Constellation

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May 6, 2025 10 CFR 50.90

RS-25-097

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

Braidwood Station, Units 1 and 2
Renewed Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456 and STN 50-457

Subject: Response to Request for Additional Information Related to Braidwood Station, Unit 1 Relief Request RR-4

References:

1. Letter from R. Steinman (Constellation Energy Generation, LLC) to U.S. NRC, "Relief Request RR-4 Associated with the Fourth Inservice Testing 10-Year Interval," dated April 28, 2025 (ADAMS Accession No. ML25118A331)

2. Email from S. Wall (U.S. NRC) to B. Seawright (Constellation Energy Generation, LLC), "Final RAI - Braidwood, Unit 1 - Relief Request RR-4 (Auxiliary Feedwater Air Operated Flow Control Valves) (EPID No. L-2025-LLR-0049)," dated May 5, 2025 (ADAMS Accession No. ML25126A101)

In Reference 1, Constellation Energy Generation, LLC (CEG) requested relief from certain inservice testing (IST) requirements of the 2012 Edition of the American Society of Mechanical Engineers (ASME) *Operation and Maintenance of Nuclear Power Plants,* Division 1, OM Code: Section IST (OM Code) for the IST Program at Braidwood Station (Braidwood), Unit 1, for the Fourth IST Program Interval. Specifically, CEG requested a one-time allowance to IST Program testing to perform a partial stroke test in lieu of the OM Code required full-stroke exercise following maintenance to repair to the 1AF005F valve.

In Reference 2, the NRC requested additional information that is needed to complete review of Braidwood relief request RR-4. In response to this request, CEG is providing the attached information.

There are no regulatory commitments included in this letter.

Should you have any questions concerning this letter, please contact Brian Seawright at 779-231-6151.

Respectfully,

Steinman, Rebecca Lee

Digitally signed by Steinman, Rebecca Lee
Date: 2025.05.06 11:26:11 -05'00'

Rebecca L Steinman
Sr. Manager Licensing
Constellation Energy Generation, LLC

Attachment: Response to Request for Additional Information Related to Alternative Request RR-4, Revision 0

cc: Regional Administrator – NRC Region III
NRC Senior Resident Inspector – Braidwood Nuclear Power Station
Illinois Emergency Management Agency – Department of Nuclear Safety

ATTACHMENT

Braidwood Station

Unit 1

Response to Request for Additional Information
Related to Alternative Request RR-4, Revision 0

Attachment
Response to Request for Additional Information
Related to Alternative Request RR-4, Revision 0

Mechanical Engineering & Inservice Testing Branch (EMIB) Request for Additional Information (RAI)

EMIB-RAI-1:

Regulatory Requirements:

The NRC regulations in 10 CFR 50.55a(z), "Alternatives to codes and standards requirements," state the following:

Alternatives to the requirements of paragraphs (b) through (h) of this section or portions thereof may be used when authorized by the Director, Office of Nuclear Reactor Regulation. A proposed alternative must be submitted and authorized prior to implementation. The applicant or licensee must demonstrate that:

(1) *Acceptable level of quality and safety.* The proposed alternative would provide an acceptable level of quality and safety; or

(2) *Hardship without a compensating increase in quality and safety.* Compliance with the specified requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Issue

In Section 5.0, "Proposed Alternative and Basis for Use," of Alternative Request RR-4, the licensee states that the proposed post-maintenance test will close the 1AF005F valve using the air operator and then ensure the valve is closed using the handwheel. The licensee then states that utilizing this test method, the handwheel may not move the obturator if the valve fully closes via the air operator.

Request

- Based on past experience where handwheel operation interfered with the air-operated function of the 1(2)AF005 valves at the Braidwood and Byron nuclear power plants, the licensee is requested to describe its plan to ensure that the air-operated function of the 1AF005F valve at Braidwood Unit 1 has not been degraded if it is necessary to use the handwheel to fully close the valve manually during the proposed post-maintenance test.

Constellation Response:

For the post-maintenance test (PMT), the 1AF005F valve will be closed with air, have its handwheel engaged to fully close and gag the valve, and then have air removed to ensure the handwheel maintains the valve closed. Once this function is verified, air will be reapplied, the handwheel will be restored to its normal position ensuring the valve remains closed. The valve will then be returned to its normally open position by normal means of venting air to allow spring force to open the valve. It is CEG's position that ensuring the valve remains closed with air applied and then re-opening the valve in this manner demonstrates that handwheel operation did not degrade the air-operated function.