

From: Wall, Scott
Sent: Monday, February 1, 2021 2:50 PM
To: Lashley, Phil H (EH)
Cc: Morgan, Jeffrey D.
Subject: Final RAI - Perry Request for Relief - Proposed Alternative Request SR-2, Rev. 0 (EPID: L-2021-LLR-0005)

Dear Mr. Lashley,

By letter dated January 15, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21018A004), Energy Harbor Nuclear Corp (EHNC, the licensee) submitted a relief request for Perry Nuclear Power Plant (PNPP) proposing a one-time extension of operational readiness testing for certain PNPP snubbers scheduled for the upcoming spring 2021 refueling outage.

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). By phone call on February 1, 2021, the EHNC staff indicated that a response to the RAIs would be provided by February 12, 2021.

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-EMIB (SR-2)

REQUEST FOR ADDITIONAL INFORMATION

PROPOSED ALTERNATIVE TO AMERICAN SOCIETY OF MECHANICAL ENGINEERS

OPERATION AND MAINTENANCE CODE

SR-2, REVISION 0

ENERGY HARBOR NUCLEAR CORP.

ENERGY HARBOR NUCLEAR GENERATION, LLC

PERRY NUCLEAR POWER PLANT, UNIT NO. 1

DOCKET NO. 50-440

INTRODUCTION

By letter dated January 15, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21018A004), Energy Harbor Nuclear Corp (EHNC, the licensee) submitted a relief request, SR-2, Revision 0 (Proposed Alternative), to certain requirements of the American Society of Mechanical Engineers, Operation and Maintenance Code (ASME OM Code), for the fourth 10-year in-service testing (IST) Program for the Perry Nuclear Power Plant, Unit 1 (PNPP). Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) paragraph 50.55a(z)(2), the licensee requested approval of a one-time extension of operational readiness testing for certain PNPP snubbers scheduled for the upcoming spring 2021 refueling outage. The licensee's proposed alternative applies to the fourth IST interval.

In order for the U.S. Nuclear Regulatory Commission (NRC) staff to determine if the proposed alternative may be authorized pursuant to 10 CFR 50.55a(z)(2), the staff requests the licensee provide the following additional information.

APPLICABLE REGULATION AND GUIDANCE

The regulations in 10 CFR 50.55a(g)(4) state, in part, that ASME Code Class 1, 2, and 3 components (including supports) must meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME OM Code for snubber examination and testing that become effective subsequent to editions and addenda specified in 10 CFR 50.55a(g)(2) and (3) and that are incorporated by reference in 10 CFR 50.55a(a), to the extent practical, within the limitations of design, geometry, and materials of construction of the components.

The regulations in 10 CFR 50.55a(z) state, in part, that alternatives to the requirements in paragraphs (b) through (h) of 10 CFR 50.55a may be authorized by the NRC if the licensee demonstrates that: (1) the proposed alternative provides an acceptable level of quality and safety, or (2) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. In order for the staff to determine if the proposed alternative may be authorized pursuant to 10 CFR 50.55a(z)(2), the staff requests the licensee provide the following additional information.

RAI-EMIB-01

Section 4, "Reason for Change," of the January 15, 2021 request, states, in part, that licensee groups the PNPP program snubbers into three Defined Test Plan Groups (DTPGs), PSA mechanical snubbers (37 plan), Lisega hydraulic snubbers (10% plan), and E-systems hydraulic snubbers (10% plan). The 37 plan requires 37 randomly selected snubbers from the DTPG, while the 10% test plan requires 10% of each DTPG to be tested for operational readiness during each fuel cycle.

The table in Section 1 of the request represents the population of snubbers scheduled to be tested under the snubber test plan for the spring 2021 refueling outage, excluding snubbers that will still be monitored for or changed in support of service life monitoring. There are 909 PSA mechanical snubbers subject to the 37 plan. Of the 37 randomly selected PSA mechanical snubbers, 28 are listed in Section 1 and the remaining nine snubbers were excluded. There are 82 Lisega hydraulic snubbers subject to the 10% plan. Of the nine selected Lisega hydraulic snubbers, five are listed in Section 1 and the remaining four snubbers were excluded.

