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ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT:

Davis-Besse Nuclear Power Station, Unit No. 1
Docket No. 50-346, License No. NPF-3
Davis-Besse Nuclear Power Station, Unit No. 1 Steam Generator Tube Circumferential Cracking Report for the Sixteenth Refueling Outage

In accordance with License Condition 2.C(7) of the Davis-Besse Nuclear Power Station (DBNPS) Unit No. 1 Operating License, the FirstEnergy Nuclear Operating Company (FENOC) hereby provides required information regarding the eddy current inspection of the DBNPS once-through steam generator (OTSG) tubes performed during the 2010 refueling outage (16RFO).

The indications below met the reporting requirements of License Condition 2.C(7), "Steam Generator Tube Circumferential Crack Report," and were discussed with the Nuclear Regulatory Commission (NRC) staff during a conference call on March 18, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML100970031).

The information specified by the license condition is provided below.

- a. No circumferential cracking was found inboard of any installed repair roll.
- b. One indication in the upper tubesheet region of OTSG 2A and one indication in the lower tubesheet region of OTSG 1B were discovered with circumferential primary water stress corrosion cracking (PWSCC) in the tube-to-tubesheet weld heat affected regions. There were also 49 indications of roll heel (outboard) transition circumferential PWSCC of the originally installed second rolls in 40 tubes in the lower tubesheet of OTSG 1B. The affected tubes were plugged in accordance with Technical Specification (TS) 5.5.8.c.

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- c. The large-break loss-of-coolant accident (LBLOCA) leakage integrity evaluation was performed and was included in the CMOA Evaluation of Steam Generator Tubing at Davis-Besse, 16RFO report. The projected best-estimate LBLOCA leakage for degradation observed during the 2010 refueling outage inspection is 0.0 gpm from OTSG 1B and 0.28 gpm from OTSG 2A.

A total of four indications of reroll heel (outboard) transition circumferential PWSCC were discovered in four tubes in the upper tubesheet of OTSG 2A. Three indications of reroll inner diameter (ID) volumetric inter-granular attack (IGA) were discovered in one tube in the upper tubesheet of OTSG 2A. Although no indications are inboard of the roll repair, they are in the reroll itself and are included in this report for completeness. The above ID volumetric IGA indications are included as they do have non-trivial circumferential extent. The affected tubes were plugged in accordance with TS 5.5.8.c, which provides provisions for SG tube repair criteria. No similar indications were found in or inboard of repair rolls of OTSG 1B. There are no in-service repair rolls installed in either steam generator's lower tubesheet region.

The estimated combined OTSG leak rate is less than the analyzed leak rate assumed in the event of a LBLOCA and thus bounded by the current analyses. The current analyses demonstrate that the off-site dose consequences from a LBLOCA would be below the 10 CFR Part 100 limits.

There are no regulatory commitments contained in this letter. If there are any questions or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at (330) 761-6071.

Sincerely,



Barry S. Allen

cc: NRC Region III Administrator
NRC Resident Inspector
NRR Project Manager
Utility Radiological Safety Board