

August 06, 2018

Serial: RA-18-0110

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

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2  
Renewed Facility Operating License Nos. DPR-71 and DPR-62  
Docket Nos. 50-325 and 50-324  
Request for One-Time Allowance to Submit License Amendment Request  
Referencing Topical Report Draft Safety Evaluation

- References:
1. Letter from Andrew Hon (U.S. Nuclear Regulatory Commission) to Duke Energy, *Summary of October 26, 2017, Second Pre-Submittal Meeting with Duke Energy Regarding Brunswick Advanced AREVA Methods License Amendment Request (CAC NOS. MF9965 and MF9966; EPID L-2017-LRM-0033)*, dated December 22, 2017, ADAMS Accession Number ML17317A330.
  2. Letter from Kevin Hsueh (U.S. Nuclear Regulatory Commission) to Gary Peters (AREVA Inc.), *Acceptance for Review of AREVA Inc. Topical Report ANP-10332P, Revision 0, "AURORA-B: An Evaluation Model for Boiling Water Reactors; Application to Loss of Coolant Accident Scenarios" (CAC NO. MF3829)*, dated October 27, 2016, ADAMS Accession Number ML16288A837.

Ladies and Gentlemen:

As described in the October 26, 2017, pre-submittal meeting summary (i.e., Reference 1), Duke Energy Progress, LLC (Duke Energy) plans to submit a license amendment request (LAR) in September 2018 for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, regarding adoption of advanced Framatome (i.e., formerly AREVA Inc.) methodologies to support transition to the Framatome ATRIUM 11 fuel design. Duke Energy is pursuing the ATRIUM 11 fuel type to improve fuel cycle economics and safety margins.

The September 2018 submittal date for the BSEP advanced Framatome methodology LAR is necessary to support a critical milestone in December 2018 for the ATRIUM 11 fuel transition. Approval of the BSEP advanced Framatome methodology LAR will be required by February 20, 2020, to support reactor startup following the Unit 1 refueling outage.

The BSEP advanced Framatome methodology LAR will propose to incorporate eight new Topical Reports (TRs) into the BSEP Technical Specifications (TSs), one of which is TR ANP-10332P, Revision 0, *AURORA-B: An Evaluation Model for Boiling Water Reactors; Application to Loss of Coolant Accident (LOCA) Scenarios* (AURORA-B LOCA TR) which was accepted for NRC review on October 27, 2016 (i.e., Reference 2). As documented in Reference 2, the NRC originally projected to have the draft safety evaluation (SE) issued by March 30, 2018. However, due to the advanced nature of the methodology, additional review

time was required and the latest projection for issuance of the draft SE is by August 31, 2018. Therefore, by the September 2018 submittal date for the BSEP advanced Framatome methodology LAR, the review of the AURORA-B LOCA TR will be near completion and there will be a solid understanding of the potential limitations and conditions (L&Cs).

Apart from the AURORA-B LOCA TR, all other elements of the LAR will use NRC-approved or detailed plant specific methodology. The AURORA-B LOCA TR is only one piece of the BSEP advanced Framatome methodology LAR; the majority of the technical content does not directly involve the AURORA-B LOCA TR.

As a result of the needed approval timeline for the BSEP advanced Framatome methodology LAR, the complexity of the LAR, and the status of the AURORA-B LOCA TR review, Duke Energy is requesting an allowance to submit the BSEP advanced Framatome methodology LAR referencing the draft SE for the AURORA-B LOCA TR. The generally accepted practices to reference the NRC-approved TR or to include the entire TR with a plant-specific justification would significantly delay submittal and would not add value to the review process in this circumstance. If this strategy is acceptable to the NRC, Duke Energy will address each of the L&Cs from the AURORA-B LOCA TR draft SE with submittal of the BSEP advanced Framatome methodology LAR. Following issuance of the approved AURORA-B LOCA TR (i.e., ANP-10332P-A), Duke Energy will supplement the BSEP advanced Framatome methodology LAR referencing the approved AURORA-B LOCA TR and addressing any differences between the draft and final SEs.

Duke Energy acknowledges that this strategy will introduce additional uncertainty into the NRC's initial projection of LAR review hours and duration. In addition, Duke Energy understands that there are remaining regulatory processes that need to be completed before the AURORA-B LOCA TR final SE can be issued; Duke Energy acknowledges that there is uncertainty in the outcome of these processes which may impact the LAR review schedule. Notwithstanding these schedule risks, Duke Energy has confidence that submitting the LAR referencing the AURORA-B LOCA TR draft SE remains the best strategy at this juncture and that sufficient, reliable information regarding the LAR review duration will be available in December 2018 to support the critical ATRIUM 11 fuel transition milestone.

To facilitate submittal of the BSEP advanced Framatome methodology LAR in September 2018, Duke Energy requests that the NRC grant this allowance by September 6, 2018.

No new regulatory commitments are contained in this letter.

Please refer any questions regarding this submittal to Mr. Lee Grzeck, Manager - Regulatory Affairs, at (910) 832-2487.

Sincerely,

A handwritten signature in blue ink, appearing to read "Bryan B. Wooten" followed by "Sr. B.W." in a smaller, less legible script.

Bryan B. Wooten  
Director – Organizational Effectiveness  
Brunswick Steam Electric Plant

SBY/sby

cc:

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