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February 8, 2007
PY-CEI/NRR-3014L

10 CFR 50.90

ATTN: Document Control Desk
United States Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Perry Nuclear Power Plant
Docket No. 50-440

Supplemental Information in Support of a Proposed License Amendment Request to Revise the Intermediate Range Monitoring Instrumentation, Mode 5, CHANNEL FUNCTIONAL TEST Surveillance Frequency from 7 Days to 31 Days (TAC NO. MD0144)

Ladies and Gentlemen:

This letter provides supplemental information requested by the Nuclear Regulatory Commission on January 4, 2007, as clarified on January 8, 2007, pertaining to the FirstEnergy Nuclear Operating Company (FENOC) Perry Nuclear Power Plant License Amendment Request (LAR) submitted on February 14, 2006 (PY-CEI/NRR-2906L). The LAR would modify Technical Specification (TS) 3.3.1.1 to extend the Intermediate Range Monitoring Instrumentation, Mode 5, CHANNEL FUNCTIONAL TEST Surveillance Frequency from once per 7 Days to once per 31 Days.

There are no regulatory commitments contained in this letter or its attachment.

If there are any questions or if additional information is required, please contact Mr. Henry L. Hegrat – Supervisor, FENOC Fleet Licensing, at (330) 315-6944.

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 8, 2007.

L. William Pearce
Vice President – Nuclear

Attachment:
1. Supplemental Information

cc: NRC Project Manager
NRC Resident Inspector
NRC Region III
State of Ohio

A001

Supplemental Information

By letter dated February 14, 2006 (PY-CEI/NRR-2906L), the Perry Nuclear Power Plant (PNPP) submitted a License Amendment Request (LAR) to the Nuclear Regulatory Commission (NRC) for review and approval. The LAR proposed to modify Technical Specification (TS) 3.3.1.1 by extending the Intermediate Range Monitoring Instrumentation, Mode 5, CHANNEL FUNCTIONAL TEST Surveillance Frequency from 7 Days to 31 Days. On January 4, 2007, the NRC, by electronic mail, requested supplemental information relative to the LAR.

NRC Request:

The January 4, 2007 electronic mail request stated:

> **The licensee's letter of October 17, 2006 identified 21 component failures in addition to 13 S4 switch failures. The NRC staff was concerned with the number of failures. During the conference call on December 6, the NRC staff questioned the licensee about the acceptability of these failures. The licensee by e-mail dated December 8, informed the staff that only 4 failures are associated with the Mode 5 channel functional tests.**
>
> **In order to justify the acceptability of these failures, confirm that the number of failures demonstrates a 95% statistical confidence that the failures of the IRM will not result in meeting (sic) the functional requirements of the system.**

By a teleconference conducted on January 8, 2007 between the NRC and PNPP, the second paragraph was clarified. The NRC desired that a statistical analysis using a Poisson distribution be performed on the component failures to demonstrate that there would be a 95% confidence at a 95% probability that the component failure rates would not exceed one (1) failure per year. With this failure rate, then explain the impact it has upon the Intermediate Range Monitoring system function.

Response:

A statistical analysis using a Poisson distribution was performed. The analysis used the failures which impacted channel operability that were identified during the performance of the Mode 5 Intermediate Range Monitoring (IRM) CHANNEL FUNCTIONAL TEST [Surveillance Requirement (SR) 3.3.1.1.5] and the number of Mode 5 IRM CHANNEL FUNCTIONAL TESTS (SR 3.3.1.1.5) completed during each refueling outage. The CHANNEL FUNCTIONAL TESTS used in the analysis included the Mode 5 tests performed during Refueling Outage 1 through Refueling Outage 10 (1989 through 2005). The results of the analysis indicate there is greater than a 95% confidence that the probability of experiencing no more than one (1) failure per 31 days (proposed surveillance interval) is 95%.

Assuming one failure, the IRM function is not impacted. The PNPP IRM design divides eight IRM channels into two trip systems, each trip system having four IRM channels. Technical Specification 3.3.1.1, "Reactor Protection System (RPS) Instrumentation," states that three IRM channels are required for each trip system to be OPERABLE. With only one channel failure, the required number of IRM channels for both trip systems would be satisfied; therefore the IRM function is OPERABLE.