



William R. Gideon
Vice President
Brunswick Nuclear Plant
P.O. Box 10429
Southport, NC 28461
o: 910.832.3698

September 27, 2018

Serial: RA-18-0144

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

Subject: Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2
Renewed Facility Operating License Nos. DPR-71 and DPR-62
NRC Docket Nos. 50-325 and 50-324
Response to March 12, 2012, Request for Information Enclosure 2,
Recommendation 2.1, Flooding, Required Response 3, Flooding Focused
Evaluation Summary Report

References:

1. NRC Letter, *Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident*, dated March 12, 2012, Agencywide Documents Access and Management System (ADAMS) Accession No. ML12053A340
2. NRC Letter, *Supplemental Information Related to Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near Term Task Force Review of Insights from the Fukushima Dai-ichi Accident*, dated March 1, 2013, ADAMS Accession Number ML13044A561
3. BSEP Letter, *Flood Hazard Reevaluation Report, Response to NRC 10 CFR 50.54(f) Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3 and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident*, dated March 11, 2015, ADAMS Accession Number ML15079A385
4. NRC Staff Requirements Memoranda to COMSECY-14-0037, *Integration of Mitigating Strategies for Beyond-Design-Basis External Events and the Reevaluation of Flooding Hazards*, dated March 30, 2015, ADAMS Accession Number ML15089A236
5. NRC Letter, *Coordination of Requests for Information Regarding Flooding Hazard Reevaluations and Mitigating Strategies for Beyond-Design-Basis External Events*, dated September 1, 2015, ADAMS Accession Number ML15174A257
6. Nuclear Energy Institute (NEI) Report, NEI 16-05, Revision 1, *External Flooding Assessment Guidelines*, dated June 2016, ADAMS Accession Number ML16165A178

7. U.S. Nuclear Regulatory Commission, JLD-ISG-2016-01, Revision 0, *Guidance for Activities Related to Near-Term Task Force Recommendation 2.1, Flood Hazard Reevaluation; Focused Evaluation and Integrated Assessment*, dated July 11, 2016, ADAMS Accession Number ML16162A301
8. NRC Letter, *Brunswick Steam Electric Plant, Units 1 and 2 - Interim Staff Response to Reevaluated Flood Hazards Submitted In Response to 10 CFR 50.54(f) Information Request - Flood-Causing Mechanism Reevaluation (CAC Nos. MF6104 and MF6105)*, dated March 16, 2017, ADAMS Accession Number ML17072A364
9. NRC Letter, *Nuclear Regulatory Commission Report for the Audit of Duke Energy Progress Flood Hazard Reevaluation Report Submittal Related to the Near-Term Task Force Recommendation 2.1-Flooding for Brunswick Steam Electric Plant, Units 1 and 2, (CAC Nos. MF6104 and MF6105; EPID L-2015-JLD-007 and EPID L-2015-JLD-008)*, dated November 15, 2017, ADAMS Accession Number ML17271A248
10. NRC Letter, *Brunswick Steam Electric Plant Units 1 and 2 - Staff Assessment of Response to 10 CFR 50.54(f) Information Request Flood-Causing Mechanism Reevaluation (EPID Nos. 000495/05000325/L-2015-JLD-0007 and 000495/05000324/L-2015-JLD-0008)*, dated April 16, 2018, ADAMS Accession No. ML18089A055

Ladies and Gentlemen:

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Reference 1 to request information associated with Near-Term Task Force (NTTF) Recommendation 2.1 for Flooding. One of the required responses in Reference 1 directed licensees to submit a Flood Hazard Reevaluation Report (FHRR). On March 1, 2013, the NRC issued Reference 2 to provide supplemental information to the request. The FHRR for Brunswick Steam Electric Plant (BSEP), Units 1 and 2, was submitted on March 11, 2015 (i.e., Reference 3).

Following the Commission's directive to NRC Staff (i.e., Reference 4), the NRC issued a letter to industry (i.e., Reference 5) indicating that guidance is being prepared to replace existing instructions and provide for a "graded approach to flooding reevaluations and provide for more focused evaluations of local intense precipitation and available physical margin in lieu of proceeding to an integrated assessment."

Guidance for performing flooding reevaluations is contained in Reference 6, which has been endorsed by the NRC in Reference 7. Reference 6 indicates that each flood-causing mechanism that is not bounded by the design basis flood (i.e., using only stillwater and/or wind-wave run-up levels) shall follow one of the following five assessment paths:

- Path 1: Demonstrate Flood Mechanism is Bounded
- Path 2: Demonstrate Effective Flood Protection
- Path 3: Demonstrate a Feasible Response to Local Intense Precipitation (LIP)
- Path 4: Demonstrate Effective Mitigation
- Path 5: Scenario Based Approach

Non-bounded flood-causing mechanisms in Paths 1, 2, or 3 require a Focused Evaluation to complete the actions related to external flooding required by Reference 1. Mechanisms in Paths 4 or 5 require an Integrated Assessment. The enclosure to this letter provides the Flooding Focused Evaluation Summary for BSEP.

The flooding analysis described in References 8, 9 and 10 was utilized as an input to this Flooding Focused Evaluation. The Flooding Focused Evaluation reaffirms that BSEP has reliable, passive protection of key structures, systems, and components (SSCs) to maintain key safety functions (KSFs).

The Flooding Focused Evaluation follows Path 2 of Reference 6 and utilized Appendices B and C of Reference 6 for guidance on evaluating the site protection features. This submittal completes the actions related to external flooding required by Reference 1.

The purpose of this letter is to provide the BSEP, Unit Nos. 1 and 2, Flooding Focused Evaluation Summary Report. Enclosure 1 provides the report.

This letter contains new regulatory commitments. Enclosure 2 provides a list of these commitments.

If you have any questions regarding this submittal, please contact Mr. Lee Grzeck, Manager - Regulatory Affairs, at (910) 832-2487.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on September 27, 2018.

Sincerely,



William R. Gideon

Enclosure 1: Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, Flooding Focused Evaluation Summary Report

Enclosure 2: Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2, Flooding Focused Evaluation Summary Report, Regulatory Commitments

U.S. Nuclear Regulatory Commission
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cc (with enclosures):

U.S. Nuclear Regulatory Commission, Region II
ATTN: Ms. Catherine Haney, Regional Administrator
245 Peachtree Center Ave, NE, Suite 1200
Atlanta, GA 30303-1257

U.S. Nuclear Regulatory Commission
ATTN: Mr. Dennis Galvin (Mail Stop OWFN 8B1A)
11555 Rockville Pike
Rockville, MD 20852-2738

U.S. Nuclear Regulatory Commission
ATTN: Mr. Peter Bamford (Mail Stop OWFN 8B3)
11555 Rockville Pike
Rockville, MD 20852-2738

U.S. Nuclear Regulatory Commission
ATTN: Mr. Gale Smith, NRC Senior Resident Inspector
8470 River Road
Southport, NC 28461-8869

Chair - North Carolina Utilities Commission (**Electronic Copy Only**)
P.O. Box 29510
Raleigh, NC 27626-0510