

NRR-DMPSPeM Resource

From: Mahoney, Michael
Sent: Wednesday, November 29, 2017 9:31 AM
To: Yang, Dustin
Cc: Cecil Fletcher ; Carrie Wilson
Subject: Request for Additional Information - Catawba Nuclear Station, Units 1 and 2 - Relief Request 17-CN-001 (CACs MF9807 and MF9808, EPID L-2017-LLR-0032)

Dustin,

By letter dated May 25, 2017 (ADAMS Accession No. ML17150A305), Duke Energy Carolinas, LLC (the licensee) requested relief from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, specifically related to the ultrasonic testing (UT) procedure demonstration and personnel qualification in III-2200(b) of Appendix III and the inspection of examination volume C-D-E-F of Figure IWB-2500-8. Relief request 17-CN-001 was submitted for Class 1 welds in the branch pipe connection where a forged stainless steel branch piping nozzle is welded to a centrifugally cast austenitic stainless steel (CASS) main coolant pipe at the Catawba Nuclear Station (Catawba), Units 1 and 2.

In order to complete its review, the U.S. Nuclear Regulatory Commission staff requests the following additional information. Please provide your response to the following requests for additional information (RAIs) within 30 days of the date of this correspondence.

RAI-01

Provide wall thickness, operating pressure and temperature for the welds listed in Section 1.0 of Enclosure 1 to this relief request.

RAI-02

In the third 10-year ISI interval, were any through-wall leaks identified in the subject Class 1 piping welds during system leakage test conducted in accordance with Examination Category B-P of Table IWB-2500-1?

RAI-03

Was the UT procedure used for the inservice inspection (ISI) demonstrated on a plant-specific CASS mockup having deep flaws in the outer two thirds of volume of the pipe wall thickness?

RAI-04

Given the inability to inspect the required volume C-D-E-F of Figure IWB-2500-8, the inability to qualify the UT procedure and personnel, and the limited coverage of the proposed volume (i.e., less than 50 percent coverage of the outer two thirds of volume), provide the cumulative usage factor based on the actual plant operating cycles for each Class 1 weld listed in this relief request to ensure the structural integrity of unexamined volume of the weld.

RAI-05

NRC report, NUREG/CR-7122 "An Evaluation of Ultrasonic Phased Array Testing for Cast Austenitic Stainless Steel Pressurizer Surge Line Piping Welds" published in March 2012 (ADAMS Accession No. ML12087A061) documents the latest NRC guidance for an effective inspection of CASS components from the OD. Furthermore, ASME Code Case N-824 "Ultrasonic Examination of Cast Austenitic Piping Welds From the Outside Surface Section XI, Division 1" that has been incorporated by reference in 10 CFR 50.55a (by Federal

Register Notice 82 FR 32934, dated July 18, 2017 (which became effective on July 18, 2017)) with conditions provides improved requirements for inspecting CASS until a performance demonstration qualification and testing for CASS to be developed.

Discuss whether the licensee has considered implementing ASME Code Case N-824 or using NRC NUREG/CR-7122 guidance to improve the effectiveness of its CASS inspection in the next interval.

RAI-06

The NRC staff notes that in Section 3.5 of this relief request, the licensee requested relief from I-2220 of Appendix I while in Section 4.1, the licensee discussed impracticality of compliance associated with III-2200 of Appendix III.

For consistency and clarification, identify the specific paragraph in the ASME Code, Section XI for which the relief is sought, and discuss impracticality associated with that specific paragraph in the ASME Code, Section XI.

Once this email is added to ADAMS, I will provide the accession number for your reference.

Thanks
Mike

Michael Mahoney

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