



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 14, 2017

Mr. Bryan C. Hanson
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: NINE MILE POINT NUCLEAR STATION, UNITS 1 AND 2 – REQUEST FOR ADDITIONAL INFORMATION REGARDING PROPOSED ALTERNATIVE REQUEST NUMBER GVRR-3 TO PERFORM PRESSURE ISOLATION VALVE LEAKAGE TESTING AT FREQUENCIES CONSISTENT WITH TITLE 10 OF THE CODE OF FEDERAL REGULATIONS, PART 50, APPENDIX J (CAC NOS. MF9073 AND MF9074)

Dear Mr. Hanson:

By letter dated December 27, 2017 (Agencywide Documents Access and Management System Accession No. ML17003A096), Exelon Generation Company, LLC (the licensee) submitted a request in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(z)(1) for a proposed alternative to the requirements of 10 CFR 50.55a and the American Society of Mechanical Engineers Boiler and Pressure Vessel Code for Nine Mile Point Nuclear Station, Units 1 and 2. The proposed alternative would allow the licensee to perform pressure isolation valve leakage testing at frequencies consistent with 10 CFR Part 50, Appendix J, primary reactor containment leakage testing performance-based requirements.

The U.S. Nuclear Regulatory Commission staff has reviewed the information provided in your application and determined that additional information is needed to complete its review. Enclosed is our Request for Additional Information (RAI). The RAI was discussed with your staff on March 13, 2017, and it was agreed that your response would be provided within 30 days from the date of this letter.

Sincerely,

A handwritten signature in black ink that reads "Michael L. Marshall, Jr." in a cursive style.

Michael L. Marshall, Jr., Senior Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-220 and 50-410

Enclosure:
Request for Additional Information

cc: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION
PROPOSED ALTERNATIVE REQUEST NUMBER GVRR-3 FOR
THE INSERVICE TESTING PROGRAM FOURTH AND THIRD 10-YEAR INTERVALS
NINE MILE POINT NUCLEAR STATION, LLC
EXELON GENERATION COMPANY, LLC
NINE MILE POINT NUCLEAR STATION, UNITS 1 AND 2
DOCKET NOS. 50-220 AND 50-410

By letter dated December 27, 2017 (Agencywide Documents Access and Management System Accession No. ML17003A096), Exelon Generation Company, LLC (Exelon, the licensee) submitted a request in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(z)(1) for a proposed alternative to the requirements of 10 CFR 50.55a and the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code for Nine Mile Point Nuclear Station, Units 1 and 2 (NMP1 and NMP2). The Proposed Alternative Request Number GVRR-3 would allow the licensee to perform pressure isolation valve (PIV) leakage testing at frequencies consistent with the 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," reactor containment leakage testing performance-based requirements. The licensee has proposed an alternative test in lieu of the requirements found in the 2004 Edition of the ASME Operation and Maintenance (OM) Code Section ISTC-3630(a) for 35 PIVs.

The licensee proposes to functionally test and verify the leakage rate of these PIVs using 10 CFR Part 50, Appendix J, Option B, performance-based schedule. Valves would initially be tested at the required interval schedule, which is currently every refueling outage (RFO), or 2 years, as specified by ASME OM Code, Section ISTC-3630(a). Valves that have demonstrated good performance for two consecutive cycles may have their test interval extended. Any PIV leakage test failure would require the component to return to the initial interval of every RFO, or 2 years, until good performance can again be established.

In its proposed alternative, Exelon states that the extension of test frequencies will be consistent with the guidance provided for Appendix J, Type C, leak rate tests as detailed in NEI 94-01, Revision 2-A, "Industry Guidelines for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," paragraph 10.2.3.2, "Extended Test Interval" (ADAMS Accession No. ML100620847), which states that, "Intervals for Type C testing may be increased to a specific value in a range of frequencies from 30 months up to a maximum of 60 months" (see page 10 of proposed alternative).

Also, the licensee states that it proposes to perform PIV testing at intervals ranging from every refueling outage to every third refueling outage (see page 3 of proposed alternative). The U.S. Nuclear Regulatory Commission (NRC) staff understands that NMP1 and NMP2 have a refueling cycle of 24 months. The proposed testing interval from every refueling outage to every

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third refueling outage would exceed the maximum 60-month test interval described in NEI 94-01, Revision 2-A.

NEI 94-01 has been updated and is currently on its third version that has been accepted by the NRC staff. For NMP1, the Type C test interval is in accordance with NEI 94-01, Revision 0 (ADAMS Accession No. ML11327A025), which is endorsed by Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program" (ADAMS Accession No. ML003740058). Type C tests intervals are set to 60 months. For NMP2, the Type C test interval is in accordance with NEI 94-01, Revision 2-A which has been accepted with limitations by letter dated June 25, 2008 (ADAMS Accession No. ML081140105). Type C test intervals are set to 60 months with a 9-month grace period. The third version of NEI 94-01, Revision 3-A (ADAMS Accession No. ML12221A202), has been approved with conditions by NRC staff. Type C test intervals can be extended to 75 months with a 9-month grace period with conditions.

The NRC staff has determined that the following additional information is required to complete its review:

- (1) Explain which version of NEI 94-01 NMP1 and NMP2 wants to apply to the extension of PIV test frequencies.
- (2) Clarify whether the extension of the PIV test frequencies will be consistent with NEI 94-01, paragraph 10.2.3.2, or up to every third refueling outage.

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ADAMS Accession Number: ML17065A162

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