



FirstEnergy Nuclear Operating Company

5501 North State Route 2
Oak Harbor, Ohio 43449-9760

Brian D. Boles
Vice President - Nuclear

419-321-7676
Fax: 419-321-7582

June 26, 2015
L-15-197

10 CFR 50.90

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

SUBJECT:

Davis-Besse Nuclear Power Station
Docket No. 50-346, License No. NPF-3
Response to Request for Additional Information Regarding a Request to Amend
Technical Specification 5.5.15, "Containment Leakage Rate Testing Program"
(TAC No. MF5433)

By correspondence dated December 19, 2014 (Accession No. ML14353A349), FirstEnergy Nuclear Operating Company (FENOC) submitted a request to amend Technical Specification 5.5.15, "Containment Leakage Rate Testing Program," for the Davis-Besse Nuclear Power Station.

By correspondence dated May 20, 2015 (Accession No. ML15127A624), the Nuclear Regulatory Commission (NRC) requested additional information to complete its review. FENOC's response to this request is attached.

There are no regulatory commitments established in this submittal. If there are any questions or if additional information is required, please contact Mr. Thomas A. Lentz, Manager – Fleet Licensing, at (330) 315-6810.

I declare under penalty of perjury that the foregoing is true and correct. Executed on June 26, 2015.

Sincerely,

Brian D. Boles

Attachment: Response to May 20, 2015 Request for Additional Information

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

Response to May 20, 2015 Request for Additional Information
Page 1 of 4

By correspondence dated December 19, 2014, FirstEnergy Nuclear Operating Company (FENOC) submitted a license amendment request for Nuclear Regulatory Commission (NRC) review and approval. By correspondence dated May 20, 2015, NRC staff requested additional information to complete its review. The requested information is presented below in bold type, followed by the FENOC response.

1. Provide the combined Type B and C as-found minimum pathway totals going back eight years.

Response:

See Table 1 on page 4 of this attachment.

2. In Section 3.1.2 on page 4 of 8 of the December 19, 2014, submittal, FENOC describes the response to Condition 1 of the letter dated May 8, 2012, providing the approval for topical report Nuclear Energy Institute (NEI) 94-01, Revision 3-A. The response indicates that Davis-Besse will meet the condition by performing Type C testing in accordance with NEI 94-01, Revision 3-A.

a. Address whether the post-outage report will include the margin between the Type B and Type C minimum pathway leak rate summation value as adjusted to include the estimate of applicable Type C leakage understatement and its Technical Specification performance criterion of 0.6 L_a (maximum allowable containment leakage rate).

Response:

As stated in NEI 94-01¹, Revision 3-A, Section 11.3.2, "Programmatic Controls," the primary containment leakage rate testing program trending or monitoring (Section 12.1) shall also "include an estimate of the amount of understatement in the minimum pathway Type B & C summation."

As stated in NEI 94-01, Revision 3-A, Section 12.1, "Report Requirements," a post-outage report shall be prepared and the "report shall also include the combined Type B and Type C leakage summation, and the margin between the Type B and Type C leakage rate summation and its regulatory limit²."

By incorporating NEI 94-01, Revision 3-A, into Technical Specification 5.5.15, "Containment Leakage Rate Testing Program," as proposed in the license amendment request (LAR) currently under NRC review, the Davis-Besse Nuclear Power Station (DBNPS) would issue a post-outage report that includes the margin between the Type B and Type C minimum pathway leak rate summation value, as adjusted to include the estimate of applicable Type C leakage understatement and its Technical Specification performance criterion of 0.6 L_a.

¹ NEI 94-01, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," Revision 3-A, July 2012.

² Per Technical Specification 5.5.15.d.1, the leakage rate acceptance criteria is less than 0.60 L_a for the Type B and Type C tests.

b. Address how FENOC intends to apply the 9-month grace period to eligible Type C components for unanticipated emergent conditions.

Response:

As discussed during the FENOC-NRC teleconference on May 12, 2015, specific, unanticipated emergent conditions when a 9-month grace period could be applied to eligible Type C components can't be predicted. FENOC staff also stated the 9-month grace period would not likely be used due to its misalignment with the DBNPS two-year [24-month] operating cycle. Should staff at DBNPS apply the 9-month grace period to an eligible Type C component, its use and basis would be documented in a surveillance change form.

c. Describe those actions that would be taken should Davis-Besse need to restore margin to an acceptable level.