Subparagraph ISTD-5240, "Test Frequency," requires that tests of snubbers from the facility shall be performed every refueling cycle. Subparagraph ISTD-5261, "Sample Plan," of the paragraph ISTD-5260, "Testing Sample Plans," states that the snubber of each DTPG shall be tested either (a) the 10% testing plan or (b) the 37 testing sample plan. The selected snubber tables in Section 1 do not include nine PSA snubbers and five Lesega hydraulic snubbers. The ASME OM Code, Subsection ISTD, requires that the 37 sample testing or 10% sample testing plans for snubber testing shall be performed during a refueling outage. The ASME OM Code, Subsection ISTD, does allow splitting of 37 sampling and 10% sampling plans.

- Please clarify the splitting of the sampling plans and make appropriate changes to alternative request for NRC authorization

RAI-EMIB-02

Section 6, "Duration of Proposed Alternative," states, in part, that the proposed alternative is requested for use during the PNPP fourth 10-year IST interval.

- Please provide the Snubber Program 10-year IST interval with start and end dates.

RAI-EMIB-03

Section 1, "The ASME Code Component Affected," provides a list of snubbers included in the alternative request SR-2, Revision 0. For operational readiness of snubbers, Subsection ISTD-3000, "General Requirements," requires (1) Visual Examination, (2) Functional Testing, and (3) Service Life Monitoring.

- Please provide the history of visual examination and testing and replaced history of snubbers listed in Section 1 (when these were tested or replaced).

RAI-EMIB-04

Section 5, "Proposed Alternative and Basis for Use," second paragraph describes the alternative request as "the elimination of spring 2021 refueling outage snubber testing." The regulation in 10 CFR 50.55a(z)(2) allows the NRC to authorize the proposed alternative, but not to eliminate the testing altogether. The NRC staff considers this alternative request to propose a one-time extension of the ASME OM Code IST of snubbers listed in the Section 1 of the submittal to the spring 2023 refueling outage in lieu of spring 2021 refueling outage.

- Please clarify (and revise, as necessary) whether this is the case or if the request is to eliminate the spring 2021 refueling outage snubber testing.

RAI-EMIB-05

Section 5, "Proposed Alternative and Basis for Use," second paragraph, second sentence states that "Since 2011, there have been approximately 260 tests of program snubbers with only four

snubber test failures related to operational readiness testing. These test failures occurred in the PSA DTPG (Defined Testing Plan Group) and were captured in the PNPP corrective action program.” PNPP is using “The 37 testing Plan,” for PSA DTPG as per ISTD-5260, “Testing Sample Plans,” and ISTD-5400, “The 37 Testing Plan.” The licensee states that since 2011 there were four failed snubbers. Snubber failures while using the 37 testing plan requires additional 18 or 19 snubbers to be tested as specified by ISTD-5421, “Additional Sample Size,” and ISTD-5420, “The 37 Testing Sample Plan Additional Testing.”

- Please clarify and explain the number of additional snubbers tested and their results due to four failed snubbers.

RAI-EMIB-06

Section 5, fifth paragraph, states that visual examination interval specified in ASME OM Code, Table ISTD-4252-1, “Visual Examination Table,” has been extended for applicable PNPP snubbers to at least once every 10 years in accordance with ASME Code Case OMN-13.

- Please provide the visual examination history of the snubbers included in the SR-2, Section 1 for one-time extension of the snubber testing.

RAI-EMIB-07

Section 5, sixth paragraph states that this request does not impact the service life monitoring program. As required by ISTD-6200, “Service Life Evaluation,” the service life will be evaluated. The licensee did not provide the current service life of snubbers listed in Section 1.

- Please provide the current service life of each snubbers listed in the Section 1, for which relief is requested.

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Recipients:
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Tracking Status: None
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