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May 31, 2009

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Subject: Duke Energy Carolinas, LLC
Oconee Nuclear Station, Units 1, 2, and 3
Docket Numbers 50-269, 50-270, and 50-287
Additional Information regarding Modifications in support of License Amendment Request to adopt NFPA 805 Performance-Based Standard for Fire Protection for Light Water Reactor Generating Plants (2001 Edition)
License Amendment Request (LAR) 2008-01

In accordance with 10 CFR 50.90, Duke Energy Carolinas, LLC (Duke) proposes to amend Renewed Facility Operating Licenses (FOLs) Nos. DPR-38, DPR-47, and DPR-55. This LAR requests Nuclear Regulatory Commission (NRC) review and approval for adoption of a new fire protection licensing basis which complies with the requirements in 10 CFR 50.48(a), 10 CFR 50.48(c), and the guidance in Regulatory Guide (RG) 1.205. The LAR follows the guidance provided in Nuclear Energy Institute (NEI) 04-02. The LAR was submitted to the NRC on October 31, 2008.

Enclosure 2 of the LAR contains the Transition Report (TR). Attachment S of the TR contains a list of proposed plant modifications, studies, and evaluations to support transitioning to the new fire protection licensing basis. Duke committed to provide a letter to the NRC specifying the specific elements of the modifications, studies, and evaluations listed in Attachment S of the TR along with a committed schedule by May 31, 2009. Enclosure 1 to this submittal contains the following: Modification scoping and commitment dates for the Wall upgrades; an update for the Information Notice (IN) 92-18, Potential For Loss Of Remote Shutdown Capability During a Control Room Fire, motor operated valve study; an update regarding necessity and scoping of other potential modifications to address variances from the deterministic; and modifications that will be removed from Attachment S of the TR, either due to no risk benefit or a change evaluation being performed. Study and scoping details regarding the IN 92-18 MOV study and other modifications to address variances from the deterministic will be provided in the responses to the requests for additional information as discussed in the meeting between Duke and the NRC on May 13-14, 2009.

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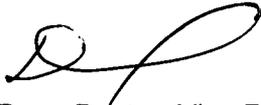
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Commitments for the scoped modifications and completion of the IN 92-18 valve study and the evaluation and scoping for other potential resolutions to address variances from the deterministic are provided in Attachment 1.

If there are any questions regarding this submittal, please contact Reene' Gambrell at (864) 873-3364 or David J. Goforth at 704-382-2659.

I declare under penalty of perjury that the foregoing is true and correct. Executed on May 31, 2009.

Sincerely,

A handwritten signature in black ink, appearing to be 'Dave Baxter', written in a cursive style.

Dave Baxter, Vice President
Oconee Nuclear Station

Enclosures:

1. Additional Information Regarding Modifications in Support of NFPA-805

Attachments:

1. Commitments

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Enclosure 1

**ADDITIONAL INFORMATION REGARDING MODIFICATIONS IN
SUPPORT OF NFPA-805**

ENCLOSURE 1

ADDITIONAL INFORMATION REGARDING MODIFICATIONS IN SUPPORT OF NFPA-805

BACKGROUND:

Attachment S, Plant Modifications of the Transition Report was submitted as Enclosure 2 of the NFPA 805 License Amendment Request (LAR) dated 10/31/08. In the LAR, Duke Energy Carolinas, LLC (Duke) committed to provide the specific elements of the modifications, studies, and evaluations listed in Attachment S by May 31, 2009. This enclosure provides the following information: Modification scoping and commitment dates for the Wall upgrades; an update for the Information Notice (IN) 92-18, Potential For Loss Of Remote Shutdown Capability During a Control Room Fire, study; an update regarding necessity and scoping of other potential resolutions to address variances from the deterministic; and modifications that will be removed from Attachment S of the TR, either due to no risk benefit or a change evaluation being performed. All of these are discussed below.

A revised Attachment S, Plant Modifications, will be provided in responses to the requests for additional information as discussed in the meeting between Duke and the NRC on May 13-14, 2009. Commitments are provided in Attachment 1.

For the purpose of this letter, the modifications have been divided into the following three categories:

- Modifications added for risk reduction
- Modifications added to bring the plant into deterministic compliance
- Other potential resolutions to address variances from the deterministic

The determination of necessity and scoping for other potential resolutions that will address variances from the deterministic is not complete. Details are provided below.

Risk Reduction Modifications

The following modifications have been added for risk reduction:

Protected Service Water (PSW)

PSW scoping details were provided in the Tornado Mitigation/High Energy Line Break (HELB) letters to the NRC dated June 26, 2008 (ML081840371 and ML081910559).

This modification, along with the Turbine Building/Auxiliary Building (TB/AB) wall upgrade, will address current balance of plant (BOP) susceptibility to a Turbine Building fire that can challenge safe shutdown. The TB/AB wall upgrade will allow the TB and the AB to be separated into 2 fire areas. In the event of a TB Fire, PSW will remain unaffected and can be used as part of the mitigation strategy. The PSW modification will also allow an overall risk reduction which will allow self approval moving forward. Additional details related to this modification will be provided in the responses to the requests for additional information as

discussed in the meeting between Duke and the NRC on May 13-14, 2009. The PSW modification was previously committed to be implemented in December, 2010.