Response:

As discussed during the FENOC-NRC teleconference on May 12, 2015, specific corrective action and corrective maintenance is determined on a case-by-case [component-by-component] basis, and that both a Maintenance Rule³ discussion and a typical corrective maintenance example would be provided.

Maintenance Rule discussion: The Maintenance Rule program manual at DBNPS contains plant level performance criteria for containment integrity. Per the program, the combined leakage rate for all Type B and Type C penetrations is less than or equal to 0.45 L_a , otherwise a Maintenance Rule Condition Monitoring Failure occurs. Additionally, the combined leakage rate for all bypass penetrations is less than or equal to 0.0225 L_a ; otherwise, a Maintenance Rule Condition Monitoring Failure occurs. In accordance with 10 CFR 50.65(a)(1), an evaluation would be performed to determine if the containment system is capable of performing its intended safety function and if corrective action is necessary to restore the leakage summation margin to less than the DBNPS Maintenance Rule administrative leakage limit. The corrective action plan would prioritize those components contributing the most to the increase in the leakage summation value and focus on the prevention of future component leakage performance issues.

Corrective Maintenance example: During as-found testing of Penetration X, the as-found leakage value for Valve Y exceeded the acceptance limit. As part of a corrective action plan, the leakage was found at the bolted diaphragm connection of Valve Y. Corrective maintenance resulted in the replacement of the valve's diaphragm. As-left testing indicated that margin for Valve Y was restored to an acceptable level [below the acceptance limit]. Due to the replacement of the valve's diaphragm, which negated its performance history, Valve Y was placed on a nominal test frequency.

³ 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," [also known as "Maintenance Rule"].

3. In Section 3.1.2 on page 5 of 8 of the December 19, 2014, submittal, FENOC describes the Davis-Besse response to Condition 2 of the letter dated May 8, 2012, providing the approval for topical report NEI 94-01, Revision 3-A. The response indicates that Davis-Besse will meet the condition by performing Type C testing in accordance with NEI 94-01, Revision 3-A. Describe how any potential leakage understatement of the local leak rate testing totals will be conservatively applied.

Response:

As stated in NEI 94-01, Revision 3-A, Section 11.3.2, "Programmatic Controls," when routinely scheduling any local leak rate test (LLRT) interval beyond 60 months, the primary containment leakage rate testing program trending or monitoring "shall include an estimate of understatement in the minimum pathway Type B & C summation." The estimate must be included in the post-outage report of Section 12.1 and include the reasoning and determination of acceptability of the extension, demonstrating that the LLRT totals calculated represent the actual leakage potential of the penetrations.

By incorporating NEI 94-01, Revision 3-A, into Technical Specification 5.5.15, "Containment Leakage Rate Testing Program," the testing interval change from 60 months to 75 months for Type C tested components represents a 25 percent increase in the LLRT periodicity. As such, FENOC would conservatively apply a potential understatement adjustment factor of 1.25 to the as-left leakage total for each Type C component tested at the 75-month periodicity. This will result in conservative Type C totals for all 75-month LLRTs going forward. Additionally, DBNPS staff would include in its post-outage report the estimate of understatement and the reasoning and determination of acceptability of the extension to demonstrate that the LLRT totals calculated represent the actual leakage potential of the penetrations.

Table 1
Davis-Besse Nuclear Power Station
Type B and Type C Leak Rate Summation History

Outage	As-Found MNPLR Total	Percentage of 0.6 L _a (599,400 sccm)	As-Found MNPLR Bypass	Percentage of 0.03 L _a (29,970 sccm)
Winter 2008	30,099 sccm	5.03%	5,679 sccm	18.95%
Spring 2010	14,945 sccm	2.50%	2,723 sccm	9.09%
Fall 2011	17,495 sccm	2.92%	6,244 sccm	20.84%
Spring 2012	29,469 sccm	4.92%	5,961 sccm	19.89%
Spring 2014	27,603 sccm	4.61%	7,271 sccm	24.27%

MNPLR = Minimum Pathway Leakage Rate
sccm = Standard Cubic Centimeters per Minute
% = percent