

From: Cotton, Karen
Sent: Monday, April 26, 2021 9:03 AM
To: Zaremba, Arthur H.
Subject: Catawba Verbal Relief Request RA-21-0145
Attachments: Catawba Verbal Script PA RA-21-0145.pdf

Mr. Zaremba:

In accordance with NRR Office Instruction LIC-102, "Relief Request Reviews," the NRR staff has provided verbal authorization for Catawba, Unit 2, relief request Proposed Alternative RA-21-0145 as described in your letter to NRC dated April 23, 2021, as supplemented by letter dated April 24, 2021.

Attached is the script for the verbal authorization of relief request Proposed Alternative RA-21-0145 that was provided at approximately 7:00pm EDT on 4/24/2021, by Matthew Mitchell and Michael Markley. The NRC staff intends to follow-up this verbal authorization with a written safety evaluation within approximately 150 days. Please let me know if you have any questions. A copy of this email and verbal authorization will be made publicly available in ADAMS.

Best,

Karen Cotton, Project Manager
Catawba
NRR/DORL/LPL2-1

Hearing Identifier: NRR_DRMA
Email Number: 1147

Mail Envelope Properties (MN2PR09MB5498DD30AAB94E2EE6DC232185429)

Subject: Catawba Verbal Relief Request RA-21-0145
Sent Date: 4/26/2021 9:02:42 AM
Received Date: 4/26/2021 9:02:42 AM
From: Cotton, Karen

Created By: Karen.Cotton@nrc.gov

Recipients:
"Zaremba, Arthur H." <Arthur.Zaremba@duke-energy.com>
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Priority: Normal
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Reply Requested: No
Sensitivity: Normal
Expiration Date:

VERBAL AUTHORIZATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION FOR
PROPOSED ALTERNATIVE RA-21-0145
ALTERNATE REPAIR OF A REACTOR VESSEL HEAD PENETRATION 74
DUKE ENERGY CAROLINAS, LLC
CATAWBA UNIT 2 DOCKET NO. 50-414
APRIL 24, 2021

Technical Evaluation Read by Matthew Mitchell, Branch Chief, Piping and Head Penetration Branch, Division of New and Renewed Licenses, Office of Nuclear Reactor Regulation

By letter dated April 23, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21113A215) as supplemented by letter dated April 24, 2021 (ADAMS Accession No. ML21114A000), Duke Energy Carolinas, LLC (the licensee) submitted Proposed Alternative RA-21-0145 for the repair of degraded reactor vessel head penetration number 74 at Catawba Nuclear Station, Unit 2 (CNS2). In order to repair the degraded penetration J-groove weld, the licensee proposed to use the embedded flaw repair process described in the NRC-approved WCAP-15987-P, Revision 2-P-A report, with some modifications.

The licensee made this request in accordance with 10 CFR 50.55a(z)(1) on the basis that the proposed alternative repair will provide an acceptable level of quality and safety. The licensee requested the alternative for one cycle of operation.

The NRC staff reviewed the following information: (1) proposed repair method and inspections; (2) flaw evaluation including a conservatively postulated flaw in the nozzle J-groove weld and potential fatigue crack growth into the reactor vessel head; (3) corrosion resistance of repair weld material (Alloy 52/52M) exposed to reactor coolant; and (4) consistency of the repair, inspection and flaw evaluation methods with those described in the NRC-approved WCAP-15987-P, Revision 2-P-A report and current NRC regulations under 10 CFR 50.55a(g)(6)(ii)(D).

The NRC staff finds that the licensee's repair, inspection and flaw evaluation methods are consistent with the guidance in the NRC-approved WCAP-15987-P, Revision-2-P-A report and the inspection requirements specified in ASME Code Case N-729-6, as conditioned in 10 CFR 50.55a(g)(6)(ii)(D). The NRC staff determines that the proposed repair will restore the primary system pressure boundary and provide reasonable assurance that the structural integrity of the reactor vessel head and repaired penetration number 74 for one cycle of operation as requested in the licensee's proposed alternative. Therefore, the NRC staff concludes the licensee's proposed alternative provides an acceptable level of quality and safety.

NRC Staff Conclusion Read by Michael Markley, Chief of Plant Licensing Branch II-1, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation

As Chief of Plant Licensing Branch II-1, I concur with the Piping and Head Penetration Branch's determinations.

The NRC staff concludes that Proposed Alternative RA-21-0145 will provide an acceptable level of quality and safety for the reactor vessel head and repaired penetration number 74. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the

regulatory requirements set forth in 10 CFR 50.55a(z)(1) and is in compliance with the requirements of the ASME Code, Section XI, ASME Code Case N-729-6 as mandated and conditioned in 10 CFR 50.55a(g)(6)(ii)(D). Therefore, as of April 24, 2021, the NRC authorizes Proposed Alternative RA-21-0145 for one cycle of operation at CNS2 until the end of Cycle 25 that is scheduled to end in fall 2022.

All other requirements of ASME Code, Section XI and 10 CFR 50.55a(g)(6)(ii)(D), for which relief was not specifically requested and authorized by the NRC staff, remain applicable including the third-party review by the Authorized Nuclear Inservice Inspector.

This verbal authorization does not preclude the NRC staff from asking additional questions and clarifications regarding the licensee's proposed alternative while preparing the subsequent written safety evaluation.