

RS-23-074

10 CFR 50.90

June 9, 2023

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 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: Supplement to Application for License Amendment to Braidwood Station, Units 1 and 2, Technical Specification 3.7.9, "Ultimate Heat Sink"

References: 1. Letter from K. Lueshen (Constellation Energy Generation, LLC) to U.S. Nuclear Regulatory Commission, "License Amendment to Braidwood Station, Units 1 and 2, Technical Specification 3.7.9, 'Ultimate Heat Sink'," dated March 24, 2023 (ADAMS Accession No. ML23083B941)

In Reference 1, Constellation Energy Generation, LLC (CEG) requested an amendment to Renewed Facility Operating License Nos. NPF-72 and NPF-77 for Braidwood Station, Units 1 and 2 (Braidwood). The proposed amendment is to change Technical Specifications (TS) Surveillance Requirement (SR) 3.7.9.2 to allow an Ultimate Heat Sink (UHS) temperature of ≤102.8°F until September 30, 2023.

On April 24, 2023, Braidwood Unit 2 entered the planned refueling outage A2R23. During this outage, maintenance activities on the Diesel Driven Auxiliary Feedwater Closed Cycle Heat Exchanger, 2SX01K, required a tube to be plugged. This brings the actual number of tubes that are plugged for Unit 2's 2SX01K heat exchanger to two (2). Heat exchanger 2SX01K supports the Diesel Driven Auxiliary Feedwater Pump operation during loss of all AC power.

Attachment 1, Section 3.3.5 of Reference 1 discusses the operation of the Diesel Driven Auxiliary Feedwater Pump for two hours with loss of all AC power and derives its conclusion based on the actual tube plugging for Unit 1 and Unit 2 1/2SX01K heat exchangers. Section 3.3.5 of Reference 1 states, "The actual numbers of tubes that are plugged for the heat exchangers (1/2SX01K) is zero (0) for Unit 1 and one (1) for Unit 2. The actual plugging level supports a maximum non-accident SX temperature of 104°F. Therefore, raising the SX temperature of 102.8°F is acceptable." Taking into consideration the additional Unit 2 heat exchanger tube plugged during outage A2R23, the actual plugging level supports a maximum non-accident Essential Service Water (SX) temperature of 103.5°F. Therefore, the conclusion that raising the SX temperature of 102.8°F is acceptable remains applicable.

The license amendment request (Reference 1) was further reviewed to ensure all other supporting technical evaluations remain applicable following A2R23 outage. There were no additional discrepancies, and all conclusions made in Reference 1 are unchanged.

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In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), CEG is notifying the State of Illinois of this application for license amendment by transmitting a copy of this letter and its attachments to the designated State Official.

There are no regulatory commitments contained in this letter. Should you have any questions concerning this letter, please contact Brian Seawright at (630) 657-2814.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 9th day of June 2023.

Respectfully,

**Lueshen,
Kevin**  Digitally signed by
Lueshen, Kevin
Date: 2023.06.09
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Kevin Lueshen
Sr. Manager – Licensing
Constellation Energy Generation, LLC

cc:

NRC Regional Administrator – Region III
NRC Senior Resident Inspector – Braidwood Station
Illinois Emergency Management Agency – Division of Nuclear Safety