

From: Wall, Scott
Sent: Wednesday, May 6, 2020 9:53 AM
To: Lashley, Phil H.
Cc: Morgan, Jeffrey D.
Subject: Final RAI - Perry Request for Relief - Proposed Alternative Request IR-054, Rev. 2 (EPID: L-2020-LLR-0003)

Dear Mr. Lashley,

By letter dated January 6, 2020, (Agencywide Documents Access and Management System (ADAMS), Accession No. ML20006D984), FirstEnergy Nuclear Operating Company (FENOC) requested U.S. Nuclear Regulatory Commission (NRC) approval of proposed alternatives to the American Society of Mechanical Engineers, Boiler and Pressure Vessel Code (ASME Code), for the fourth 10-year inservice inspection (ISI) Program for the Perry Nuclear Power Plant (Perry). Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) paragraph 50.55a(z)(1), "Acceptable level of quality and safety," FENOC requested approval to use the inspection requirements documented in the ASME Code Case N-702, "Alternative Requirements for Boiling Water Reactor (BWR) Inner Nozzle Radius and Nozzle-to-Shell Weld, Section XI, Division 1."

By order dated December 2, 2019, the NRC staff approved the direct and indirect transfers of several FENOC-owned and operated plants, including Perry. Under the new set-up, Energy Harbor Corp would indirectly own the plants as a parent company, Energy Harbor Nuclear Generation LLC would directly own the plants, and Energy Harbor Nuclear Corp. would have authority to operate the plants. On February 27, 2020, Energy Harbor Nuclear Corp., informed the NRC that the transaction closed on February 27, 2020 and that it adopted and endorsed the outstanding commitments, licensing actions, applications and similar items on dockets submitted by FENOC on behalf of the licensees. Accordingly, Energy Harbor Nuclear Corp. (the licensee) is now authorized to act as agent for Energy Harbor Nuclear Generation, LLC, and has exclusive responsibility and control over the physical construction, operation, and maintenance of the facility at Perry.

The NRC staff has reviewed the submittals and determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). During a telephone call on May 5, 2020, the Entergy staff indicated that a response to the RAI would be provided within 30 days.

If you have questions, please contact me at 301-415-2855 or via e-mail at Scott.Wall@nrc.gov.

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Docket No. 50-440

Enclosure:

Request for Additional Information

cc: Listserv

RAI-NVIB-01 (IR-054)

REQUEST FOR ADDITIONAL INFORMATION

PROPOSED ALTERNATIVE TO AMERICAN SOCIETY OF MECHANICAL ENGINEERS

BOILER AND PRESSURE VESSEL CODE

IR-054, REVISION 2

ENERGY HARBOR NUCLEAR CORP.

ENERGY HARBOR NUCLEAR GENERATION, LLC

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-440

By letter dated January 6, 2020, (Agencywide Documents Access and Management System (ADAMS), Accession No. ML20006D984), the licensee submitted Proposed Alternative Request No. IR-054, Revision 2 (Proposed Alternative) to certain requirements of the American Society of Mechanical Engineers, Boiler and Pressure Vessel Code (ASME Code), for the fourth 10-year inservice inspection (ISI) Program for the Perry Nuclear Power Plant (Perry). Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) paragraph 50.55a(z)(1), "Acceptable level of quality and safety," the licensee requested approval to use the inspection requirements documented in the ASME Code Case N-702, "Alternative Requirements for Boiling Water Reactor (BWR) Inner Nozzle Radius and Nozzle-to-Shell Weld, Section XI, Division 1."

In order for the U.S. Nuclear Regulatory Commission (NRC) to determine if the proposed alternative may be authorized pursuant to 10 CFR 50.55a(z)(1), the NRC staff requests the licensee provide the following additional information.

Applicable Regulation and Guidance

10 CFR 50.55a(g)(4), "Inservice inspection standards requirement for operating plants," requires ISI of ASME Code Class 1 components to be performed in accordance with Section XI of the ASME Code. The licensee has proposed an alternative to the inspection requirements of Section XI for ASME Code Class 1, Examination Category B-D, "Full Penetration Welded Nozzles in Vessels," Item Number B3.90, "Nozzle-to-Vessel Welds" and Item Number B3.100, "Nozzle Inside Radius Section." Specifically, the licensee proposed to use the inspection requirements documented in the ASME Code Case N-702, which reduces the inspection of reactor pressure vessel (RPV) nozzle-to-vessel shell welds and nozzle inner radii areas from 100 percent to 25 percent of the nozzles for each nozzle type during each 10-year interval. However, the licensee proposed to inspect one of either the Top Head Spray Nozzle (N8) or the Top Head

Spray Spare Nozzle (N7). This proposal assumes that the N7 and N8 nozzles are the same nozzle type, otherwise the licensee proposal would not meet the ASME Code Case requirement for inspection of 25 percent of the nozzles for each nozzle type.

Request for Additional Information

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- During plant operations, the static and cyclical loads on the N7 and N8 nozzles could be assume to be different. Provide justification for considering the N7 nozzle equivalent to the N8 nozzle for inspection purposes; or that environmental and loading conditions for the nozzle to be inspected are bounding for the other nozzle.

Hearing Identifier: NRR_DRMA
Email Number: 571

Mail Envelope Properties (MN2PR09MB3374A01EC074B4176D5A9B4F92A40)

Subject: Final RAI - Perry Request for Relief - Proposed Alternative Request IR-054, Rev. 2 (EPID: L-2020-LLR-0003)
Sent Date: 5/6/2020 9:52:45 AM
Received Date: 5/6/2020 9:52:46 AM
From: Wall, Scott

Created By: Scott.Wall@nrc.gov

Recipients:
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Tracking Status: None
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Tracking Status: None

Post Office: MN2PR09MB3374.namprd09.prod.outlook.com

Files	Size	Date & Time
MESSAGE	5720	5/6/2020 9:52:46 AM

Options
Priority: Normal
Return Notification: No
Reply Requested: No
Sensitivity: Normal
Expiration Date: