



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

February 10, 2011

Mr. Paul A. Harden
Site Vice President
FirstEnergy Nuclear Operating Company
Beaver Valley Power Station
Mail Stop A-BV-SEB1
P.O. Box 4, Route 168
Shippingport, PA 15077

SUBJECT: BEAVER VALLEY POWER STATION, UNIT NO. 2 – STAFF EVALUATION
REGARDING THE 2009 STEAM GENERATOR INSPECTION REPORT (TAC
NO. ME3998)

Dear Mr. Harden:

By letter dated February 11, 2010, as supplemented by letters dated May 17, 2010, and January 14, 2011, FirstEnergy Nuclear Operating Company, (the licensee) submitted information summarizing the results of the 2009 steam generator (SG) tube inspections for the 14th refueling outage at Beaver Valley Power Station, Unit No. 2 (BVPS-2), in accordance with Technical Specification (TS) 5.6.6.2.4.

The U.S. Nuclear Regulatory Commission (NRC) staff has completed its review of these reports and has concluded that the licensee provided the information required by their TSs and that no additional follow-up is required at this time. The NRC staff's review of the report is enclosed.

Please contact me at (301) 415-1016, if you have any questions regarding this issue.

Sincerely,

A handwritten signature in black ink, appearing to be "Nadiyah S. Morgan", written over a horizontal line.

Nadiyah S. Morgan, Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-412

Enclosure:
As stated

cc w/encl: Distribution via Listserv

STAFF EVALUATION REGARDING THE
2009 STEAM GENERATOR TUBE REPORT
BEAVER VALLEY POWER STATION, UNIT NO. 2
DOCKET NUMBER 50-412

By letter dated February 11, 2010, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML100491087), as supplemented by letters dated May 17, 2010 (ADAMS Accession No. ML101410292), and January 14, 2011 (ADAMS Accession No. ML110200067), FirstEnergy Nuclear Operating Company, (the licensee) submitted information summarizing the results of the 2009 steam generator (SG) tube inspections for the 14th refueling outage at Beaver Valley Power Station, Unit No. 2 (BVPS-2), in accordance with Technical Specification (TS) 5.6.6.2.4. In addition to this report, the U.S. Nuclear Regulatory Commission (NRC) staff summarized the October 23, 2009, conference call regarding the ongoing 2009 SG tube inspection activities at BVPS-2 by letter dated November 18, 2009 (ADAMS Accession No. ML093140728).

BVPS-2 is a 3-loop plant with Westinghouse model 51 SGs. Each SG contains 3,376 mill annealed Alloy 600 tubes. Each tube has a nominal outside diameter (OD) of 0.875-inch and a nominal wall thickness of 0.050-inch. The tubes are supported by a number of carbon steel tube support plates and Alloy 600 anti-vibration bars. The tubes were roll expanded at both ends for the full length of the tubesheet. The entire length of tube within the tubesheet was shot-peened on both the hot and cold leg side of the SG, prior to operation. In addition, the U-bend region of the small radius tubes were in-situ stress relieved prior to operation.

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.

After review of the information provided by the licensee, the NRC staff has the following comment/observation:

- Two circumferential OD stress-corrosion cracking indications that were located within free span dings in SG C were in-situ pressure tested. The amplitude of the dings were 2.25 volts and 14.84 volts. There was no evidence of leakage during the testing and the tubes did not burst. The eddy current signal obtained after the in-situ pressure test showed little change when compared to the eddy current signal obtained prior to the in-situ pressure test.

Based on a review of the information provided by the licensee, the NRC staff has concluded that the licensee provided the information required by their TSs. In addition, the NRC staff has also concluded 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.

Enclosure

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/ra/

Nadiyah S. Morgan, Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
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*See memo dated January 25, 2011

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