

From: [Guzman, Richard](#)
To: [Wanda D Craft](#)
Subject: Millstone Unit 2 - Proposed LAR to Revise ILRT Type A and Type C Test Intervals - REQUEST FOR ADDITIONAL INFORMATION (EPID: L-2017-LLA-0316)
Date: Thursday, May 17, 2018 12:38:31 PM

Wanda,

On May 14, 2018, the U.S. Nuclear Regulatory Commission (NRC) staff sent Dominion Energy Nuclear Connecticut, Inc. (Dominion Energy or the licensee) the Request for Additional Information (RAI) as a draft (via e-mail shown below). This RAI relates to a license amendment request submitted by Dominion Energy that proposes to revise Technical Specification (TS) 6.19, "Containment Leakage Rate Testing Program" to allow extension of the Type A test interval from the current 10 years to 15 years and adopt the extension of the Type C test interval to 75 months.

On May 17, 2018, the NRC staff conducted a conference call with the licensee staff to clarify the request. During the call, you indicated that Dominion Energy will provide a response to this RAI by June 18, 2018 (approximately 30 days from the date of this correspondence). Updated below is the official RAI. A publicly available version of this e-mail and RAI will be placed in the NRC's ADAMS system. Please contact me should you have any questions in regard to this request.

Thanks,

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Rich Guzman  
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U.S. Nuclear Regulatory Commission  
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**From:** Guzman, Richard [<mailto:Richard.Guzman@nrc.gov>]  
**Sent:** Monday, May 14, 2018 8:43 AM  
**To:** Wanda D Craft (Generation - 6)  
**Subject:** [External] Millstone Unit 2 - Proposed LAR to Revise ILRT Type A and Type C Test Intervals - DRAFT Request for Additional Information

Wanda,

By letter dated October 4, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17284A179), Dominion Energy Nuclear Connecticut, Inc. (Dominion Energy, the licensee) submitted a license amendment request (LAR) for Millstone Power Station, Unit 2 (MPS2), proposing to revise Technical Specification (TS) 6.19, "Containment Leakage Rate Testing Program" to allow extension of the Type A test interval from the current 10 years to 15 years and adopt the extension of the Type C test interval to 75 months. The Nuclear Regulatory Commission (NRC) staff has determined that additional information is needed to complete its review, as described in the attached request for additional information (RAI).

This RAI is identified as draft at this time to confirm your understanding of the information that the NRC staff needs to complete the evaluation. Please contact me if you would like to set up a conference call to clarify this request for information. Per your e-mail dated April 24, 2018, I understand Dominion Energy also intends to provide supplemental information to its LAR by May 30.

Thanks,

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Rich Guzman
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REQUEST FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST TO REVISE INTEGRATED
LEAK RATE TEST (TYPE A) AND TYPE C TEST INTERVALS
DOMINION ENERGY NUCLEAR CONNECTICUT, INC.
MILLSTONE POWER STATION, UNIT 2 (MPS2)
DOCKET NO.50-336

Title 10 of the *Code of Federal Regulations* Part 50 (10 CFR 50), Appendix J, Option B identifies the performance-based requirements and criteria for preoperational and subsequent periodic containment leakage-rate testing for all operating licenses and combined licenses for light-water-cooled power reactors. In its letter dated October 4, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17284A179), Dominion Energy Nuclear Connecticut, Inc. (Dominion Energy, the licensee) submitted a license amendment request (LAR) for Millstone Power Station, Unit 2 (MPS2) which would revise Technical Specification (TS) 6.19, "Containment Leakage Rate Testing Program" to allow extension of the Type A test interval from the current 10 years to 15 years and adopt the extension of the Type C test interval to 75 months. In Section 4.6 of Attachment 3 to the LAR, the licensee stated that the plant-specific risk assessment follows the guidance in Nuclear Energy Institute (NEI) Topical Report (TR) 94-01, Revision 2-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," (ADAMS Accession No. ML100620847) and the methodology described in Electric Power Research Institute (EPRI) Report No. 1009325, Revision 2-A (ADAMS Accession No. ML14024A045).

