator A inspection results as C-3 was reported in Event Notification #39345 on November 5, 2002. Since this latter report cannot be found in ADAMS, please provide a copy of Event Notification #39345.

Callaway Plant, Unit 1

cc:

Professional Nuclear Consulting, Inc.  
19041 Raines Drive  
Derwood, MD 20855

John O'Neill, Esq.  
Shaw, Pittman, Potts & Trowbridge  
2300 N. Street, N.W.  
Washington, D.C. 20037

Mr. Mark A. Reidmeyer, Regional  
Regulatory Affairs Supervisor /  
Regulatory Affairs  
AmerenUE  
P.O. Box 620  
Fulton, MO 65251

U.S. Nuclear Regulatory Commission  
Resident Inspector Office  
8201 NRC Road  
Steedman, MO 65077-1302

Manager, Quality Assurance  
AmerenUE  
P.O. Box 620  
Fulton, MO 65251

Manager - Electric Department  
Missouri Public Service Commission  
301 W. High  
P.O. Box 360  
Jefferson City, MO 65102

Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-4005

Mr. Ronald A. Kucera  
Deputy Director for Public Policy  
Department of Natural Resources  
P.O. Box 176  
Jefferson City, Missouri 65102

Mr. Rick A. Muench  
President and Chief Executive Officer  
Wolf Creek Nuclear Operating Corporation  
P.O. Box 411  
Burlington, KA 66839

Mr. Dan I. Bolef, President  
Kay Drey, Representative  
Board of Directors Coalition for the  
Environment  
6267 Delmar Boulevard  
University City, MO 63130

Mr. Lee Fritz, Presiding Commissioner  
Callaway County Court House  
10 East Fifth Street  
Fulton, MO 65151

Mr. David E. Shafer  
Superintendent, Licensing  
Regulatory Affairs  
AmerenUE  
P.O. Box 66149, MC 470  
St. Louis, MO 63166-6149

Manager, Regulatory Affairs  
AmerenUE  
P.O. Box 620  
Fulton, MO 65251

Mr. Scott Clardy, Director  
Section for Environmental Public Health  
P.O. Box 570  
Jefferson City, MO 65102-0570