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February 17, 2012

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

Subject: Duke Energy Carolinas, LLC
Oconee Nuclear Station (ONS), Units 1, 2 and 3
Renewed Facility Operating License Numbers DPR-38, -47, -55;
Docket Numbers 50-269, 50-270 and 50-287;
Duke Energy's Recommended Revisions to the Oconee Nuclear Station Section of
NRC's Screening Analysis Report for the Proposed Generic Issue on Flooding of Nuclear
Plant Sites Following Upstream Dam Failure

On February 7, 2012, Duke Energy Carolinas, LLC (Duke Energy) received the section of the subject Screening Analysis report pertaining to Oconee Nuclear Station (ONS) from the office of the Nuclear Regulatory Commission (NRC) Senior Resident Inspector. Following its review of the ONS specific section, Duke Energy, while understanding the intent of the Screening Analysis, feels obligated to bring to the NRC's attention the fact that information contained in the ONS specific section does not serve the best interest of public health and safety and of the security of Oconee Nuclear Station. A discussion of Duke Energy's bases for arriving at this conclusion follows.

Previous correspondence between the NRC and Duke Energy on the subject of Jocassee Dam Failure has been withheld from public disclosure under 10 CFR 2.390(d)(1), "Public inspections, exemptions, requests for withholding." In August, 2008, the NRC sent Duke Energy a request for information pursuant to 10 CFR 50.54(f) seeking information related to flooding of the Oconee Nuclear Station resulting from a postulated failure of the upstream Jocassee Dam. The NRC's request for information was marked 'OFFICIAL USE ONLY – SECURITY-RELATED INFORMATION.' Furthermore, in the request for information the NRC specifically directed Duke Energy to take appropriate measures in the development and handling of information regarding this issue, including use of the provisions of 10 CFR 2.390(d)(1). Since 2008, there has been extensive correspondence and other written materials exchanged between NRC and Duke Energy that have been consistently controlled under this provision, which would prevent public disclosure. A limited sample is provided below:

- NRC Letter from Joseph G. Giitter to Dave Baxter, "INFORMATION REQUEST PURSUANT TO 10 CFR 50.54(f) RELATED TO EXTERNAL FLOODING, INCLUDING FAILURE OF THE JOCASSEE DAM, AT OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3", dated August 15, 2008.
- Duke Energy Letter from Dave Baxter, "RESPONSE TO 10 CFR 50.54(f) REQUEST, dated September 26, 2008.
- NRC Letter from Joseph G. Giitter to Dave Baxter, "EVALUATION OF DUKE ENERGY CAROLINAS, LLC (DUKE), SEPTEMBER 26, 2008 RESPONSE TO NUCLEAR REGULATORY COMMISSION (NRC) LETTER DATED AUGUST 15, 2008 RELATED TO EXTERNAL FLOODING AT OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3", dated April 30, 2009.

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- NRC Letter from Luis A. Reyes to Dave Baxter, "CONFIRMATORY ACTION LETTER – OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 COMMITMENTS TO ADDRESS EXTERNAL FLOODING CONCERNS", dated June 22, 2010.
- NRC Letter from Eric J. Leeds to Preston Gillespie, "STAFF ASSESSMENT OF DUKE'S RESPONSE TO CONFIRMATORY ACTION LETTER REGARDING DUKE'S COMMITMENTS TO ADDRESS EXTERNAL FLOODING CONCERNS AT THE OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3", dated January 28, 2011.

Notwithstanding Duke Energy's designation, the NRC's recent Screening Analysis report directly incorporates information Duke Energy designated to be withheld under 10 CFR 2.390(d)(1). Furthermore, the proposed Screening Analysis report provides a single source compilation of discrete pieces of sensitive security related information and data that describe the adverse consequences of a Jocassee Dam failure, up to and including reactor core damage. The aggregate of that information makes the ONS specific section of the Screening Analysis a source of security sensitive information describing a postulated initiating event and its adverse consequences.

