

RS-16-138

10 CFR 50.90

June 16, 2016

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. 50-456 and 50-457

Subject: Supplemental Information Regarding Request for a License Amendment to Braidwood Station, Units 1 and 2, Technical Specification 3.7.9, "Ultimate Heat Sink"

- References:
- 1) Letter from D. M. Gullott (Exelon Generation Company, LLC) to U. S. Nuclear Regulatory Commission, "Request for a License Amendment to Braidwood Station, Units 1 and 2, Technical Specification 3.7.9, 'Ultimate Heat Sink,'" dated August 19, 2014 (ML14231A902)
  - 2) Email from J. Wiebe (NRC) to J. Krejcie (Exelon Generation Company, LLC) Preliminary Containment and Ventilation Branch RAIs for Braidwood UHS LAR dated March 9, 2015 (ML15069A004)
  - 3) Letter from D. M. Gullott (Exelon Generation Company, LLC) to U. S. Nuclear Regulatory Commission, "Response to Request for Additional Information Regarding Request for a License Amendment to Braidwood Station, Units 1 and 2, Technical Specification 3.7.9, 'Ultimate Heat Sink,'" dated April 30, 2015 (ML15120A396)
  - 4) Email from J. Wiebe (NRC) to J. Krejcie (Exelon Generation Company, LLC) Need Clarification Conference Call Regarding Your April 30, 2015 Response to SCVB-RAI-1(a), dated August 12, 2015
  - 5) Letter from D. M. Gullott (Exelon Generation Company, LLC) to U. S. Nuclear Regulatory Commission, "Response to Request for Additional Information Regarding Request for a License Amendment to Braidwood Station, Units 1 and 2, Technical Specification 3.7.9, 'Ultimate Heat Sink,'" dated October 9, 2015 (ML15282A345)

In Reference 1, Exelon Generation Company, LLC, (EGC) requested an amendment to the Technical Specifications (TS) of Facility Operating License Nos. NPF-72 and NPF-77 for Braidwood Station, Units 1 and 2. The proposed amendment would modify TS 3.7.9, "Ultimate Heat Sink (UHS)," by changing the maximum allowable temperature of the UHS from 100°F to a

maximum UHS temperature of 102°F. As part of the Reference 1 request, EGC included certain Regulatory Commitments.

As part of its review of Reference 1, the U. S. Nuclear Regulatory Commission (NRC) requested additional information in Reference 2 and Reference 4. In response to these requests, EGC responded in Reference 3 and Reference 5.

Specifically, in Reference 2, the NRC requested information related to how and where postulated water hammer events can take place following the first few minutes post-accident (see NRC SCVB-RAI-1). EGC responded in Reference 3, and as part of that response stated:

"The RCFC [Reactor Containment Fan Cooler] Unit 2 piping analyses are based on the Unit 1 RCFC piping analytical models, with unit specific differences reconciled during original construction. Unit specific RCFC piping differences that are applicable to the 96-06 analysis will be reconciled as part of Regulatory Commitment #1 of Reference 1 [Reference 1], prior to the implementation of the UHS LAR."

In Reference 4, the NRC requested EGC to explain what was implied by the reconciliation of the Unit specific differences and how the analysis for Braidwood Unit 2 would be performed using the analysis for Unit 1.

EGC responded in Reference 5 and described the evaluation performed to-date, and indicated that:

"Based on similarities between Unit 1 and Unit 2 Essential Service Water (SX) piping configurations (as documented in the reviews of the as-built piping subsystems), the results of the RELAP model using the Braidwood Unit 1 configuration are considered representative for both Braidwood Units.

The forces on the piping that were calculated with HYTRAN were reviewed against the structural capacity of the pipe supports. The support loads and configuration were obtained from the stress analyses for the affected Braidwood Unit 1 piping subsystems. The regulatory commitment [i.e., Regulatory Commitment #1 of Reference 1] is to validate that the structural capacity of the Unit 2 pipe support configuration is equivalent to the capacity of the Unit 1 pipe support configuration. This commitment will support the conclusion that the Unit 2 pipe supports can accommodate forces developed from void collapses."

As part of the completion of design analyses in support of Regulatory Commitment #1, EGC performed a review of the Reference 3 and Reference 4 statements to review the support loads and configuration of the Braidwood Unit 1 piping systems relative to Unit 2. Specifically, EGC validated the structural integrity of the Unit 2 piping system relative to the projected loads and confirms that the piping system supports are adequate. Therefore, the reconciliation and validation of Unit 1 and Unit 2 piping systems discussed in Reference 3 and Reference 5 is complete.

EGC has reviewed the information supporting a finding of no significant hazards consideration that was previously provided to the NRC in Attachment 1 of Reference 1. The information provided in this supplement does not affect the bases for concluding that the proposed license amendment does not involve a significant hazards consideration.

There are no regulatory commitments contained within this letter.

In accordance with 10 CFR 50.91, "Notice for public comment; State consultation," paragraph (b), a copy of this letter and its attachment is being provided to the designated State of Illinois official.

Should you have any questions concerning this letter, please contact Ms. Jessica Krejcie at (630) 657-2816.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 16th day of June 2016.

Respectfully,

A handwritten signature in black ink, appearing to read 'D M Gullott', followed by a horizontal line extending to the right.

David M. Gullott  
Manager - Licensing  
Exelon Generation Company, LLC

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