NRR-PMDAPEm Resource

From: Mozafari, Brenda
Sent: Monday, August 11, 2014 2:12 PM
To: Nicely, Ken M.:(GenCo-Nuc) (ken.nicely@exeloncorp.com)
Cc: Rosenberg, Stacey; Alley, David; Tate, Travis; Purnell, Blake; McLellan, Thomas; Cumblidge, Stephen
Subject: Quad Cities Nuclear Power Station, Units 1 and 2 - Request for Additional Information (RAI) - Fourth 10-Year Interval Inservice Inspection Program Plan Requests for Relief (TAC Nos. MF3397 and MF3398)

Ken,

SCOPE

1. By letter dated January 23, 2014, (Agencywide Documents Access and Management System Accession No. ML14023A865) the licensee, Exelon Generation Company, LLC, submitted Request for Relief I4R-20 from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, *Rules for Inservice Inspection of Nuclear Power Plant Components* for Quad Cities Nuclear Power Station, Units 1 and 2 (QCNPS 1 and 2). The request for relief applies to the fourth 10-year inservice inspection (ISI) interval, in which the licensee adopted the 1995 Edition through the 1996 Addenda of ASME Code Section XI as the code of record.

   In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(5)(iii), the licensee has submitted the subject request for relief for limited examinations in multiple ASME Code Examination Categories. The ASME Code requires that 100 percent of the examination volumes, or surface areas, described in Tables IWB-2500 and IWF-2500 be performed during each interval. The licensee stated that 100 percent of the ASME Code-required volumes, or surface areas, are impractical to obtain at QCNPS 1 and 2.

   The 10 CFR 50.55a(g)(5)(iii) states that when licensees determine that conformance with ASME Code requirements is impractical at their facility, they shall submit information to support this determination. The U.S. Nuclear Regulatory Commission (NRC) will evaluate such requests based on impracticality, and may impose alternatives, giving due consideration to public safety and the burden imposed on the licensee.

   The Staff has reviewed the information submitted by the licensee, and based on this review, determined the following information is required to complete the evaluation. For clarity, the licensee's requests have been evaluated according to ASME Code Examination Category and corresponding request for relief.

2. REQUEST FOR ADDITIONAL INFORMATION

2.1 General Information Required on All Welds in Request for Relief I4R-20

The licensee has provided only general information regarding the impracticality of obtaining ASME Code-required volumetric or surface examinations, as applicable. Statements such as "nozzle configurations" or "configuration and geometry of the weld" are inadequate to explain the bases for not obtaining the ASME Code-required examination volumes. No sketches with dimensional information or restricting appurtenances that adequately demonstrate the causes of limited accessibility have been included.

Submit detailed and specific information to support the bases for limited examination coverage for all welds in request for relief I4R-20, and therefore, demonstrate impracticality.

a) Include detailed descriptions (written and/or sketches, as necessary) of the interferences to applied nondestructive examination (NDE) techniques.

b) As applicable, describe NDE equipment (ultrasonic scanning apparatus), details of the listed obstructions (size, shape, proximity to the weld, etc.) to demonstrate accessibility limitations.

c) Fully clarify the wave modality and insonification angles used for all ultrasonic examinations, if not already provided. For example, please clarify what "SLIC $40^{o}/55^{o}$" is intended to denote. (*Note: This information does not apply to Examination Categories F-A welds, as only visual, VT-3, examinations are required.)*

d) Show cross-sectional or surface coverage plots to describe the ASME Code volumes and surfaces examined.

d) State whether any relevant indications were discovered as a result of ASME Code-required examinations, and describe how these indications have been analyzed and dispositioned.

2.2 Request for Relief I4R-20, Part A, ASME Code, Section XI, Examination Category B-A, Items B1.12, B1.40, and 1.51, Pressure Retaining Welds in Vessels , QCNPS 1 and 2

2.2.1 Confirm that examinations of the welds listed under Examination Category B-A, Item B1.12, were conducted in accordance with the performance demonstration requirements described in ASME Code, Section XI, Appendix VIII.

2.2.2 Confirm that the required surface examinations were performed for the Category B-A, Item B1.40 welds, whether these surface examinations were full ASME Code examinations (>90% coverage per Code Case N-460), and describe any indications that were detected. were detected.

2.3 Request for Relief I4R-20, Part B, ASME Code, Section XI, Examination Category B-D, Item B3.90, Full Penetration Welded Nozzles in Vessels, QCNPS 1 and 2

2.3.1 Confirm that examinations of all welds listed under Examination Category B-D were conducted in accordance with the performance demonstration requirements described in ASME Code, Section XI, Appendix VIII.

2.4 Request for Relief I4R-20, Part C, ASME Code, Section XI, Examination Category F-A, Item F1.40, Supports, QCNPS 1 and 2

2.4.1 The licensee states that the impracticality of complying with the ASME visual VT-3 examinations for components 1/REACTORVESSEL/0200-W-184 and 2/REACTOR VESSEL/0200-W-178 is due to the presence of insulation on the inner diameter and nearby instrumentation. State why the insulation cannot be removed. For instance, if weld repairs were required to be made on these components, the license would have to remove the insulation to make such repairs.

2.4.2 Discuss whether alternative methods, such as remote visual examination, could be utilized.

2.5 Request for Relief I4R-20, Part D, ASME Code, Section XI, Examination Category R-A, Item R1.20, Risk Informed Piping Examinations, QCNPS 1

2.5.1 State the materials of construction and the wall thicknesses for all Category R-A welds and base materials.

2.5.2 Confirm whether the examinations listed for all Category R-A welds were conducted in accordance with the performance demonstration requirements of ASME Code, Section XI, Appendix VIII.

2.5.3 Further discuss whether additional or alternative welds could have been examined to augment the reduced volumetric coverage resulting from the limited examinations of the subject welds.

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