



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

July 11, 2011

Mr. Barry S. Allen
Site Vice President
FirstEnergy Nuclear Operating Company
Davis-Besse Nuclear Power Station
Mail Stop A-DB-3080
5501 North State Route 2
Oak Harbor, OH 43449-9760

SUBJECT: DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1 – REVIEW OF THE
STEAM GENERATOR TUBE INSPECTIONS PERFORMED DURING
REFUELING OUTAGE NO. 16 IN 2010 (TAC NO. ME5261)

Dear Mr. Allen:

By letters to the U.S. Nuclear Regulatory Commission (NRC) dated June 18, 2010, December 17, 2010, and May 27, 2011 (Agencywide Document Access Management System (ADAMS) Accession Nos. ML101740055, ML103610313, and ML111510643, respectively), FirstEnergy Nuclear Operating Company (the licensee) submitted information summarizing the results of the 2010 steam generator (SG) tube inspections at the Davis-Besse Nuclear Power Station, Unit No. 1 (DBPNS) during refueling outage No. 16 (RFO 16).

In addition to the enclosed report, the NRC staff summarized a conference call regarding the 2010 SG tube inspections at DBNPS in a letter dated April 12, 2010 (ADAMS Accession No. ML100970031).

The NRC staff has completed its review of the information summarizing the results of the 2010 SG tube inspections at DBPNS during RFO 16 and concludes that the licensee provided the information required by the DBNPS Technical Specifications. No additional follow up is required at this time.

If you have any questions, contact me at (301) 415-3867 or michael.mahoney@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael Mahoney", with a long horizontal stroke extending to the right.

Michael Mahoney, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-346

Enclosure:
As stated

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STAFF EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO THE STEAM GENERATOR TUBE INSPECTIONS

PERFORMED DURING THE 2010 REFUELING OUTAGE NO. 16

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NUMBER 50-346

By letters to the U.S. Nuclear Regulatory Commission (NRC) dated June 18, 2010, December 17, 2010, and May 27, 2011 (Agencywide Document Access Management System (ADAMS) Accession Nos. ML101740055, ML103610313, and ML111510643, respectively), FirstEnergy Nuclear Operating Company (the licensee) submitted information summarizing the results of the 2010 steam generator (SG) tube inspections at Davis-Besse Nuclear Power Station, Unit No. 1 (DBNPS) during refueling outage No. 16 (RFO 16). In addition to this report, the NRC staff summarized a conference call about the 2010 SG tube inspections at DBNPS in a letter dated April 12, 2010 (ADAMS Accession No. ML100970031).

There are two Babcock and Wilcox once-through SGs (OTSG), designated 1-B and 2-A, at DBNPS. Each SG has approximately 15,500 Alloy 600 tubes in the mill-annealed condition. The tubes have a nominal outside diameter of 0.625 inches and a nominal wall-thickness of 0.037 inches. Both OTSG 1-B and 2-A contain tubes with sleeves and tubes with shop re-rolls.

The licensee provided the scope, extent, methods, and results of the 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.

After reviewing the information provided by the licensee, the NRC staff has the following comments/observations:

1. The number and severity of crack-like indications found increased slightly from 2008 to 2010. All tubes in both SGs met the SG performance criteria.
2. Based on bobbin coil examination data, the licensee reported that the auxiliary feedwater (AFW) headers had not moved during operating cycle 16. Visual examinations of the internal AFW header in SG 1-B identified no recordable indications.

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3. The NRC staff review did not identify any issues with the best-estimate, primary-to-secondary leakage expected for a large-break, loss-of-coolant accident (LBLOCA). This best estimate determination was performed to satisfy a license condition to permit the use of a re-roll repair process for the DBNPS SGs. The NRC conducted an audit of the approach for ensuring SG tube integrity following a LBLOCA in 2010. The audit results are summarized in a letter dated June 17, 2011 (ADAMS Accession No. ML111400365).

Based on a review of the information provided by the licensee, the NRC staff concludes that the licensee provided the information required by DBPNS's technical specifications. In general, the SG tube inspections at DBNPS 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. The NRC staff's review did not reveal any issues warranting follow-up action by the NRC.

ENCLOSURE

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Sincerely,
/RA/
Michael Mahoney, Project Manager
Plant Licensing Branch III-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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ADAMS Accession No. ML111890322

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