In reaching these conclusions, Duke Energy notes that the information contained within the Screening Analysis report is of a type that other Federal agencies would protect under similar critical infrastructure security programs. Duke Energy recommends that this information be submitted to the Department of Homeland Security (DHS) for screening against Critical Infrastructure Information criteria as defined in 6 CFR Part 29. Specifically, the Screening Analysis and the vulnerability assessments and conclusions contained therein constitute information not customarily in the public domain related to the security of critical infrastructure or protected systems, including the ability of a critical infrastructure or protected system to resist compromise. This would include past assessments, projections, and estimates of the vulnerability of critical infrastructure or a protected system and associated risk evaluations, which Duke Energy believes are central to the Screening Analysis. While Duke Energy understands that this information has not been formally submitted to DHS and thus has not undergone official agency review for classification as Critical Infrastructure Information, release of such data would be inconsistent with the intent of section 211, Subtitle B, of the Homeland Security Act of 2002 and implementing regulations contained in 6 CFR Part 29.

It was also noted that there were several instances where dated or incomplete information was relied upon in the Screening Analysis. Examples included: 1) reliance on inundation study result descriptions that have been superseded by the inundation study that was the subject of an NRC Safety Evaluation Report, dated January 28, 2011, and 2) risk discussions that were inappropriately applied to the ONS specific discussion when a deterministic approach to the Oconee external flood issue has been required by the NRC. Because of the deterministic approach, discussions of recent probabilistic risk analyses and results have not been included within exchanges between NRC and Duke Energy. The NRC's risk perspective, as reflected in the Screening Analysis, is generic in nature and not representative of specific risk analyses that Duke Energy has developed regarding the Jocassee Dam.

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As such, Duke Energy recommends that risk discussions be excluded from the ONS specific section of the Screening Analysis.

Duke Energy understands the NRC's mandate to develop and provide regulatory guidance to its licensees. Further, Duke Energy is mindful of, and supportive of the NRC's efforts to review its programs in light of events in Japan. With this recognition in mind, Duke Energy has revised the ONS specific section of the Screening Analysis offering two versions. The first version is derived by identifying text to be redacted that Duke Energy and the NRC have historically controlled as security-sensitive information. The other is a proposed rewrite of the original section in a way that will provide an adequate level of information to support the screening analysis while changing the original content from an aggregate set of security-sensitive information to one in which security exposure is minimized. In both attachments, Duke Energy has identified a number of changes to ensure that the information is consistent with existing correspondence. Duke Energy recommends that the NRC give consideration to the feedback provided in the enclosed versions.

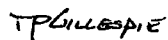
Duke Energy requests that should the NRC decide to re-classify information related to postulated Jocassee Dam failure impacts to Oconee Nuclear Station, which has historically been classified as security sensitive and withheld from public disclosure, that notification be provided to Duke Energy such that an assessment of additional security measures can be made, and if necessary, enhanced security measures can be implemented prior to the release of information to the public.

Since this letter and its enclosure contain security sensitive information, Duke Energy hereby requests the NRC withhold them from public disclosure pursuant to 10 CFR 2.390(d)(1), "Public inspections, exemptions, requests for withholding."

This submittal document contains no regulatory commitments.

If there are any questions regarding this submittal, please contact Terry Patterson, Safety Assurance Manager at ONS, at (864) 873-3163.

Sincerely,



T. Preston Gillespie, Jr., Vice President
Oconee Nuclear Station

Enclosure 1: Duke Energy's Recommended Revisions to the Oconee Nuclear Station Section of NRC's Screening Analysis Report for the Proposed Generic Issue on Flooding of Nuclear Plant Sites Following Upstream Dam Failure

Enclosure 2: Duke Energy's Recommended Complete replacement for the Oconee Nuclear Station Section of NRC's Screening Analysis Report

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ENCLOSURE 1

**Duke Energy's Proposed Revisions to ONS Section of NRC's Screening Analysis Report
for the Proposed Generic Issue on Flooding of Nuclear Plant Sites Following Upstream
Dam Failure**

