

NRR-PMDAPEm Resource

From: Sreenivas, V
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Cc: Vu, Phong T; Murphy, George M; Li, Yong; Bettle, Jerome; Biro, Mihaela; West, Khadijah; Miller, Ed; Pettis, Robert
Subject: MCGUIRE UNITS 1 AND 2-REQUEST FOR ADDITIONAL INFORMATION FOR PROPOSED LICENSE AMENDMENT REQUEST FOR ONE-TIME EXTENSION OF APPENDIX J TYPE A INTEGRATED LEAK RATE TEST

REQUEST FOR ADDITIONAL INFORMATION (RAI) FOR PROPOSED LICENSE AMENDMENT REQUEST FOR ONE-TIME EXTENSION OF APPENDIX J TYPE A INTEGRATED LEAK RATE TEST INTERVAL FROM 10 YEARS TO 10.5 YEARS, DUKE ENERGY CAROLINAS, LLC; WILLIAM B. MCGUIRE NUCLEAR STATION, UNITS 1 AND 2 (TAC NOS. MF7407 & MF7408)

Mechanical and Civil Engineering Branch (EMCB):

EMCB RAI-1

McGuire Nuclear Station (MNS), Unit 1 and 2, LAR Section 3.2.2, "Inservice Inspection Program for Containment – IWE," provides in Tables 3.2.2-1 through 3.2.2-4 MNS' Second and Third Containment Inservice Inspection (CISI) Interval inspections for both Units 1 and 2, but does not provide specific inspection results for the completed containment inspections associated with the following inspection intervals: For Unit 1, End of Cycle (EOC) EOCs 17-24 refueling outages (RFOs); and for Unit 2, EOCs 17-23 RFOs.

LAR Section 3.2.3, "License Renewal," states that the CISI Plan – IWE program is credited in the joint Catawba and MNS License Renewal Application (LRA) as an aging management program for Reactor Building containment steel components. The program manages loss of material due to corrosion of steel surfaces, and that objective evidence associated with the program's effectiveness was provided in LRA Appendix B.3.7. Staff's review of the LRA, submitted to the U.S. Nuclear Regulatory Commission (NRC) in 2001, did not identify any specific CISI inspection results to support, other than programmatic, implementation of the program's effectiveness. Therefore, please provide the results for the completed CISI inspections for each unit as discussed above.

EMCB RAI-2

Section 3.4.2 of the LAR discusses the inspection of containment leak-chase channel systems. NRC Information Notice (IN) 2014–07, "Degradation of Leak-Chase Channel Systems for Floor Welds of Metal Containment Shell and Concrete Containment Metallic Liner," provides three options a licensee may follow to comply with the CISI requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50.55a(g)(4). MNS proposes to add these inspections to the CISI Plan as Elective Examinations to be performed 100% during each Inspection Interval (instead of each Inspection Period, as indicated in the IN). MNS also proposes to perform a VT- 3 visual examination in accordance with procedure NDE-67, "Visual Examination (VT-1 and VT-3) of Metal and Concrete Containment." These examinations may be scheduled and performed as follows:

100% of the containment interior concrete floors shall be examined during each Inspection Interval. Approximately 1/3 of the floor surface areas shall be examined during each Inspection Period to determine the condition of all leak-chase channel bronze caps installed in the floor within the examination area (emphasis added).

The examination and schedule proposed by the licensee follows the third option given in IN 2014–07 which states, "Perform inservice inspection of leak-chase channel system using licensee-proposed alternatives to code requirements under 10 CFR 50.55a(a)(3)."

Please provide the basis to justify the acceptability of the proposed alternative to that recommended in the IN and the American Society of Mechanical Engineers (ASME) Code requirements (ASME Boiler & Pressure Vessel Code, Section XI, Subsection IWE, Table IWE-2500-1, Examination Category E-A, Item E1.30 "Moisture Barriers," and ASME Code Section XI, Subsection IWE, Subarticle IWE-1240 and Table IWE-2500-1, Examination Category E-C, Item E4.11 "Visible Surfaces").

Balance-of-Plant Branch (SBPB):

SBPB RAI-1

The LAR describes and evaluates the ILRT interval extension as being from the 10-year interval to 10.5-years or elsewhere as being approximately 6 months. However, the proposed change to the TS shows a "perform by" being the end of specified refueling outages for each unit (Unit 1 End of Cycle 26 RFO in spring 2019, Unit 2 end of cycle 25 RFO in fall 2018) rather than calendar dates reflecting the 10 year intervals plus 6 month extensions. While the current schedule/projection of those refueling outages would appear consistent with a six month extension, it is entirely possible that one or both of the identified refueling outages could be delayed in time by a month or more, there being 2-3 or more years between now and the refueling outages when performance is proposed. The App J Option B guidance including model TS wording specifically used a calendar interval of 10 years rather than some number of refueling cycles, since refueling cycle lengths can vary. Extension of the 10-year interval described in the guidance was intended primarily to accommodate transitions to longer fuel cycle lengths which were common at the time the guidance was drafted but expected to rarely recur at any particular reactor. Justify how the evaluation bounds or accommodates reasonable delay in the scheduled start dates of the specific refuel outages identified in the proposed TS text.

Licensee staffs were given an opportunity to review the draft for technical clarification. Licensee staffs have responded that these RAI questions are clear. Please submit the responses within 30 days (June 30, 2016) from the date of this e-mail. If additional information is needed, you will be advised by separate correspondence. If you have any questions, please do not hesitate to contact me.

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