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

January 6, 2014

Mr. Matthew W. Sunseri
President and Chief Executive Officer
Wolf Creek Nuclear Operating Corporation
Post Office Box 411
Burlington, KS 66839

SUBJECT: WOLF CREEK GENERATING STATION – REQUEST FOR ADDITIONAL INFORMATION REGARDING THE 2013 STEAM GENERATOR INSPECTIONS (TAC NO. MF2837)

Dear Mr. Sunseri:

By letter dated September 30, 2013, Wolf Creek Nuclear Operating Corporation (the licensee), submitted information summarizing the results of the 2013 steam generator tube inspections performed at Wolf Creek Generating Station during refueling outage 18. The ongoing inspections were discussed with your staff as documented by the U.S. Nuclear Regulatory Commission (NRC) letter dated April 1, 2013.

The NRC staff has reviewed the information provided in your September 30, 2013, letter and determined that additional information is required in order to complete its review. The enclosed questions were provided to Mr. S. Wideman of your staff on December 26, 2013. Please provide a response to the questions by February 7, 2014.

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of NRC staff resources. If circumstances result in the need to revise the requested response date, please contact me at 301-415-2296 or via e-mail at Fred.Lyon@nrc.gov.

Sincerely,

CFLyon

Carl F. Lyon, Project Manager
Plant Licensing Branch IV-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-482

Enclosure
As stated

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION

REGARDING THE 2013 STEAM GENERATOR INSPECTIONS

WOLF CREEK NUCLEAR OPERATING CORPORATION

WOLF CREEK GENERATING STATION

DOCKET NO. 50-482

By letter dated September 30, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13277A558), Wolf Creek Nuclear Operating Corporation (the licensee), submitted information summarizing the results of the 2013 steam generator (SG) tube inspections performed at Wolf Creek Generating Station during refueling outage 18. The ongoing inspections were discussed by the licensee and U.S. Nuclear Regulatory Commission (NRC) staff as documented in the NRC letter dated April 1, 2013 (ADAMS Accession No. ML13077A073). In order to complete its review of the SG inspections, the NRC staff requests the following additional information:

1. Please discuss any insights you have regarding the cause of the restriction in the tube at row 58 column 72 in SG A. Also, please clarify how integrity for this tube was verified, since the data quality was unsatisfactory for confident analysis.

2. Please confirm that you inspected 100 percent of all the tubes (including the U-bend region of the row 1 and 2 tubes) in all SGs during the third inspection period.

3. In a prior eddy current data review, no tubes were identified with signal characteristics similar to the degraded tubes at Seabrook. During the 2013 outage, a review indicated that five tubes exhibited similarities to the Seabrook tube signature, suggesting an unusual manufacturing process. These tubes were plugged. In your inspection scope, you indicate that all tubes with "potentially elevated residual stress" were inspected with a bobbin probe. Please clarify this discussion. Are the "Seabrook" tubes considered low row tubes (with a distinct eddy current offset), while the tubes with "potentially elevated residual stress" are tubes commonly referred to by the industry as "-2 sigma" tubes?

4. A rotating probe was used to inspect the portion of the tubes that pass through the top tube support plate in support of a tube fatigue analysis. Please clarify the nature/reason for this tube fatigue analysis and its results.

5. In prior inspections, it appeared that wear indications at the tube support plate elevations were limited to wear attributed to foreign objects that were no longer present. In 2013, it appears that a few wear indications at the tube support plate elevations were detected that may not be attributed to foreign objects. Please provide any insights on the nature of these indications, including any insights on why these indications developed after approximately 20 years of operation.

Enclosure

6. In prior inspections, rotating probe inspections at dented locations were performed at a bobbin voltage threshold of 2 volts. In 2013, it appears that voltage threshold was changed to 5 volts. Please confirm the change in voltage threshold.

7. One tube was identified with a primary water stress corrosion cracking indication associated with a bulge. The tube was plugged, but not stabilized. In the assessment of future crack growth and potential pullout of the tube from the tubesheet, only axial stresses associated with the pressure differential across the tube appear to have been considered. Please confirm that other potential sources of axial stresses were considered in these assessments (e.g., axial stresses that may exist as a result of the upward flow of water on the secondary side of the SG during normal operation, transient, and accident conditions).

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Sincerely,
/RA/
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Plant Licensing Branch IV-1
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