Note: Bolded text is proposed to be redacted

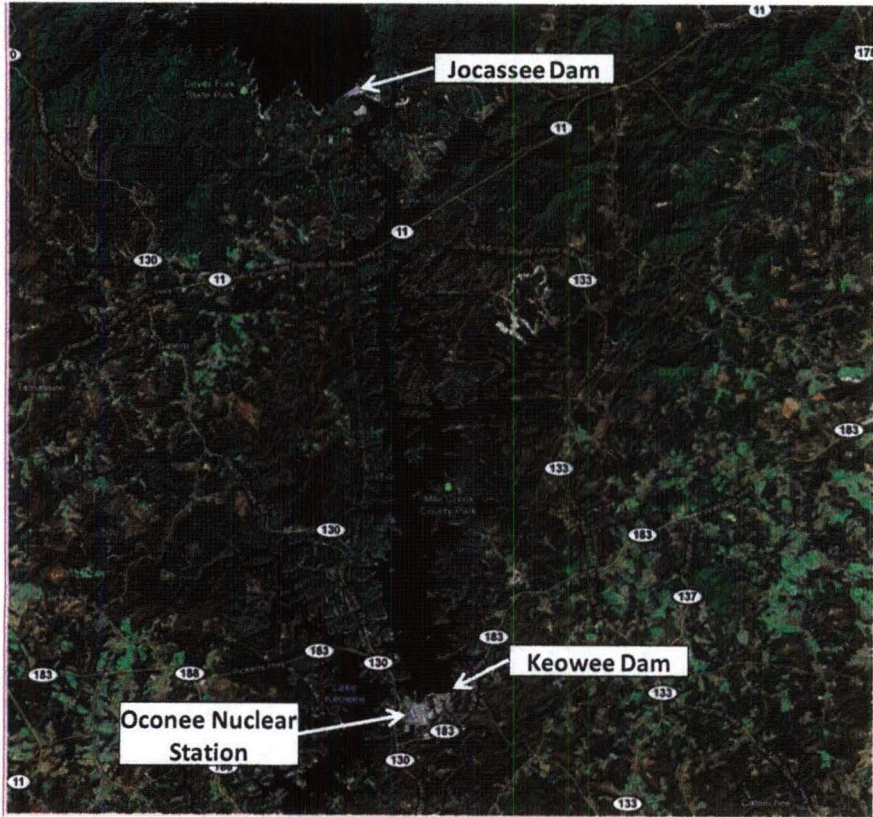
1.1. Oconee Nuclear Station

Oconee Nuclear Station (ONS) is located about 30 miles west of Greenville, South Carolina. The site is downstream from Jocassee Dam and adjacent to Keowee Dam (Figure 1 provides a map and Figure 2 provides aerial photographs of Oconee Nuclear Station). Jocassee Dam is located ~~about~~ **approximately** 11 miles upstream of Oconee Nuclear Station (ONS 2009, p. 2.4-1). The full pond elevation of the water retained by Jocassee Dam is about 300 feet above Lake Keowee, which is retained by Keowee Dam **and the Little River Dam**. The Oconee Nuclear Station has a yard grade that is a few feet below the full pond level of Lake Keowee (ONS 1995, p. 5-19).

Comment [r1]: Changed "about" to "approximately" for accuracy to match language in ONS UFSAR, page 2.4-1.

Comment [r2]: Added for completeness and to match language in ONS UFSAR, page 2.4-1.

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Comment [r3]: Redact: Labeled Figure should be redacted. While image is publicly available, relationship of Jocassee Dam location relative to Oconee Nuclear Station is not typically annotated in public information.

Figure 1: Location of Keowee and Jocassee Dams Relative to Oconee Nuclear Station

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Comment [r4]: Recommend delete second picture; two pictures of same area in different orientations is confusing.

Figure 2: Aerial Photograph of Oconee Nuclear Station

The Jocassee Dam was built as part of the same project (the Keowee-Toxaway Project) as Oconee Nuclear Station. As such, natural phenomena criteria were applied to the design and

construction of the Jocassee Project. As addressed in the Oconee Nuclear Station Updated Final Safety Analysis Report, the Jocassee Dam was built to the Oconee Nuclear Station seismic criteria and with sufficient design features (spillway capacity and freeboard) to avoid overtopping during a maximum hypothetical precipitation scenario. Therefore, it was concluded that the design of the Jocassee project had adequate margins to contain and control floods, posing no risk to the nuclear site. As such, postulated failures of the Jocassee Dam were not included in the original Oconee Nuclear Station licensing basis.

