



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

September 25, 2009

Mr. Rafael Flores  
Senior Vice President and  
Chief Nuclear Officer  
Attention: Regulatory Affairs  
Luminant Generation Company LLC  
P.O. Box 1002  
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 1 – REVIEW OF THE  
2008 STEAM GENERATOR TUBE INSPECTIONS PERFORMED DURING  
REFUELING OUTAGE 1RF13 (TAC NO. ME0367)

Dear Mr. Flores:

By letter dated January 7, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML090300118), as supplemented by letter dated April 21, 2009 (ADAMS Accession No. ML091180326), Luminant Generation Company LLC (the licensee), submitted information summarizing the results of the 2008 steam generator tube inspections performed at the Comanche Peak Steam Electric Station (CPSES), Unit 1 during the thirteenth refueling outage (1RF13).

The U.S. Nuclear Regulatory Commission (NRC) has completed its review of these reports and concludes that the licensee provided the information required by the CPSES, Unit 1, Technical Specifications and that no additional follow-up action is required at this time. The results of the NRC staff's review of the reports submitted by the licensee are summarized in the enclosure to this letter. If you have any questions, please contact me at 301-415-3016 or via e-mail at [balwant.singal@nrc.gov](mailto:balwant.singal@nrc.gov).

Sincerely,

A handwritten signature in black ink, reading "Balwant K. Singal".

Balwant K. Singal, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-445

Enclosure:  
As stated

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OFFICE OF NUCLEAR REACTOR REGULATION  
REVIEW OF INSPECTION REPORTS FOR 2008 STEAM GENERATOR TUBE INSPECTIONS  
PERFORMED DURING UNIT 1 REFUELING OUTAGE 1RF13  
LUMINANT GENERATION COMPANY LLC  
COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 1  
DOCKET NO. 50-445

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CPSES, Unit 1 has four Westinghouse Model Delta 76 SGs. Each SG contains 5,532 thermally treated Alloy 690 tubes. Each tube has a nominal outside diameter of  $\frac{3}{4}$  inch and a nominal wall thickness of 0.043 inch. The row 1 and 2 tubes have a nominal wall thickness of 0.044 inch. The tubes were hydraulically expanded at both ends for the full length of the tubesheet and are supported by four sets of type 405 stainless steel anti-vibration bars.

The licensee provided the scope, extent, methods, and results of their SG tube inspections in the documents referenced above. In addition, the licensee described corrective actions, such as tube plugging, taken in response to the inspection findings. The tubes in all four SGs were inspected during CPSES, Unit 1 thirteenth refueling outage (1RF13).

The Nuclear Regulatory Commission (NRC) staff has reviewed the information provided by the licensee, and has the following comments and observations:

- The licensee replaced its SGs in 2007 during CPSES, Unit 1 refueling outage 12 (1RF12). The 2008 inspections were the first inservice inspections of the SGs since the replacement.
- During the pre-service inspection, a condition was identified that suggested reduced tube-to-tube clearance in the U-bend region in the eddy current data in 28 tubes. These indications are classified as trackable anomalies and there was no tube wear associated with this condition. The licensee reported that there was no change in these eddy current signals between the pre-service inspection

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and the 2008 inspection.

- Bobbin inspections in SG1 resulted in the identification of possible loose part indications in six tubes. Further investigation of these signals with a rotating probe suggested that the bobbin signals were the result of the presence of axially oriented deposits on the outside surface of the tube. These deposits were reported to generally increase with proximity to the 10<sup>th</sup> hot leg tube support plate and, in some cases, extend through the tube support plate at the trefoil lobe. These deposits were observed visually.
- The licensee provided its operational assessment for tube wear indications. Although the NRC staff did not review this analysis in detail, the results appear reasonable based on operating experience at similarly designed and operated units.

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by the Technical Specifications. In addition, the NRC 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.

Principal Contributor: A. Obodoako

Date: September 25, 2009

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*/ra/*

Balwant K. Singal, Senior Project Manager  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
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\* Memo dated 9/1/09

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