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U. S. Nuclear Regulatory Commission

Attn: Document Control Desk Washington, D. C. 20555-0001

Subject:

Duke Energy Carolinas, LLC

Oconee Nuclear Station, Units 1, 2, and 3

Renewed Facility Operating Licenses Numbers DPR-38, -47, and -55;

Docket Numbers 50-269, 50-270, and 50-287;

Proposed License Amendment Request to Revise the Oconee Nuclear Station Current Licensing Basis for HELB events outside of the Containment Buildings;

License Amendment Request No. 2008-005

## References:

- 1. Letter to Mr. James Dyer, Director, Office of Nuclear Reactor Regulation, from Henry B. Barron, Group Vice President and Chief Nuclear Officer, Nuclear Generation, Duke Energy Corporation, "Tornado/HELB Mitigation Strategies and Regulatory Commitments," dated November 30, 2006.
- 2. Letter from Leonard N. Olshan, Project Manager, Plant Licensing Branch II-1, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation, "Summary of March 5, 2007, Meeting to Discuss the November 30, 2006, Letter Regarding Oconee High-Energy Line Break (HELB) and Tornado Mitigation Strategies," dated March 28, 2007.
- 3. Letter from Leonard N. Olshan, Project Manager, Plant Licensing Branch II-1, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation, "Summary of March 20, 2007, Meeting to Discuss Oconee High-Energy Line Break (HELB) Mitigation Strategy," dated April 3, 2007.
- 4. Letter from Timothy J. McGinty, Deputy Director, Division of Operating Reactor Licensing, USNRC Office of Nuclear Reactor Regulation, to Bruce H. Hamilton, Oconee Nuclear Station, Units 1, 2, and 3 (Oconee) Tornado and High-Energy Line Break (HELB) Mitigation Strategies, dated May 15, 2007.
- 5. Letter to the U. S. Nuclear Regulatory Commission from Henry B. Barron, Group Vice President and Chief Nuclear Officer, Nuclear Generation, Duke Energy Corporation, "Revision to Tornado/HELB Mitigation Strategies and Regulatory Commitments," dated January 25, 2008.

In accordance with 10 CFR 50.90, Duke Energy Carolinas, LLC (Duke) proposes to amend Renewed Facility Operating License Nos. DPR-38, -47, and -55. This License Amendment

400/ NRR Request (LAR) will result in a complete revision of the Oconee Nuclear Station (ONS) Current Licensing Basis (CLB) in regard to mitigating High Energy Line Break (HELB) events occurring outside of containment.

The proposed changes are the result of an extensive and comprehensive HELB analysis and include several plant modifications necessary to support the revised HELB Licensing Basis (LB). Included in the proposed changes is a revised ONS HELB report that replaces the existing HELB report, MDS Report No. OS-73.2 and its supplements dated April 25, 1973, June 22, 1973, and March 12, 1974, respectively. For this LAR, the ONS Unit 1 portion of the existing HELB report is superseded by Oconee Nuclear Station Report ONDS-351, "Analysis of Postulated High Energy Line Breaks (HELBs) Outside of Containment," that contains the updated methodology and mitigation strategy. However, the existing HELB report (MDS OS-73.2) will remain credited until the ONDS-351 report has been fully implemented, including the incorporation of proposed modifications. The HELB analyses for Units 2 and 3 will be submitted for Staff review and approval in subsequent LARs, currently scheduled for December 2008, and June 2009, respectively.

The enclosed HELB report includes Safe Shutdown Analyses for HELBs postulated throughout the plant. Those analyses credit normal plant equipment, the SSF, and the new Protected Service Water (PSW) system to achieve safe shutdown. However, ongoing safety analysis work is in progress relative to operation of the Standby Shutdown Facility (SSF) with a compromised main steam pressure boundary due to potential breaks in the main steam system and other HELBs. This analysis will be completed and submitted by the issuance of the Unit 3 revision of the HELB study.

The LAR also includes a Technical Specification (TS), TS BASES, and Updated Final Safety Analysis Report (UFSAR) section for the new Protected Service Water (PSW) System as well as a revision to the current UFSAR HELB section. Attachment 1 and Reference 5 contain a list of regulatory commitments made as a result of this LAR. Attachments 2 and 3 provide the marked-up and reprinted TS and UFSAR pages. A technical evaluation of the proposed changes is contained in Enclosure 2, and the revised ONS HELB report is included in Enclosure 3.

As described herein, the revised ONS HELB LB is based on the plant configuration that will exist after implementation of several modifications to the site as described in previous correspondence with the Staff and in this LAR (Ref.: 1, 2, 3, 4 and 5). Accordingly, implementation of the revised HELB LB will be integrated with the completion of those associated plant modifications. As part of modification implementation, certain emergency procedures, pertaining to HELB mitigation, will be revised to include the use of the new systems and methodology.

As noted in the commitment table, the eventual completion for some of the proposed HELB modifications will be contingent upon the staff's approval of the revised HELB methodology. Duke requests approval of this amendment by July 2009, with an extended implementation period in accordance with the listing of commitments given in Attachment 1 and Reference 5.

The specific actions that Duke will be implementing have been selected and prioritized based upon a thorough assessment of operational, risk and safety benefits, as well as regulatory considerations and resource requirements. These actions will require a significant investment of resources by Duke and are intended to resolve outstanding HELB LB issues. Duke believes these actions collectively represent the most appropriate use of resources to enhance safety and resolve regulatory issues. Implementation of the revised HELB LB and the related commitments will revise the HELB CLB to address issues raised by the NRC and to collectively enhance the station's overall design, safety and risk margin.

In accordance with Duke administrative procedures that implement the Quality Assurance Program Topical Report, these proposed changes have been reviewed and approved by the Plant Operations Review Committee and Nuclear Safety Review Board. A copy of this LAR is being sent to the State of South Carolina in accordance with 10 CFR 50.91 requirements.

Inquiries on this proposed amendment request should be directed to Stephen C. Newman of the Oconee Regulatory Compliance Group at (864) 885-4388.

Very sincerely yours,

Dave Baxter, Vice President,

Oconee Nuclear Site

## Enclosures:

- 1. Notarized Affidavit
- 2. Evaluation of Proposed Changes
- 3. ONDS-351, "Analysis of Postulated High Energy Line Breaks (HELBs) Outside of Containment"

## Attachments:

- 1. List of Regulatory Commitments
- 2 TS/TS Bases/UFSAR Marked-Up Pages
- 3. TS/TS Bases/UFSAR Reprinted Pages

## bc w/enclosures and attachments:

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bc w/enclosures and attachments (continued):

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