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Serial: RA-21-0321
December 14, 2021

United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Catawba Nuclear Station, Unit No. 2
Docket No. 50-414 / Renewed License No. NPF-52

SUBJECT: Response to Request for Additional Information (RAI) Regarding Catawba Unit 2, Refuel 24 (C2R24) Inservice Inspection (ISI) and Steam Generator Inspection (SG-ISI) Report

REFERENCES:

1. Duke Energy letter, *Catawba Unit 2, Refuel 24 (C2R24) Inservice Inspection (ISI) and Steam Generator Inspection (SG-ISI) Report*, dated August 2, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21214A160)
2. NRC email, *Catawba Nuclear Station, Unit 2 - Request for Additional Information RE: Spring 2021 Steam Generator Tube Inspection Report (L-2021-LRO-0043)*, dated December 1, 2021

Ladies and Gentlemen:

In Reference 1, Duke Energy Carolinas, LLC (Duke Energy) provided the U.S. Nuclear Regulatory Commission (NRC) the Inservice Inspection (ISI) Summary Report for Catawba Nuclear Station, Unit No. 2, Refuel 24 (C2R24) in accordance with Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code. Reference 1 also included the Steam Generator Inservice Inspection (SG-ISI) Summary Report for Catawba Nuclear Station, Unit No. 2, Refuel 24 (C2R24). In Reference 2, the NRC staff requested additional information regarding Reference 1. The Enclosure provides Duke Energy's response to the Reference 2 RAIs.

No new regulatory commitments have been made in this submittal. Should you have any questions concerning this letter, or require additional information, please contact Lee Grzeck, (acting) Manager – Nuclear Fleet Licensing, at 980-373-1530.

Sincerely,

Mandy Hare
Nuclear Support Services Manager, Catawba Nuclear Station

Enclosure:
Response to Request for Additional Information

NDE

cc:

Z. Stone, NRC Project Manager, NRR

L. Dudes, NRC Regional Administrator, Region II

J.D. Austin, NRC Senior Resident Inspector, Catawba Nuclear Station

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Enclosure

Response to Request for Additional Information

By letter dated August 2, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21214A160), Duke Energy Carolinas, LLC (Duke Energy), submitted information summarizing the results of the spring 2021 steam generator (SG) inspections performed at Catawba Nuclear Station, Unit 2 (Catawba Unit 2) for the end-of-cycle (EOC) 24. In addition, the U.S. Nuclear Regulatory Commission (NRC) staff held a conference call with Duke Energy on April 12, 2021, regarding the ongoing SG inspection activities at Catawba Unit 2. A summary of the conference call, regarding the spring 2021 SG inspections, is available at ADAMS Accession No. ML21133A004.

Title 10 of the *Code of Federal Regulations* Part 50.36 establishes the requirements for pressurized water reactors to have technical specifications (TS) which include a SG program with specific criteria for the structural and leakage integrity, repair, and inspection of SG tubes. Catawba Unit 2 TS Section 5.6.8 requires that a report be submitted within 180 days after the initial entry into hot shutdown (MODE 4) following completion of an inspection of the SGs performed in accordance with TS Section 5.5.9, which requires that a SG Program be established and implemented to ensure SG tube integrity is maintained.

To complete its review of the inspection report, the NRC staff requests the following additional information:

NRC RAI No. 1

The tube in Row 36, Column 100 (R36C100) was plugged in SG 2D at the EOC-24 due to “FO [foreign object] wear at AVB [Anti-Vibration Bar] 3 at 43 %TW [percent through-wall].” The April 12, 2021, conference call summary stated that “FO wear was identified at an AVB wear indication, which is not typical, although there was no loose part detected during the outage.” However, the NRC staff notes that the fall 2019 inspection report, dated December 19, 2019 (ADAMS Accession No. ML19353A416), reported a 38 %TW wear indication in tube R36C100 at AVB 3. It appears that the 38 %TW AVB wear indication reported at EOC-23 was reclassified as a FO wear indication at EOC-24. Please discuss the differences between inspections performed at EOC-23 and EOC-24 and the basis for reclassifying the AVB wear indication as a FO wear indication.

Duke Energy Response to NRC RAI No. 1

During the EOC-24 inspection, a 100% enhanced probe inspection was performed. The array probe data showed the wear was not associated with the AVB, but looked more consistent of FO wear. Therefore, the indication was re-classified as FO wear. All indications were checked for the correct classification and were found to be correct.

NRC RAI No. 2

There appears to be errors in the reported number of tubes plugged in SG 2B prior to the EOC-24 and the total number of tubes plugged in SG 2B after the EOC-24. The spring 2021 inspection report states that 133 tubes were plugged in SG 2B prior to EOC-24 and 7 tubes were plugged during EOC-24, resulting in a total of 140 (133 + 7 = 140) tubes plugged in SG 2B. However, the spring 2021 inspection report also states that a total of 141 tubes have been plugged in SG 2B. The NRC staff notes that the fall 2019 inspection report stated that 131

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tubes were plugged in SG 2B prior to EOC-23 and 3 tubes were plugged during EOC-23, resulting in a total of 134 ($131 + 3 = 134$) tubes plugged in SG 2B. However, the fall 2019 inspection report states that a total of 133 tubes were plugged in SG 2B. Please confirm the total number of tubes plugged in SG 2B.

Duke Energy Response to NRC RAI No. 2

The total number of tubes plugged is 141. The error was in the EOC-23 report which should have reported 134 tubes plugged and propagated again in the EOC-24 report. The total number of tubes plugged was correct at 141 tubes.