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September 11, 2009

L-09-122

10 CFR 50.55a

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
Flaw Evaluation for N6A and C Nozzle-To-Safe-End Welds

In letters dated August 2, 1999 and June 18, 2001, inservice inspection (ISI) summary reports were submitted by FirstEnergy Nuclear Operating Company (FENOC) to the Nuclear Regulatory Commission (NRC) 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 evaluations were completed.

In September 2008, under Boiling Water Reactor Vessel and Internals Project (BWRVIP) guidance, FENOC completed a review of previous dissimilar metal weld examination data that had not yet been evaluated using 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. The review identified two unacceptable indications in the N6A and one unacceptable indication in the N6C nozzle-to-safe-end welds. These three unacceptable indications were determined to be subsurface flaws that exceed ASME Section XI subsurface flaw acceptance criteria. FENOC submitted (letter dated January 19, 2009) an evaluation of the fabrication defects performed in accordance with ASME Section XI, Article IWB-3600. The welds were deemed acceptable for continued service without flaw removal, repair, or replacement through the spring 2009 refueling outage.

The ISI examinations conducted during the spring 2009 refueling outage identified a change in reported indication length for the N6C nozzle-to-safe-end weld. The unacceptable indication reported by FENOC in January 2009 for N6C was approximately 11 inches in length. An additional acceptable indication of approximately 2 inches in length existed in close proximity to the unacceptable

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indication. The spring 2009 ISI examinations revealed these two indications as one continuous indication with a total length of 16.6 inches. This length exceeds the bounding flaw size previously evaluated and exceeds ASME Section XI subsurface flaw acceptance criteria. As a result, a bounding evaluation (Enclosure) was performed in accordance with ASME Section XI, Article IWB-3600, to determine the acceptability of continued service of the weld through the next scheduled inspection interval.

The ISI examinations also revealed that one of the unacceptable indications reported by FENOC in January 2009 for N6A nozzle-to-safe-end welds was acceptable due a slightly lower through wall measurement recorded in 2009. A bounding evaluation (Enclosure) for the remaining unacceptable indication was performed in accordance with ASME Section XI, Article IWB-3600, to determine the acceptability of continued service of the weld through the next scheduled inspection interval.

As concluded in the evaluation, the reported subsurface flaws and the projected growth due to fatigue do not reduce the capacity of the N6A and N6C nozzle-to-safe-end welds below Code allowables. All Code margins are maintained. Therefore, the welds are acceptable for continued service without the flaw removal, repair, or replacement through the next scheduled inspection interval.

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

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:

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cc: NRC Region III Administrator
NRC Resident Inspector
Nuclear Reactor Regulation Project Manager

Enclosure
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(22 pages follow)