

September 18, 2008

Mr. Adam C. Heflin
Senior Vice President and
Chief Nuclear Officer
Union Electric Company
P.O. Box 620
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT, UNIT 1 – SUMMARY OF STAFF REVIEW OF RESULTS
OF THE 2007 STEAM GENERATOR TUBE INSPECTIONS (TAC NO. MD7372)

Dear Mr. Heflin:

By letter dated October 25, 2007, as supplemented on June 11, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML073050323 and ML081710156, respectively), Union Electric Company (the licensee) submitted information pertaining to the results of the 2007 steam generator tube inspection performed at Callaway Plant, Unit 1. These inspections were performed during the 15th refueling outage.

The U.S. Nuclear Regulatory Commission (NRC) staff has completed its review of the report and supplemental information and concludes that the licensee has provided the information required by its technical specifications and no additional follow-up is required at this time. The NRC staff's summary of its review is enclosed.

If you have any questions regarding this matter, please contact me at (301) 415-1476.

Sincerely,

/RA by Balwant K. Singal for/

Mohan C. Thadani, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-483

Enclosure:
As stated

cc w/encl: See next page

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ADAMS Accession No. ML082540555 NRR-106 (*) memo dated 6/30/08

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DATE	9/18/08	9/17/08	9/16/08	6/30/08	9/18/08	9/18/08

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Callaway Plant, Unit 1

(7/2/2008)

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SUMMARY OF STAFF'S REVIEW OF
2007 STEAM GENERATOR TUBE INSPECTIONS AT
CALLAWAY PLANT, UNIT 1
TAC NO. MD7372
DOCKET NO. 50-483

By letters dated October 25, 2007, and June 11, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML073050323 and ML081710156, respectively), Union Electric Company (the licensee) submitted information pertaining to the 2007 steam generator tube inspections performed at Callaway Plant, Unit 1 during the 15th refueling outage.

Callaway has four Framatone-designed 73/19T steam generators (SGs) that were installed at the plant in 2005. Each SG has 5872 thermally-treated Alloy 690 tubes, which have an outside diameter of 0.75 inches and a wall thickness of 0.043 inches. The tubes are hydraulically expanded throughout the entirety of the tubesheet. The U-bend region of the tubes in rows 1 through 18 was stress relieved after bending. The tubes are supported by eight Type 410 stainless steel tube supports and anti-vibration bars (AVBs). The holes in the tube support plate are trifoil shaped.

The licensee provided the scope, extent, methods, and results of its SG tube inspections in the documents referenced above. In addition, the licensee described corrective actions (i.e., tube plugging) taken in response to the inspection findings. Based on its review of the reports submitted, the Nuclear Regulatory Commission (NRC) staff has the following observations and comments:

At the end of the 15th refueling outage, Callaway was in the first refueling outage after the replacement of the SGs. The SGs had operated 18 effective full power months since replacement.

A chemical excursion occurred on March 9, 2007. Action Level 3 limits (as defined in the Electric Power Research Institute's Secondary Water Chemistry Guidelines) on sodium, sulfate, and chloride were exceeded, so the plant was shut down. The licensee performed an assessment and concluded that the likelihood of accelerated tube degradation as a result of the event is small.

The only degradation mechanically observed during the outage was wear at the AVBs. A total of 36 tubes had wear indications.

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by their technical specifications. In addition, the staff concludes that there are no technical issues that warrant follow-up action at this time since the inspections appear to be consistent with the objective of detecting potential tube degradation and the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

Enclosure