



1101 Market Street, Chattanooga, Tennessee 37402

March 2, 2022

WBL-22-010

10 CFR 50.4

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Watts Bar Nuclear Plant, Unit 2
Facility Operating License No. NPF-96
NRC Docket No. 50-391

Subject: Response to Request for Confirmation of Information Regarding the Watts Bar Nuclear Plant, Unit 2, Cycle 4 Mid-Cycle Outage Generic Letter 95-05 Final Report

Reference: 1. TVA letter to NRC, WBL-21-057, "Watts Bar Nuclear Plant (WBN) Unit 2 - Cycle 4 Mid-Cycle Outage Generic Letter 95-05 Voltage-Based Alternate Repair Criteria Final Report," dated December 16, 2021 (ML21350A209)

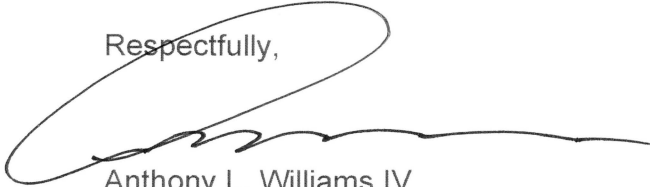
2. NRC Electronic Mail to TVA, "Request for Confirmation of Information Regarding the Watts Bar Nuclear Plant, Unit 2, Cycle 4 Mid-Cycle Outage Generic Letter 95-05 Final Report," dated February 15, 2022 (ML22046A039)

In Reference 1, Tennessee Valley Authority (TVA) submitted, in accordance with the requirements of the Watts Bar Nuclear Plant (WBN) Unit 2 Technical Specification (TS) 5.9.9, "Steam Generator Tube Inspection Report," the WBN Unit 2 Cycle 4 Mid-Cycle Outage Generic Letter (GL) 95-05 Voltage-Based Alternate Repair Criteria Final Report. In Reference 2, the Nuclear Regulatory Commission (NRC) submitted a Request for Confirmation of Information (RCI) for which the NRC would like to confirm its understanding of certain information in Reference 1, and requested TVA provide a response by March 17, 2022. The enclosure to this submittal provides the TVA response to the NRC RCI.

There are no new regulatory commitments associated with this submittal. Please address any questions regarding this request to Jonathan Johnson, WBN Site Licensing Manager, at jtjohnson0@tva.gov.

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Respectfully,

A handwritten signature in black ink, consisting of a large, sweeping loop at the top and a series of smaller, connected loops below it, ending in a horizontal line.

Anthony L. Williams IV
Site Vice President
Watts Bar Nuclear Plant

Enclosure: Response to NRC Request for Confirmation of Information

cc (Enclosure):

NRC Regional Administrator – Region II
NRC Senior Resident Inspector – Watts Bar Nuclear Plant
NRC Project Manager – Watts Bar Nuclear Plant
Director, Division of Radiological Health – Tennessee State Department of
Environment and Conservation

Enclosure

Response to NRC Request for Confirmation of Information

NRC Introduction

By letter dated December 16, 2021 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21350A209), the Tennessee Valley Authority (TVA, the licensee) submitted the fall 2021 Generic Letter (GL) 95-05 Voltage-Based Alternate Repair Criteria (ARC) Steam Generator (SG) Report for Watts Bar Nuclear Plant (Watts Bar), Unit 2. The SG tube inspections were performed during the Cycle 4 mid-cycle outage (F214).

In Title 10 of the Code of Federal Regulations Section 50.36, "Technical specifications," the NRC regulatory requirements related to the content of the technical specifications (TSs) are established. Watts Bar, Unit 2, TS 5.7.2.12, "Steam Generator (SG) Program," requires that an SG Program be established and implemented to ensure SG tube integrity is maintained. When the voltage-based ARC methodology is applied during an inspection of the SGs performed in accordance with TS 5.7.2.12, TS 5.9.9, "Steam Generator Tube Inspection Report," requires that a report be submitted within 90 days after the initial entry into hot shutdown (MODE 4) following completion of the inspection.

To complete its review of the F214 GL 95-05 report, the U.S. Nuclear Regulatory Commission (NRC) staff requests that you submit confirmation that the staff's understanding described below is correct, or provide the corrected information:

Request for Confirmation of Information (RCI) 1

Based on the review of Section 3.1 on page 3-1, rotating probe inspections in F214 were performed on dent indications with a bobbin probe voltage greater than or equal to 2 volts, which exceeds the minimum criterion in GL 95-05 (Attachment 1, Section 3.b.3) to use a rotating probe to inspect dent indications with a bobbin probe voltage greater than 5 volts.

TVA Response

TVA confirms that the above information is correct as stated.

RCI 2

Based on the review of Section 3.1 on page 3-1 and 3-2, rotating probe inspections in F214 were performed on distorted support indications (DSIs) with a bobbin probe voltage greater than the lower repair limit of 1.0 volt, according to the criterion in GL 95-05 (Attachment 1, Section 3.b.1) for 0.75-inch diameter tubes. The inspection criterion in F214 meets but does not exceed the GL 95-05 criterion as stated on page 3-2.

TVA Response

TVA confirms that the above information is correct as stated.

RCI 3

Based on the discussion in Sections 3.2 and 6.4, the “limiting Cycle 4b operating temperatures” shown in Table 3-2 are assumed values selected for conservatism in the projected growth rates. Based on the discussion in Section 6.4, the Cycle 4b operating temperature is lower than the Table 3-2 assumed temperatures.

TVA Response

TVA confirms that the above information is correct as stated.

RCI 4

Based on the discussion in Section 3.2, the operating temperature in Cycles 4a and 4b is lower than in Cycle 3, but the “limiting Cycle 4b operating temperature” values in Table 3-2 are higher than Cycle 3 for conservatism in the growth rate correction factor. These temperature values and the doubling of the activation energy relative to the previous GL 95-05 operational assessment (from 30 to 60 kilocalories per mol) are used to increase the value of the calculated temperature correction factor. This is conservative because the correction factor was used to adjust the observed Cycle 4a voltage growth rates upward as part of determining the bounding growth rate to use in the Cycle 4b operational assessment (OA).

TVA Response

TVA confirms that the above information is correct as stated.

RCI 5

Based on the discussion in Section 3.2, the terms “OA growth rate adjustment,” growth correction factor,” and “Growth Adjustment Factor,” are used to refer to the same thing - the effect of temperature on growth as expressed by Equation 3-1.

TVA Response

TVA confirms that the above information is correct as stated.

RCI 6

Based on the discussion in Section 3.2, the temperature Growth Adjustment Factor calculated according to Equation 3-1 was applied to the Cycle 4a growth rates for each SG and then compared to Cycle 3 growth rates to identify the bounding growth rate for use in the Cycle 4b OA. The phrase, “Cycle 4a bounding temperature adjusted growth rate” in the first paragraph on page 3-5 refers to the highest temperature-adjusted Cycle 4a growth rate among the four SGs.

TVA Response

TVA confirms that the above information is correct as stated.