In the safety evaluation (SE) issued on June 25, 2008 (ADAMS Accession No. ML081140105), the U.S. Nuclear Regulatory Commission (NRC) staff found the methodology in NEI 94-01, Revision 2, and EPRI Report No. 1009325, Revision 2, acceptable for referencing by licensees proposing to amend their TSs to permanently extend the ILRT interval to 15 years, provided certain conditions are satisfied. Condition 1, set forth in Section 4.2 of the SE for EPRI Report No. 1009325, Revision 2, states that the licensee should submit documentation indicating that the technical adequacy of their probabilistic risk assessment (PRA) is consistent with the guidance in Regulatory Guide (RG) 1.200, relevant to the ILRT extension application. Revision 2 of RG 1.200 endorses, with clarifications and qualifications, the American Society of Mechanical

Engineers/American Nuclear Society (ASME/ANS) PRA Standard RA-Sa-2009.

The information provided in the LAR is not sufficient for the NRC staff to reasonably determine that the licensee's PRA is consistent with the guidance in RG 1.200, Rev. 2, and therefore, cannot assess the technical acceptability of the licensee's PRA for use in support of this application. The following requests for additional information (RAIs) outline the information needed for the NRC staff to complete its review:

RAI-01

The licensee's LAR does not discuss changes made to the internal events and internal flooding PRA since the 2000 full-scope peer review.

- a) Provide an overview of all changes in the internal events and internal flooding PRA since the 2000 full scope peer review that were not subject to the 2012 focused-scope peer review and provide justification as to whether any of these changes fit the definition of a PRA upgrade.
- b) For each upgrade identified in item a. above, provide the results of the focused-scope peer review(s) performed on these upgrades and the disposition of any findings for the application.

RAI-02

In order to ensure efficiency in its reviews and prevent duplicate reviews of a licensee's PRA technical acceptability, the NRC staff may utilize PRA information from the licensee's previous risk-informed submittals. In the course of its review for this LAR, the staff utilized information from a previous risk-informed LAR submitted by the licensee in October 2014 (ADAMS Accession No. ML14301A112). On page 1 of Attachment 2 of the 2014 LAR, the licensee states that the MPS2 Internal Events PRA (IEPRA) underwent a full-scope peer review in 2000 and that the peer review team used the Combustion Engineering Owner's Group (CEOG) Peer Review Process Guidance as the basis for the review. However, Section 4.6.2 of Attachment 1 to the current LAR states that the MPS2 IEPRA model underwent a peer review by the Combustion Engineering Owners Group (CEOG) in 2000 using the NEI 00-02 PRA Peer Review Process Guidance. The CEOG peer review guidance is not endorsed by the NRC, and there is no approved correlation available between the compliance levels in CEOG peer review and the RA-Sa-2009 CC levels.

- a) Clarify whether the 2000 peer review of the IEPRA used the CEOG PRA standard or the standard in NEI 00-02.
- b) If the IEPRA 2000 peer review was performed against the CEOG standard, describe and justify how the licensee concluded that its IEPRA is acceptable for use in supporting this application in accordance with RG 1.200 Revision 2, given that the IEPRA has not undergone an independent full-scope peer review against an NRC endorsed industry PRA standard.

RAI-03

As referenced in RAI-02 above, the staff utilized information from the October 2014 risk-

informed LAR. Table 1 of Attachment 2 of the 2014 LAR only lists one open finding and observation (F&O) from the 2000 IEPRA full-scope peer review. However, Table 7-2 of Attachment 4 of the current LAR lists over 80 open F&Os from the 2000 IEPRA peer review. Discuss the discrepancy in the number of open F&Os from the 2000 IEPRA peer review, and clarify the number of open F&Os that are applicable to this application.

RAI-04

Section 4.6.2 of Attachment 1 to the LAR states that the MPS2 IEPRA model underwent a self-assessment in 2007 against ASME/ANS PRA Standard RA-Sb-2005 and RG 1.200 Revision 1, a gap assessment in 2011 against ASME/ANS PRA Standard RA-Sa-2009 and RG 1.200, Revision 2, and a focused-scope peer review in 2012 against the ASME/ANS PRA Standard RA-Sa-2009 and RG 1.200 Revision 2. However, Notes 1 and 2 to Table 7-1 of Attachment 4 to the LAR reference a 2009 self-assessment.

- a) Clarify whether the licensee performed a self-assessment of its IEPRA in 2009.
- b) If the licensee did perform a self-assessment of its IEPRA in 2009, provide a discussion describing the purpose of the self-assessment, and any technical issues identified with the PRA that would affect this application.