~~The current licensing basis for Oconee Nuclear Station did not consider the impact of failure of Jocassee Dam when calculating potential flood levels at the site. Based on a letter written by Duke Energy in 2008, failure of Jocassee Dam has been considered a beyond design basis event and managed as a risk assessment issue (Duke 2008, att. 1, p. 7). A more recent NRC letter (USNRC 2009) indicates that the NRC staff's position is that a Jocassee Dam failure is a credible event and needs to be addressed deterministically. In the same letter, NRC staff expressed concerns that Duke has not demonstrated that the Oconee Nuclear Station units will be adequately protected; resulting in ongoing regulatory activity related to the Oconee Nuclear Station. Subsequently, Duke provided additional information including updated inundation studies to the NRC. On January 28, 2011, the NRC staff issued a Safety Evaluation Report that concluded that failures of the Jocassee Dam due to seismic activity or overtopping events were not credible. The only remaining category of credible failure was a random, "sunny-day" failure scenario.~~

~~A sudden catastrophic failure of the Jocassee Dam is postulated to result in a flood wave that would overtop Keowee Dam as well as overtop the Oconee intake dike and would flood the plant (ONS 1995, 5-19). Flooding of the plant yard is expected to inundate the switchyard and eliminate offsite and station power (ONS 1995, 5-23). With station, offsite, and emergency hydropower from adjacent Keowee Dam unavailable, the Standby Shutdown Facility (an emergency generator alternate AC power facility) provides the only remaining shutdown power for all three units at Oconee Nuclear Station following loss of offsite and station power (ONS 2009, p. 9.6-1). If the Standby Shutdown Facility flood barriers overtop, the Standby Shutdown Facility will fail (Duke 2008, att. 2, p. 10), resulting in station blackout a loss of all AC power event. This insight has led to a change in understanding with regard to the flooding protection capabilities of the plant given the original flooding studies and has resulted in ongoing regulatory activity related to Oconee Nuclear Station. The licensee has developed a corrective action plan, including the implementation of interim compensatory measures. The interim measures have been inspected by the NRC with no findings identified. The licensee has begun permanent physical modification at the Oconee Nuclear Station site to further mitigate the consequences of a potential Jocassee Dam failure.~~

In 1983, Duke Energy Corporation evaluated external flooding effects at Oconee Nuclear Station for risk assessment purposes. That study determined that the projected flood height in

Comment [r5]: Added for completeness. Postulated failures of the Jocassee dam were not omitted from the ONS licensing basis because of an oversight; there was a sound deterministic basis for the original licensing basis that met the standards at the time the facility was licensed. Roadmap: ONS UFSAR 2.4-3 and 2.4-4

Comment [r6]: Inaccurate statement. Recommend deletion. Failure of Jocassee Dam was considered and determined to NOT be credible during initial licensing of ONS.

Comment [r7]: Redact; reference is controlled as security sensitive.

Comment [r8]: Redact; Links Jocassee Dam failure to an "event" at the Oconee Nuclear Station. Meets criteria for protection that Duke has used for related correspondence.

Comment [r9]: Redact; reference is controlled as security sensitive.

Comment [r10]: Redact; reference is controlled as security sensitive.

Comment [r11]: Redact; Links Jocassee Dam failure to an "event" at the Oconee Nuclear Station. Meets criteria for protection that Duke has used for related correspondence.

Comment [r12]: Added for completeness.

Comment [r13]: Inaccurate: SSF is alternate AC, not emergency AC. Roadmap: ONS UFSAR Section 9.6.1

Comment [r14]: Redact; reference is controlled as security sensitive.

Comment [r15]: Redact; reference is controlled as security sensitive.

Comment [r16]: Inaccurate: SSF is used to mitigate a station blackout (loss of normal and emergency AC). Roadmap: TS 3.10.1 Bases and ONS UFSAR Section 9.6

Comment [r17]: Redact; Links Jocassee Dam failure to an "event" at the Oconee Nuclear Station. Meets criteria for protection that Duke has used for related correspondence.

Comment [r18]: Inaccurate statement; recommend deletion. This condition was recognized during the 1994 NRC Service Water Inspection at ONS. An Inspector Followup Item was opened and subsequently closed by the NRC in 12/1994. Roadmap: NRC Inspection Report 50-269, 270, and 287/93-29, dated 2/11/1994, and NRC Inspection Report 50-269, 270, and 287/94-31, dated 12/19/1994.

