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L-08-349

10 CFR 50.55(a)

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

SUBJECT:
Perry Nuclear Power Plant
Docket No. 50-440, License No. NPF-58
Evaluation of Fabrication Defects in N6A and C Nozzle-To-Safe-End Welds

In 1999 (letter PY-CEI/NRR-2417L, dated August 2, 1999) and 2001 (letter PY-CEI/NRR-2572L, dated June 18, 2001), inservice inspection summary reports were submitted after the respective refueling outages at the Perry Nuclear Power Plant (PNPP) in accordance with the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, "Inservice Inspection", 1989 Edition, Article IWA-6000. All indications were evaluated for acceptance in accordance with ASME Section XI, Article IWA-3000 and all required corrective actions and/or evaluations were completed.

In September 2008, under Boiling Water Reactor Vessel and Internals Project (BWRVIP) guidance, FirstEnergy Nuclear Operating Company (FENOC) completed a review of previous dissimilar metal weld examination data that had not yet been examined with the new ASME Section XI, Appendix VIII, Supplement 10 requirements. This review included examination data for Feedwater (N4), Core Spray (N5), and Residual Heat Removal (N6) nozzle-to-safe-end welds examined in the refueling outages of 1999 and 2001. Based on the results of the review, which utilized new analysis software and procedures developed to meet the Supplement 10 requirements, two unacceptable indications were identified in N6A and one unacceptable indication was identified in N6C nozzle-to-safe-end welds. Evaluation of the indications identified in N6A and N6C nozzle-to-safe-end welds was completed in October 2008.

The three unacceptable indications were determined to be subsurface flaws that exceed ASME Section XI subsurface flaw acceptance criteria. As such, an evaluation (Enclosure A) was performed in accordance with ASME Section XI Article IWB-3600 to determine the acceptability of continued service of the subject welds with the subsurface flaws. The conclusion of the evaluation is that the presence of the three reported subsurface flaws and their projected growth rate due to fatigue does not

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reduce the capacity of the welds in N6A and N6C below Code allowable. All Code margins are maintained.

Therefore, the welds are acceptable for service without the flaw removal, repair, or replacement until the welds are re-examined in the February 2009 refueling outage.

In accordance with 10 CFR 50.55(a) and ASME Section XI, Article IWB-3134, FENOC hereby submits the evaluation (Enclosure A) of fabrication defects in N6A and N6C nozzle-to-safe-end welds for the Perry Nuclear Power Plant (PNPP).

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,

Mark B. Bezilla

Enclosure:
A. Evaluation of Fabrication Defects in N6A and C Nozzle To Safe End Welds

cc: NRC Region III Administrator
NRC Resident Inspector
NRR Project Manager

Evaluation of Fabrication Defects in N6A and C Nozzle To Safe End Welds