This document is a redacted publicly available version. In January 2025, the NRC staff identified information within this document that may be Critical Electric Infrastructure Information (CEII) as defined by the Federal Energy Regulatory Commission (FERC). The original file is non-public, designated as CEII, in ADAMS ML25002A213.

NRC staff actions were taken in accordance with:

- The Memorandum of Understanding Between US NRC and FERC Regarding Treatment of Critical Energy/Electric Infrastructure Information found at: https://www.nrc.gov/reading-rm/doc-collections/memo-understanding/2024/index.html.
- The FERC definition of CEII found at: https://www.ferc.gov/ceii, and, https://www.ferc.gov/enforcement-legal/ceii/designation-incoming-dam-safety-documents.

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ONS-2016-042

April 29, 2016

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10 CFR 50.54(f)

Duke Energy Carolinas, LLC (Duke Energy)
Oconee Nuclear Station, Units 1, 2 and 3
Docket Numbers 50-269, 50-270, 50-287
Renewed License Numbers DPR-38, DPR-47, and DPR-55

Subject: Notification of External Flood Modifications Completion

References:

1. NRC Letter; Confirmatory Action Letter - Oconee Nuclear Station, Units 1, 2, and 3 Commitments to address external Flooding Concerns, dated June 22, 2010, (ADAMS Accession No. ML 101730329).
2. NRC Letter; Oconee Nuclear Station, Units 1, 2, and 3 - Modifications to Address External Flooding Hazards, dated September 20,2012, (ADAMS Accession No. ML12219A163).
3. Duke Energy Letter, *Establish the Fukushima Flood Response as the Basis to Govern Flood Mitigation Modifications from Postulated Upstream Dam Failure*, dated August 8, 2014 (Accession No. ML14225A540).
4. Duke Energy Letter, *Revised Flood Hazard Reevaluation Report per NRC's Request for Additional Information,* dated March 6, 2015 (Accession No. ML15072A106).
5. NRC Letter, *Oconee Nuclear Station, Units 1, 2, AND 3 - Interim Staff Response To Reevaluated Flood Hazards Submitted In Response To 10 CFR 50.54(f) Information Request - Flood-Causing Mechanism Reevaluation (TAC NOS. MF1012, MF1013, AND MF1014),* dated September 24, 2015, (Accession No. ML15239B261).
6. Duke Energy Letter, *Supplemental Information Regarding NRC 2008 and 2012 Requests for Information Pursuant to 10 CFR 50.54(f) Pertaining to External Flooding at Oconee Nuclear Station (ONS) Revision 1,* dated January 8, 2016(Accession No. ML16015A430).
7. NRC Letter, *Oconee Nuclear Station, Units 1, 2, AND 3 - Staff Assessment Of Response To Request For Information Pursuant To 10 CFR 50.54(F) Flood-Causing Mechanisms Reevaluation (CAC Nos. MF1012, MF1013, AND MF1014) and Path Forward on Confirmatory Action Letter,* dated April 14, 2016 (Accession No. Pkg. ML15356A161; Letter ML15352A207 [Public] ; Enclosures 1 & 2; ML15356A158 [Non-Public]).

Ladies and Gentlemen,

On June 22, 2010 a Confirmatory Action Letter (CAL) (Reference 1) to address Oconee Nuclear Station flooding concerns was issued to Duke Energy. A NRC letter dated September 20, 2012 (Reference 2) stated that the agency intended to maintain the CAL active until it could be superseded by regulatory action related to Fukushima responses.

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On August 8, 2014 Duke Energy submitted a letter to the NRC (Reference 3) to document that Oconee flood modifications would be based on the Flooding Hazard Reevaluation Report (FHRR) flood analysis.

Duke Energy submitted its final FHRR on March 6, 2015 (Reference 4) and on September 24, 2015, the NRC provided an Interim Staff Assessment of the re-evaluated flood hazards (Reference 5). The Assessment established flooding levels for a deterministic, beyond design basis, Jocassee Dam failure flood at Oconee Nuclear Station, to be defined by the FHRR failure analysis results.

On January 8, 2016, Duke Energy submitted a supplemental information letter to the NRC which described the Jocassee Dam failure flooding response for Oconee Nuclear Station (Reference 6). This letter included a list of five (5) modifications being constructed at the site to support mitigation of Jocassee Dam failure floods. The modifications are: Relocation of the100kV (FANT) Back-up Power Line, East Slope Scour Protection, Intake Dike Scour Protection, Discharge Diversion Wall, and Turbine Building Drain Isolation. A description of these modifications is included in the enclosure to this letter.

On April 14, 2016 the NRC issued a Final Staff Assessment of the FHRR (Reference 7) and concluded that the 2015 FHRR flood analysis is acceptable for the purpose of meeting the terms of the June 22, 2010 CAL.

This letter is informing the NRC that, in support of CAL closure, all five modifications associated with Jocassee Dam failure flooding mitigation are field construction complete as of April 26, 2016.

This letter contains no new regulatory commitments.

Should you have any questions or require additional information, please contact David Haile of the ONS Regulatory Affairs Group, at (864) 873-4742.

Sincerely,

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Enclosure

EXTERNAL FLOODING MODIFICATIONS

	Modification	Description	Flooding Levels
1	100kV (FANT) Back-up Power Line Tower Relocation	Relocate the back-up power transmission line towers above the floodplain to supply emergency power through CT-5 to the site. This modification includes the acquisition of new right-of-way and relocation of 22 transmission towers.	1
2	East Slope Scour Protection	Protect the Condenser Circulating Water (CCW) embedded piping (cooling water supply) by armoring the eastern slopes supporting the site grade. This modification includes approximately 150,000 ft^2 of scour protection (rip rap, concrete block, shotcrete, energy dissipaters, gabion mattresses) on the east slopes of the ONS power block, to prevent flood waters from eroding the embankment.	1, 2, & 3
3	Intake Dike Scour Protection	Protect the intake dike and the embedded Condenser Circulating Water piping (cooling water supply) by armoring the Intake Dike in high water velocity locations and providing grass cover support as approved by FERC. The modification includes scour protection (shotcrete) where the Intake Dike meets the east bank, and an auxiliary drain system at the bottom of the intake dike slope to improve drainage for the existing good grass cover that is credited for preventing flood waters from eroding the embankment.	1, 2, & 3
4	Discharge Diversion Wall	Protect the Condenser Circulating Water imbedded piping (cooling water supply) and reduce initial flooding levels by directing water away from the site grade. The modification includes a 206' long flood diversion wall, with a top elevation of 828' msl, located near the Condenser Circulating Water discharge structure and designed to deflect flood waters away from the ONS Power Block.	1, 2, & 3
5	Turbine Building Drain Isolation	The modification includes one manually operated weir gate located at the entrance of a 72" Turbine Building drain line to prevent flood waters from back-flowing into the building basement.	1

The modifications being constructed at the site to support dam failure flood mitigation are applicable to a range of postulated flood levels, including the Jocassee breach event in the FHRR (Reference 4). The range of flooding levels are characterized by the following three categories:

1. Flooding levels with peak levels below site grade at 796' msl.
2. Flooding levels above site grade but below msl (the top of the SSF flood walls).
3. Flooding levels above the SSF flood walls (addressed by mitigating strategies).

Additional modifications, associated with the mitigation strategies for NRC Order EA-12-049, will be provided as required by that Order.