Comment [r19]: Added for completeness. Roadmap: NRC Confirmatory Action Letter, CAL 2-10-003, dated June 22, 2010. NRC Inspection Report dated 7/7/2010.

the Oconee Nuclear Station yard resulting from failure of Jocassee Dam was 4.71ft. In 1984, the licensee constructed a 5-foot high floodwall to protect the Standby Shutdown Facility as a mitigation risk reduction measure (Duke 2008, att 1, p. 7).

Comment [r20]: Inaccurate; changed to match reference.

Comment [r21]: Redact; reference is controlled as security sensitive.

In 1992, Duke Energy Corporation performed an inundation study at the request of the Federal Energy Regulatory Commission. ~~The goal of the study was to evaluate the downstream effects of failure of Jocassee Dam under the "worst possible conditions" for inclusion in the emergency action plans of the hydroelectric facilities located downstream of Jocassee Dam.~~ The purpose of the study was to determine the worst possible case flooding in downstream reservoirs for inclusion in the Emergency Action Plans (EAPs) for these hydro-electric facilities. The study evaluated two conditions – a "sunny-day" break under normal operating conditions and a break during a probable maximum flood (PMF) event. The licensee considered both modes to be "not credible" and emphasized that the goal of the study was not to credibly compute flood levels at Oconee Nuclear Station (Duke 2008, att 2, p. 3,4). Instead, the inputs and assumptions used in the analysis were conservatively selected with the goal of computing bounding flood levels for use in the emergency action plans (Duke 2008, att 2, p. 8). The conditions assumed under the 1992 study resulted in postulated flood heights in the station yard in excess of the 5 feet estimated under the 1983 study (Duke 2008, att 1, p. 8, USNRC 2006a) and consequently above the flood protection elevation of the Standby Shutdown Facility. Studies that are more recent have also computed flood heights that exceed the flood protection elevation of the Standby Shutdown Facility (Duke 2009, Duke 2010). The following timeline (which begins with dam failure) is an excerpt from a Duke letter, which is based on results of the 1992 study:

Comment [r22]: Inaccurate statement. Should be changed to the following: The purpose of the study was to determine the worst possible case flooding in downstream reservoirs for inclusion in the Emergency Action Plans (EAPs) for these hydro-electric facilities. Roadmap: 9/26/2008 Duke Response to 10 CFR 50.54(f) NRC Information Request Letter

Comment [r23]: Redact: References to the 2008 Duke submittal need to be redacted. The document is controlled as security sensitive. Links Jocassee Dam failure to an "event" at the Oconee Nuclear Station. Meets criteria for protection that Duke has used for related correspondence. In addition, this information is not relevant. It has been superseded by the inundation analysis approved by the NRC in the January 28, 2011 SER.

Comment [r24]: Redact; reference is controlled as security sensitive. Identifies flooding impact to safety related SSCs.

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..... This paragraph contains security sensitive information and has been redacted citing 10 CFR
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..... (Duke 2008, att 2, p.10)

The above timeline assumes that Oconee Nuclear Station is notified at the same time the dam fails. The licensee considers this assumption to be conservative because the plant expects notification before the dam fails (the dam is monitored 24 hours a day, 7 days a week). The licensee notes that the above timeline does not account for the recession of floodwaters, which is postulated to occur 10 hours following dam failure (5 hours following onset of flooding at the site) (Duke 2008, att 2, p.10).

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In the Oconee Nuclear Station IPEEE submittal (ONS 1995, p.5.27), the licensee estimates that the conditional core damage frequency resulting from flooding due to failure of the Jocassee Dam is [REDACTED] (ONS 1995, p. 5-27). The contribution to core damage frequency from precipitation-induced external flooding is considered negligible (ONS 1995, p. 5-18). The licensee notes that this external flood core-damage frequency is of the same magnitude as other severe accident events (e.g., earthquakes, fires). Consequently, in the IPEEE, the licensee concluded that external flooding does not pose severe accident vulnerability (ONS 1995, p. 5-27).

The aforementioned estimate of conditional core-damage frequency is based on an estimate (made by the licensee) that the probability of a random failure of Jocassee Dam is [REDACTED] (ONS 1995, p. 5-21). This failure rate includes failures due to seepage, embankment slides, and structural failure of the foundation or abutments. It does not include failures due to earthquakes or overtopping (ONS 1995, p.5-21). In 2010, NRC staff produced a report that estimates a typical dam failure rate for large rock fill dams similar to the Jocassee Dam to be [REDACTED] (USNRC 2010c). This NRC estimate is an order of magnitude larger than the estimate reported in the Oconee Nuclear Station IPEEE submittal. The database used by NRC staff to calculate the estimated failure rate includes failures due to overtopping, internal erosion, and settlement. Due to a lack of earthquake-induced failures affecting dams with characteristics similar to Jocassee Dam, the database does not contain failures due to seismic events.

