

March 20, 2008

Mr. Rick A. Muench
President and Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
Post Office Box 411
Burlington, KS 66839

SUBJECT: WOLF CREEK GENERATING STATION - RESULTS OF FOURTEENTH
STEAM GENERATOR TUBE INSERVICE INSPECTION (TAC NO. MD5946)

Dear Mr. Muench:

By letter dated March 19, 2007 (ET 07-0006), Wolf Creek Nuclear Operating Corporation (WCNOC) submitted the results of the fourteenth steam generator (SG) tube inservice inspection (ISI) performed, at Wolf Creek Generating Station (WCGS), in the fall of 2006 during refueling outage 15. As stated in the letter, the SG tube ISI report contained (1) a description of the inspections performed; (2) the location, orientation, and measured size of the service-induced indications found, and (3) the inspection results found, number of tubes plugged, and the results of condition monitoring.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the report submitted in the March 19, 2007, letter; the WCNOC letter dated January 31, 2007, which provided the Owner's Activity Report Numbered WCRE-16, 13-PI-RF-15, on the ISI activities performed at WCGS during refueling outage 15, including the fourteenth SG tube inspections; and the WCNOC responses to NRC staff questions on these two letters. The WCNOC responses were submitted by letter dated February 28, 2008 (ET 08-0013).

Enclosed is the NRC staff evaluation of the results of the SG tube inspections conducted during refueling outage 15 at WCGS. Based on a review of the material provided by WCNOC, the NRC staff concludes that the licensee provided the information required for SG tube inspections by the plant technical specifications. In addition, the NRC staff did not identify any issues that warrant additional follow-up at this time.

Sincerely,

/RA/

Jack N. Donohew, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-482

Enclosure:
Staff Evaluation

cc w/encl: See next page

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Wolf Creek Generating Station

(2/2006)

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STAFF EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO RESULTS OF FOURTEENTH STEAM GENERATOR
TUBE INSERVICE INSPECTION
WOLF CREEK NUCLEAR OPERATING CORPORATION
WOLF CREEK GENERATING STATION
DOCKET NO. 50-482

1.0 INTRODUCTION

By letters dated January 31 and March 19, 2007, and February 28, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML070430458, ML070860222, and ML080660359, respectively), Wolf Creek Nuclear Operating Corporation (the licensee) submitted information pertaining to the fourteenth steam generator (SG) tube inspection performed at Wolf Creek Generating Station (Wolf Creek) during the fifteenth refueling outage conducted in the fall of 2006 in accordance with the plant's technical specifications (TS). The letter dated February 28, 2008, was in response to questions from the U.S. Nuclear Regulatory Commission (NRC) staff on its review of the letters dated January 31 and March 19, 2007.

The licensee has four Westinghouse Model F steam generators. There are 5626 thermally treated Alloy 600 tubes in each SG. The tubes have an outside diameter of 0.688 inches, a wall thickness of 0.040 inches, and are supported by stainless steel tube supports with quatrefoil-shaped holes and V-shaped chrome-plated Alloy 600 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 (i.e., tube plugging or repair) taken in response to the inspection findings.

2.0 EVALUATION

Based on its review of the reports submitted, the NRC staff has the following observations and comments:

- At the end of the fifteenth refueling outage, Wolf Creek was in the second sequential (90 effective full power months (EFPM)) inservice inspection period. The SGs had operated 81.84 EFPM in this period.
- Cleaning of the secondary side of SGs "A" and "D" with an advanced scale conditioning agent (ASCA) was performed during refueling outage 15. In

addition, scale profiling was performed using eddy current data. The ASCA reduced the level of deposits in the SGs.

- A visual inspection revealed that the quatrefoil-shaped tube support holes were essentially open.

3.0 CONCLUSION

Based on a review of the information provided, the staff concludes that the licensee provided the information required by their TS. 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.

Principal Contributor: Emma Wong

Date: March 20, 2008