



FirstEnergy Nuclear Operating Company

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L-09-160

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
Response to Request for Additional Information Related to Inservice Testing Program
Request PR-3 in Support of the Third Ten-Year Interval (TAC No. ME0820)

By correspondence dated February 18, 2009 (L-08-353), FirstEnergy Nuclear Operating Company (FENOC) submitted a proposed alternative to requirements associated with the Perry Nuclear Power Plant Inservice Testing Program. By letter dated May 4, 2009, the Nuclear Regulatory Commission (NRC) staff requested additional information to complete its review of Request PR-3. The attachment provides responses to the NRC staff's questions.

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

Sincerely,

Mark B. Bezilla

Attachment:

Response to Request for Additional Information Related to Inservice Testing Program
Request PR-3 in Support of the Third Ten-Year Interval

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

A001
NMR

Response to Request for Additional Information Related to Inservice Testing Program
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The Nuclear Regulatory Commission (NRC) staff has requested additional information regarding a proposed alternative to requirements associated with the Perry Nuclear Power Plant (PNPP) Inservice Testing Program. The FirstEnergy Nuclear Operating Company (FENOC) responses for PNPP are provided below. The NRC staff's questions are presented in bold, followed by FENOC's responses.

Request PR-3

RAI PR-3-001

Please identify which pumps in Section 1 are currently Group B pumps that you are proposing to re-classify as Group A pumps, and provide your rationale for re-classifying the pumps.

Response:

The following table provides the requested re-classification information.

DESIGN LOCATION	PUMP NAME	ORIGINAL GROUP	PROPOSED GROUP
1C41-C001A & B	Standby Liquid Control (SLC) A & B	B	AB
1E12-C002C	Residual Heat Removal (RHR) C	B	AB
1E21-C001	Low Pressure Core Spray (LPCS)	B	AB
1E22-C001	High Pressure Core Spray (HPCS)	B	AB
1E51-C001	Reactor Core Isolation Cooling (RCIC)	B	AB
1P45-C002	HPCS Emergency Service Water	B	AB
1R45-C001A, B, & C	Fuel Oil Transfer #1	B	AB
1R45-C002A, B, & C	Fuel Oil Transfer #2	B	AB

As allowed by the American Society of Mechanical Engineers (ASME) Code Case, FENOC is voluntarily re-classifying these Group B pumps to Group A. FENOC recognizes that re-classifying these pumps introduces additional quarterly testing requirements. These additional requirements, along with consistent use of more accurate pressure instruments and only one set of pump performance acceptance criteria, improve FENOC's overall pump performance trending capabilities. As a result, the biennial comprehensive test would not be necessary or required.

Use of the Group AB designator in the PNPP Inservice Testing Program (ISTP) update for the third ten-year interval identifies original Group B pumps that have been re-classified into Group A.

RAI PR-3-002

The proposed alternative replaces the comprehensive test acceptable ranges (e.g. 0.94-1.03 for flow and 0.93-1.03 for Δ Pressure for centrifugal pumps) with wider, less conservative acceptance ranges (0.90-1.10 for flow and Δ Pressure). The Alert Range is also eliminated. Please explain how these changes will provide an acceptable level of quality and safety.

Response:

Based on recent guidance from the ASME OM Code Committee regarding application of Code Case OMN-18, the update of the ISTP for the third ten-year interval will reflect a more limiting upper bound Acceptable Range value of 1.06 versus 1.10 for flow and differential pressure. Values above 1.06 would be considered to be in the Required Action Range. This tightened Acceptable Range, in conjunction with using more accurate pressure instruments during testing (an accuracy improvement from ± 2 percent to $\pm 1/2$ percent), provides more consistent trend results when comparing subsequent tests or test results in aggregate. Due to the improved accuracy, consistent testing methodology, and the addition of quarterly vibration monitoring, deviations in actual pump performance indicative of impending degradation are more easily recognized during quarterly performance trending activities. Additionally, declaring pumps inoperable for reasons other than actual equipment degradation can be avoided.

As detailed in ISTB-5100-1, the ASME Code does not require utilization of an Alert Range for quarterly pump tests. As stated above, the proposed quarterly testing methodology is expected to more accurately identify deviations and trends in actual pump performance without relying on the use of a specified Alert Range.

The proposed alternative provides an acceptable level of quality and safety for monitoring pump performance and ensures the pumps are capable of performing their safety function.

RAI PR-3-003

ISTB-5000 allows substituting a comprehensive test for a Group A or Group B test. If the pumps listed in Section 1 can be operated within ± 20 percent of their design flow rates and instruments with $\pm 1/2$ percent accuracy can be used during quarterly testing, please explain why a comprehensive test cannot be performed quarterly in lieu of Group A or Group B tests.

Response:

Biennial comprehensive pump tests can be completed at PNPP, per the Code. However, FENOC is electing to align with ASME Code Committee direction and implement pump performance testing consistent with the provisions established within Code Case OMN-18, "Alternative Testing Requirements for Pumps Tested Quarterly within $\pm 20\%$ of Design Flow." In addition to using more accurate pressure instruments, FENOC will also use quarterly upper bound Acceptable Range acceptance criteria of 1.06 of the reference values for flow and differential pressure, as described above.