

May 26, 2005

Mr. George Vanderheyden, Vice President
Calvert Cliffs Nuclear Plant, Inc.
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1 - STEAM
GENERATOR TUBE INSPECTION REPORT FOR THE YEAR 2004
REFUELING OUTAGE (TAC NO. MC6320)

Dear Mr. Vanderheyden:

By letters dated May 6, 2004, February 25, 2005, and April 28, 2005, Calvert Cliffs Nuclear Power Plant, Inc. (CCNPPI), submitted information summarizing the steam generator tube inspections performed during the year 2004 refueling outage.

Upon review of this information, the Nuclear Regulatory Commission (NRC) staff concluded that CCNPPI provided the information required by the Technical Specifications and that no additional follow-up was required. The NRC staff's summary of review is enclosed.

Sincerely,

/RA by P. Tam/

Richard V. Guzman, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-317

Enclosure: As stated

cc w/encl: See next page

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DATE	5/26/05	5/26/05	5/12/05	5/26/05

*Evaluation transmitted by memo of 5/12/05.

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SUMMARY OF REVIEW BY THE OFFICE OF NUCLEAR REACTOR REGULATION

STEAM GENERATOR TUBE INSPECTION REPORT

FOR THE REFUELING IN THE YEAR 2004

RENEWED FACILITY OPERATING LICENSE NO. DPR-53

CALVERT CLIFFS NUCLEAR POWER PLANT, INC.

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1 (CCNPP1)

DOCKET NO. 50-317

By letters dated May 6, 2004 (Agencywide Document Access and Management System (ADAMS) Accession No. ML041330142), February 25, 2005 (Accession No. ML050610714), and April 28, 2005 (Accession No. ML051250065), the licensee, submitted information pertaining to the 2004 steam generator (SG) inservice inspection reports performed at CCNPP1.

CCNPP1 has two Babcock and Wilcox International (BWI) SGs containing 8471 tubes each. The tubing material is thermally treated Alloy 690. The tubes have an outside diameter of 0.75 inch and a nominal wall thickness of 0.042 inch. The SGs have a triangular tube pitch arrangement with 1-inch spacing between tube centers. The tubes are hydraulically expanded through the entire depth of the tubesheet in both the hot-leg and cold-leg ends. The tubesheet is 21.875 inches thick without the clad. The austenitic stainless steel tubesheet cladding has a minimum thickness of 0.375 inch. The lattice grid tube support structures and the U-bend supports are made of 410 stainless steel. The smallest radii for the U-bend is 3.5 inches in Row 1. Rows 1-18 of the U-bend received stress relief treatment after bending.

A number of fan bar wear indications were observed at CCNPP1 during the 2004 outage. The wear is considered typical fan bar wear, caused by thermal hydraulic conditions and tube-to-support clearances which can vary because of manufacturing tolerances. Although the number of wear indications is more than that observed at similarly designed operational units, the size and type of wear is consistent with that observed at these units. There are no major design changes between the replacement SGs at CCNPP1 and other BWI replacement SGs that would account for the larger number of fan bar wear indications. All wear indications were inspected with a rotating probe and no anomalies were detected.

Enclosure

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 (e.g., tube plugging or repair) taken in response to the inspection findings. Based on a review of the information provided, the Nuclear Regulatory Commission (NRC) staff concludes that the licensee provided the information required by the CCNPP1 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: M. Yoder

Date: May 26, 2005

Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2

cc:

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