RAI-05

EPRI Report No. 1009325, Revision 2-A states that “[w]here possible, the analysis should include a quantitative assessment of the contribution of external events (e.g., fire and seismic) in the risk impact assessment for extended ILRT intervals. For example, where a licensee possesses a quantitative fire analysis, and that analysis is of sufficient quality and detail to assess the impact, the methods used to obtain the impact from internal events should be applied for the external event.” EPRI Report No. 1009325, Revision 2-A further states that the “assessment can be taken from existing, previously submitted and approved analyses or another alternate method of assessing an order of magnitude estimate for contribution of the external event to the impact of the changed interval.” In Section 5.7 of Attachment 3 to the LAR, the licensee performed an assessment of external event contribution. The licensee's analysis reflected the contribution from internal fire and seismic events, but did not include a discussion of, or justification for, screening out all other external hazards (high winds, external flooding, transportation events, aircraft, industrial facilities, and other external hazard groups). Provide the following:

- a) A discussion of the contribution to risk from high winds, external floods, and other external events, OR
- b) A justification explaining how the licensee screened out each hazard group consistent with RG 1.200 using the most current information, risk studies and insights.

RAI-06

The licensee submitted over 100 open F&Os from various peer reviews and self-assessments. During the week of March 19-23, 2018, the licensee conducted an F&O closure review as well as a focused-scope peer review for the MPS2 PRA model, which

may have closed a significant number of open F&Os. If the licensee intends to supplement its application with the F&O closure results in order to reduce the amount of open F&Os that the NRC would need to review, then provide the following clarifications with respect to implementation of the Appendix X, F&O closure process:

- a) Clarify whether a focused-scope peer review was performed concurrently with the F&O closure process. If so, provide the following:
 - i. Summary of the scope of the peer review.
 - ii. Detailed descriptions of any new findings generated from the peer review and their disposition for the application.
- b) Confirm that the licensee provided the closure review team a written assessment and justification of whether the resolution of each F&O, within the scope of the independent assessment, constitutes a PRA upgrade or maintenance update, as defined in ASME/ANS RA-Sa-2009, "Standard for Level 1/Large Early Release Frequency Probabilistic Risk Assessment for Nuclear Power Plant Applications, Addendum A to RA-S-2008," as endorsed by RG 1.200 Revision 2.
- c) Section X.1.3 of the Appendix X guidance includes the following five criteria for selecting members of the closure review team:
 - i. Every member of the independent assessment team should be independent of the PRA associated with the F&Os being reviewed, per the criteria of "independent" in the ASME/ANS PRA Standard. These members may be contractors, utility personnel, or employees of other utilities, and may include members of peer review teams that previously reviewed the models being assessed.
 - ii. Every member of the independent assessment group should meet the relevant peer reviewer qualifications as stated in the ASME/ANS PRA Standard for the technical elements associated with the F&Os being reviewed.
 - iii. The overall review team experience includes two qualified reviewers for each F&O. An exception to this is allowed for the closure of an F&O related to a single SR, in which case, a single independent reviewer is acceptable, in alignment with the peer review guidance in the main body of this document and in accordance with the ASME/ANS PRA Standard.
 - iv. Each member of the independent assessment team should be knowledgeable about the F&O independent assessment process used to assess the adequacy of the F&O resolution.
 - v. The total number of reviewers is a function of the scope and number of finding F&Os to be reviewed for closure

Describe how the selection of members for the March 2018 independent assessment met this criteria.

- d) Explain how closure of the F&Os was assessed to ensure that the capabilities of the PRA elements, or portions of the PRA within the elements, associated with the closed F&Os now meet the appropriate capability category (CC) I for all the applicable supporting requirements (SRs) of ASME/ANS RA-Sa-2009 as endorsed by RG 1.200 Revision 2. If the 2000 IEPRAs were peer reviewed against the CEOG checklist, include a discussion of the validity of the F&O closure results given that the F&Os review by the closure team were tied to applicable SRs using the NEI 00-02 to ASME/ANS mapping.
- e) Discuss whether the F&O closure review scope included all finding-level F&Os, including those finding-level F&Os that are associated with “Met” supporting requirements (SRs). If not, identify and provide detailed descriptions for any F&Os that were excluded from the F&O closure review scope, and their disposition for the application.
- f) For the F&Os and self-assessment items that remained open after the F&O Closure, provide the complete text of the original peer review F&O, self-assessment finding, and Appendix X F&O closure review assessment comments and recommendations. If necessary, provide revised dispositions for each open F&O and self-assessment item that addresses how resolution to each element of the F&O/self-assessment item impacts the application.