As illustrated above, several uncertainties exist with regard to the risk posed to Oconee Nuclear Station due to upstream dam failure. In particular, uncertainty exists about the flood levels at the site that would result from failure of Jocassee Dam. Moreover, hazard due to external flooding was "screened out" in the IPEEE based on a sufficiently small contribution to core damage frequency as calculated at the time. However, uncertainty exists about the appropriate probability of dam failure that should be used in computing the contribution of external flooding to core damage frequency. This is illustrated by the disparate results of the separate analyses described above that differ by an order of magnitude in estimating the probability of failure of Jocassee Dam.

Comment [r26]: This statement is inaccurate. The risk value quoted is not for a dam similar to Jocassee Dam. Specifically, Jocassee Dam is not similar to most other large rock fill dams in that it was seismically designed and built, the spillway and the penstocks do not go through the dam, it has substantial freeboard, it is beyond the period for infant failure, and it has enhanced monitoring. Also, this study has not been referenced in correspondence relative to the external flood issue at ONS by NRC or Duke Energy.

Comment [r27]: This information is inaccurate based on its age. It does not incorporate conclusions from the inundation analysis approved by the NRC in the January 28, 2011 SER. Specifically risk from seismic and overtopping was concluded to be not credible. No discussion of risk should be included in a discussion of the Oconee Nuclear Station section of the screening analysis. The Jocassee Dam failure external flood issue was required to be addressed deterministically. As such, NRC/Duke interactions regarding the ONS issue specifically excluded discussion of risk insights.

References

Duke. "Duke Energy presentation to USNRC: Oconee Nuclear Station External Flood NRC Technical Meeting (Oct. 28, 2009)." ADAMS Accession No. ML093080034 (Not publically available), 2009.

Duke. "Letter from Duke Energy to USNRC: Oconee External Flood, Response to Request for Additional Information (March 5, 2010)." ADAMS Accession No. ML103430047 (Not publically available), 2010.

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Duke. "Letter from Duke Energy to USNRC: Response to NRC Letter from Joseph G. Gutter to Dave Baxter, "Information request pursuant to 10 CFR 50.54(f) related to external flooding, including failure of the Jocassee Dam, at Oconee Nuclear Station (Sept. 26, 2008)." ADAMS Accession No. ML082750106 (Not publically available), 2008.

ONS. "Oconee Nuclear Station IPEEE Submittal Report." 1995.

ONS. "Oconee Nuclear Station Updated Final Safety Analysis Report, Revision 18." (Not publically available), 2009.

USNRC. "Generic Failure Rate Evaluation for Jocassee Dam." ADAMS Accession No. ML100780084 (Not publically available), 2010c.

USNRC. "Letter from USNRC to Duke Energy: Evaluation of Duke Energy Carolinas, LLC (Duke) September 28, 2008, Respnse to NRC Letter Dated August 15, 2008, Related to External Flooding at Oconee Nuclear Stations, Units 1, 2, and 3 (April 30, 2009)." ADAMS Accession No. ML090570779 (Not publically available), 2009.

USNRC. "Letter from USNRC to Duke Energy: Oconee Nuclear Station - Integrated Inspection Report 05000269/2006002, 05000270/2006002, 05000287/2006002 (April 28, 2006)." http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/REPORTS/oco_2006002.pdf (accessed May 24, 2011), 2006a.

USNRC. "Oconee Nuclear Station - NRC Inspection Report 05000269/2006016, 05000270/2006016, AND 05000287/2006016; Preliminary White Finding." ADAMS Accession No. ML080780143, 2006b.

Comment [r28]: Redact. The format of the references does not allow comments on individual references. All references that are not publicly available should be redacted. They are controlled as security sensitive.

