

David B. Hamilton
Vice President

440-280-5382

October 26, 2018
L-18-239

10 CFR 50.90

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 Regarding Request to Revise
Containment Leakage Rate Test Intervals (EPID L-2018-LLA-0055)

By letter dated March 7, 2018 (Accession Number ML18066A648) FirstEnergy Nuclear Operating Company (FENOC) requested an amendment to the facility operating license for the Perry Nuclear Power Plant (PNPP). The proposed license amendment would revise Technical Specification 5.5.12, "Containment Leakage Rate Testing Program," to follow the guidance provided in Nuclear Energy Institute (NEI) 94-01, Revision 3-A, "Industry Guideline for Implementing Performance Based Option of 10 CFR Part 50, Appendix J," with conditions and limitations specified in NEI 94-01, Revision 2-A (having the same title as Revision 3-A), instead of Regulatory Guide 1.163, "Performance Based Containment Leak Test Program." The proposed license amendment would also revise Technical Specification 5.5.12 by deleting two of the four listed exceptions to program guidelines, since they are no longer necessary.

By e-mail dated September 28, 2018, the Nuclear Regulatory Commission (NRC) staff requested additional information to complete their review of the proposed changes. A response to the NRC staff request for additional information is attached. The response provided with this letter has no impact on the no significant hazards consideration transmitted by the March 7, 2018 letter.

Perry Nuclear Power Plant
L-18-239
Page 2

There are no regulatory commitments contained in this letter. If there are any questions or if additional information is required, please contact Mr. Phil H. Lashley, Acting Manager Nuclear Licensing and Regulatory Affairs, at 330-315-6808.

I declare under penalty of perjury that the foregoing is true and correct. Executed on October 26, 2018.

Sincerely,



David B. Hamilton

Attachment:

Response to September 28, 2018 NRC Staff Request For Additional Information

cc: NRC Region III Administrator
NRC Resident Inspector
NRC Project Manager
Branch Chief, Ohio Emergency Management Agency,
State of Ohio (NRC Liaison)
Utility Radiological Safety Board

Response to September 28, 2018 NRC Staff Request For Additional Information
Page 1 of 2

By e-mail dated September 28, 2018, the NRC staff requested additional information to complete their review of requested Perry Nuclear Power Plant, Technical Specification changes submitted by a FENOC letter dated March 7, 2018 (Accession Number ML18066A648). The NRC staff's request is provided below in bold type and is followed by the FENOC response.

On page 13 of the enclosure to the license amendment request (LAR), Table 3.2.2-1, "PNPP Type A Test History," for 2009 shows that the Leakage 95% Upper Confidence Level, wt. %/day was 0.1195, and the Total Leakage As-Found wt. %/day was 0.1382, and includes Note 2 that states:

ILRT as-found leak rate test data contains 95 percent upper confidence limit and all penalties assigned including leakage value adjustments from Type B and C component repairs performed prior to the ILRT test and sump level changes during the ILRT test.

On page 18 of the enclosure, FENOC states:

The 95 percent upper confidence limit for the 2009 ILRT was 0.1195 weight percent per day. Combining the 95 percent upper confidence limit with the MNPLR for the Type B and C pathways provides the performance leakage rate. The performance leakage rate for the 2009 ILRT was 0.1435 weight percent per day, which is less than 1.0 L_a (0.20 weight percent per day).

It is not clear to the NRC staff what the correct value is for evaluating the 2009 ILRT results.

RAI SCPB-1:

Clarify which value is to be used to judge the 2009 ILRT results, and provide the basis for the difference between the 0.1382 and the 0.1435 total leakage values (for 2009) cited in the LAR.

Response

The 2009 Integrated Leak Rate Test (ILRT) as-found leakage rate value of 0.1382 weight percent per day (wt. %/day), listed in Table 3.2.2-1 of the license amendment request, should be used to judge the test result against an acceptance criterion of less than or equal to 0.20 wt. %/day, which is equivalent to 1.0 L_a.

The ILRT as-found leakage rate is obtained by starting with the 95 percent (%) upper confidence level (UCL) leakage rate and then applying total leakage rate corrections and leakage savings when accounting for Type B and Type C local leak rate tests pre-

repair and post-repair on a minimum pathway leakage rate (MNPLR) methodology. The 95% UCL leakage rate of 0.1195 wt.%/day yields an as-found leakage rate of 0.1382 wt.%/day when applying the total leakage rate corrections and leakage savings.

Page 18 of the license amendment request refers to a performance leakage rate of 0.1435 wt.%/day. The performance leakage rate is calculated as the sum of the Type A 95% UCL and as-left MNPLR leakage rate for all Type B and C pathways that were in service, isolated, or not lined up in their test position (that is, drained and vented to containment atmosphere) prior to performing the Type A test. In addition, any leakage pathways that were isolated during performance of the test because of excessive leakage must be factored into the performance determination. For the 2009 test there were no components isolated during the ILRT due to excessive leakage. The performance leakage rate value listed on page 18 of the license amendment request did not include the liquid level corrections, which resulted in an erroneous value of 0.1435 instead of 0.1145. The 95% UCL leakage of 0.1195 wt.%/day listed in Table 3.2.2-1, added to the Type B and C pathways in service, isolated, or not lined up in their test position of 10,466.9 standard cubic centimeters per minute (equivalent to 0.024 wt.%/day) listed in Table 3.2.2-2, plus liquid level corrections for the reactor vessel, suppression pool, upper containment pool, containment sump, and drywell sump (-0.029 wt.%/day) yielded the 2009 ILRT as-left leakage rate of 0.1145 wt.%/day. Therefore, the 2009 ILRT performance leakage rate is equal to the 2009 ILRT as-left leakage rate of 0.1145 wt.%/day. The acceptance criterion for the ILRT performance leakage rate is less than 1.0 L_a (0.20 wt.%/day).