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January 26, 2012

Mr. Victor McCree, Regional Administrator
U. S. Nuclear Regulatory Commission - Region II
Marquis One Tower
245 Peachtree Center Ave., NE, Suite 1200
Atlanta, Georgia 30303-1257

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;
ONS Standby Shutdown Facility and Bus Duct Studies

Dear Mr. McCree:

Duke Energy Carolinas, LLC (Duke Energy) is performing a comprehensive design, licensing, and operational review of the Oconee Nuclear Station Standby Shutdown Facility (SSF). The goal of this review is to ensure that systems, structures, and components associated with the SSF functions are capable of performing their design function. Development of the detailed project plan is ongoing. It will include a description of the project scope, processes, resources, key interim milestones, and schedule. This plan will be completed and provided no later than February 17, 2012.

The SSF review will be more comprehensive than past component design basis inspections and Duke Energy internal self-assessments. While these efforts typically included a wide spectrum of system-related documents, the intent of this work is to do a complete top-to-bottom review of the SSF, tracing the licensing and design basis of the SSF through to each implementing document (e.g., calculations, specifications, and procedures). Thus, the project is similar to a reconstitution effort. As the project progresses, interim milestone deliverables will be made available for NRC review.

Independent from the SSF comprehensive review, Duke Energy is evaluating modifications and/or procedure changes to reduce core damage frequency associated with bus duct faults. This evaluation will be completed and available for your inspection no later than July 12, 2012.

Descriptions of both projects are provided in the enclosure. If there are any questions regarding this submittal, please contact Kent R. Alter of the ONS Regulatory Compliance Group at (864) 873-3255.

Sincerely,

TPGillespie

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

Enclosure: Duke Energy Descriptions of Comprehensive Standby Shutdown Facility Design, Licensing and Operational Review Project and Bus Duct Risk Reduction Study

A001
NRR

cc w/Enclosure:

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ENCLOSURE

Duke Energy Descriptions of Comprehensive Standby Shutdown Facility Design, Licensing and Operational Review Project and Bus Duct Risk Reduction Study

Comprehensive Standby Shutdown Facility Design, Licensing and Operational Review Project

The SSF review will be a top-to-bottom review, encompassing the licensing and design basis of the SSF through to each implementing document (e.g., calculations, specifications, procedures) starting from the initial licensing efforts. Thus, the project is similar to a complete design reconstitution effort.

This review will be broadly based with a focus on:

- A comprehensive approach that encompasses SSF design bases
- Credited functions that will be matrixed and analyzed
- A high degree of independence and regulatory focus, and
- Not using reduction of risk relevance as a criterion for what is reviewed.

This review will go beyond the sampling process used during NRC inspections. This effort will be a comprehensive review of the design and licensing basis, maintenance and operational implementation, and appropriate implementation of corrective actions for internal and external operating experience (OE). Review emphasis will be on reasonable assurance that the SSF can perform its intended safety functions, i.e., determining if there are deficiencies that could defeat or encumber the ability of the SSF to perform its intended safety function under design basis conditions. To determine what functions need to be performed and when, a matrix will be constructed of SSF functions versus licensing and design basis events. This will determine which systems and components need to perform their intended functions and under what conditions.

Using the industry standard configuration management model, a consistency comparison will be made between the licensing and design basis requirements, and the existing plant configuration.

The comprehensive design, licensing and operational review is intended to accomplish the following outcomes:

- Review and confirmation of the licensing basis
- Review and confirmation of the existence and adequacy of the design bases documentation, including the safety classifications of SSCs
- Review and confirmation that the actual plant configuration is in conformance with the licensing and design basis
- Review of and confirmation of test and maintenance records to confirm the adequacy of testing in determining performance capability under the applicable design basis conditions
- Review and confirmation of emergency, abnormal, and normal operating procedures, specifically with respect to manual actions required for design basis scenarios

- Review and confirmation of the adequacy and completeness of training packages related to the SSF
- Review of Oconee and relevant industry operating experience records to ensure that applicable SSF issues were properly captured and dispositioned in Duke Energy's corrective action programs.

A project approach is being used to structure the review effort. Independence and objectivity of the review project will be accomplished by having a team led by and primarily comprised of non-Duke Energy, independent industry experts to perform the work.

A detailed project plan and schedule are currently being developed for the Comprehensive Design, Licensing and Operational Review of the SSF. This includes the identification of milestones and products. A phased approach is being used to perform the review. This allows for scope evolution as initial project activities are performed. A completion date for the project will be determined when the detailed planning is complete. As the project progresses, interim milestone deliverables will be made available for NRC review.

Bus Duct Risk Reduction Study

Duke Energy is committed to identify and implement changes to reduce plant risks associated with turbine building bus duct faults. The first phase of this effort is to investigate how the risk associated with High Energy Arcing Faults as an initiating event requiring use of the standby shutdown facility (SSF) can be reduced. This study will consider the following elements in investigating the risk reduction and consequences associated with High Energy Arcing Faults:

- Assess the reliability of the ONS bus duct with respect to High Energy Arcing Faults
- Evaluate the feasibility of protecting the cables under the bus duct from the consequences of a High Energy Arcing Fault
- Evaluate the feasibility of physically separating the cables that are driving the PRA risk associated with a postulated High Energy Arc Fault in the bus duct
- Evaluate replacing/modifying the existing Main Feeder Bus Ducts with welded bus ducts
- Evaluate further improvements to our Main Feeder Bus Maintenance Strategy.

The date for completing this study is July 12, 2012. This study will be incorporated into a final report defining the options selected and providing the detailed implementation plan and schedule.