ENCLOSURE 2

Duke Energy's Recommended Complete replacement for the Oconee Nuclear Station Section of NRC's Screening Analysis Report

1. Oconee Nuclear Station

Oconee Nuclear Station (ONS) is located about 30 miles west of Greenville, South Carolina. The site is downstream from Jocassee Dam and adjacent to Keowee Dam. Jocassee Dam is located approximately 11 miles upstream of Oconee Nuclear Station (ONS 2009, p. 2.4-1). The full pond elevation of the water retained by Jocassee Dam is about 300 feet above Lake Keowee, which is retained by the Keowee Dam and the Little River Dam. The Oconee Nuclear Station has a yard grade that is a few feet below the full pond level of Lake Keowee (ONS 1995, p. 5-19).

Comment [r29]: Changed to match language in UFSAR, page 2.4-1.

Comment [r30]: Added to match language in the UFSAR, page 2.4-1.

The current licensing basis for Oconee Nuclear Station was not required to address the impact of failure of Jocassee Dam when calculating potential flood levels at the site. The Jocassee Dam was built as part of the same project (the Keowee Toxaway Project) as Oconee Nuclear Station. As such, natural phenomena criteria were included in the design and construction of the Jocassee Project. As addressed in the Oconee Nuclear Site Updated Final Safety Analysis Report, the Jocassee Dam was built to the Oconee Nuclear Site seismic criteria and with sufficient design features (spillway capacity and freeboard) to avoid overtopping during a maximum hypothetical precipitation scenario. Therefore, it was concluded that the design of the Jocassee project had adequate margins to contain and control floods, posing no risk to the nuclear site.

Comment [r31]: Roadmap - UFSAR, page 2.4-4.

Comment [r32]: Roadmap - UFSAR, page 2.4-3

Comment [r33]: Roadmap - UFSAR, page 2.4-3

In 1992, Duke Energy Corporation performed an inundation study at the request of the Federal Energy Regulatory Commission. The purpose of the study was to determine the worst possible case flooding in downstream reservoirs for inclusion in the Emergency Action Plans (EAPs) for the hydro-electric facilities downstream of Jocassee. The study evaluated two conditions - a "sunny-day" break under normal operating conditions and a break during a probable maximum flood (PMF) event. The licensee considered both modes to be "not credible" and emphasized that the goal of the study was not to credibly compute flood levels at Oconee Nuclear Station. Instead, the inputs and assumptions used in the analysis were conservatively selected with the goal of computing bounding flood levels for use in the downstream hydro-electric facility Emergency Action Plans.

Comment [r34]: Revised to match language in reference. 9/26/08 50.54(f) response, Att 1 page 3.

Duke Energy's position has been that external flooding from causes other than Probable Maximum Precipitation at the Oconee Nuclear Station site has been considered a beyond design basis event and managed as a risk assessment issue. In a 2009 letter, the NRC

Comment [r35]: Revised to match language in reference. 9/26/08 50.54(f) response, Att 1 page 7 and to remove reference to Jocassee Dam Failure to allow public disclosure.

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established a position that external flooding from another cause is a credible event and needs to be addressed deterministically. Further, the NRC indicated that Duke Energy has not demonstrated that the Oconee Nuclear Station units will be adequately protected, resulting in ongoing regulatory activity related to Oconee Nuclear Station.

Comment [r36]: Revised to remove reference to Jocassee Dam failure to allow public disclosure.

The licensee has developed a corrective action plan, including the implementation of interim compensatory measures. The interim actions have been inspected by the NRC with no findings identified. The licensee has begun physical modifications at the Oconee Nuclear Station site to deterministically address external flooding.

Comment [r37]: Roadmap: NRC Confirmatory Action Letter, CAL 2-10-003 dated June 22, 2010.

Comment [r38]: Roadmap: NRC Inspection Report dated 7/7/2010

Comment [r39]: Revised to remove reference to Jocassee Dam failure to allow public disclosure.

2. References

ONS. "Oconee Nuclear Station IPEEE Submittal Report." 1995.

ONS. "Oconee Nuclear Station Updated Final Safety Analysis Report, Revision 18." 2009.

USNRC. "Letter from USNRC to Duke Energy: Evaluation of Duke Energy Carolinas, LLC (Duke) September 28, 2008, Response to NRC Letter Dated August 15, 2008, Related to External Flooding at Oconee Nuclear Stations, Units 1, 2, and 3 (April 30, 2009)." ADAMS Accession No. ML090570779 (Not publically available), 2009.