Main Steam Isolation Valves (MSIV)

The MSIV scoping details were provided to the NRC in the Tornado Mitigation/HELB letters dated June 26, 2008 (ML081840371 and ML081910559).

This modification will address the necessity of manually isolating Main Steam Branch Valves within 10 minutes upon verification of a fire which could affect all three units. It will also allow the 3TC/TD cable re-route to be removed from the modification listing. See the discussion on modifications removed from Attachment S provided below. Additional details related to this modification will be provided in the responses to the requests for additional information as discussed in the meeting between Duke and the NRC on May 13-14, 2009. The MSIV modifications were previously committed to be implemented on Unit 1 in December, 2012, Unit 2, December 2014, and Unit 3, December 2013.

Deterministic Compliance Modifications

The following modifications were added to bring the plant into Deterministic Compliance:

- Turbine Building/Auxiliary Building Wall upgrade to a 3-hour barrier
- Purge Inlet Room/Auxiliary Building Wall upgrade to a 3-hour barrier
- U1/2 Blockhouse Tornado Vent Dampers

Scoping for these modifications is discussed below:

Turbine Building/Auxiliary Building Wall upgrade to a 3-hour barrier

All Units Turbine Building/Auxiliary Building (TB/AB) walls from floor elevations 796'-0" – 822'-0" will be upgraded to a full 3-hour rating. This upgrade will allow the current balance of plant (BOP) fire area to be divided into separate Auxiliary and Turbine Building Fire Areas; thereby, making operator manual actions (OMAs) feasible.

Currently the walls and electrical penetrations are acceptable to meet the 3-hour requirement; however, some of the mechanical, HVAC ducts and sealed penetrations do not meet the 3-hour requirement.

These penetrations will be upgraded to meet the approved 3-hour requirement per specifications.

The Unit 1 TB/AB Wall areas are located in the Auxiliary Building north of Unit 1 Cable Room, Unit 1 East Penetration Room, Unit 1 and 2 Control Room and Unit 1 Equipment Room. The Unit 2 TB/AB Wall areas are located in the Auxiliary Building between Unit 2 and Unit 3 Cable Rooms, Unit 2 and Unit 3 East Penetration Rooms, Unit 1/2 and Unit 3 Control Rooms and Unit 2 and Unit 3 Equipment Rooms. The Unit 3 TB/AB Wall areas are located in the Auxiliary Building south of the Unit 3 Cable Room, Unit 3 East Penetration Room, Unit 3 Control Room and Unit 3 Equipment Room.

These modifications will be completed on Unit 1, June 30, 2013, Unit 2, February 29, 2012, and Unit 3, October 31, 2012.

Purge Inlet Room/Auxiliary Building Wall upgrade to a 3-hour barrier

Unit 1 West Penetration Fire Area has been expanded to include additional wall surfaces: The Unit 1 and 2 Spent Fuel Receiving Area north wall from ground level to the ceiling and the wall separating the Unit 1 and 2 Spent Fuel Pool to the Unit 1 Purge Inlet Room.

Unit 2 West Penetration Fire Area has been expanded to include additional wall surfaces: The Hot Machine Shop old section south wall and the wall separating the Unit 1 and 2 SFP to the Unit 2 Purge Inlet Room.

Unit 3 West Penetration Fire Area has been expanded to include additional wall surfaces: The wall separating the Unit 3 SFP to the Unit 3 Purge Inlet Room.

Currently all three Unit's walls meet the 3-hour requirement; however the wall penetrations do not meet the 3-hour requirement.

Penetrations will be upgraded to meet the approved 3-hour requirement per specifications.

These modifications will be completed on Unit 1, October 31, 2013, Unit 2, February 28, 2014, and Unit 3, June 30, 2014.

Unit 1 and 2 (U1/2) Blockhouse Tornado Vent Dampers

The U1/2 Blockhouse concrete walls have been reviewed for adequacy as fire barriers. This review identified a vulnerability to a Unit 2 Main Step-up transformer fire. This type of fire may cause excessive heat/smoke to enter the U1/2 blockhouse through 6 tornado pressure relief openings. A passive feature has been recommended for installation over these pressure relief openings to minimize the amount of heat and smoke entering the U1/2 Blockhouse. The 6 tornado pressure relief openings are required to be 3-hour fire rated.

A sliding fire door or a 3-hour rated fire damper (single or multiple) will be installed over the 6 tornado pressure relief openings.

This modification will address complications caused by compartment interaction. This modification will be completed by June 30, 2012.

Other Potential Resolutions to Address Variances from the Deterministic

The following issues are being evaluated to determine what resolutions are required:

- Reactor Coolant Pumps (RCP(s)) spurious start and ability to ensure pump trip
- High Pressure Injection (HPI) pump spurious start and ability to ensure pump trip
- Spurious operation of the Reactor Coolant System (RCS) vent valves

Details will be provided in the responses to the requests for additional information as discussed in the meeting between Duke and the NRC on May 13-14, 2009.

Studies

IN 92-18, Potential For Loss Of Remote Shutdown Capability During a Control Room Fire, states the following:

"IN 92-18 documents a licensee that discovered an unanalyzed condition regarding fire protection and the safe shutdown capability for the plant. The licensee found that a fire in the control room could cause hot shorts, i.e. short circuits between control wiring and power sources, for certain motor-operated valves (MOVs) needed to shut the reactor down and to maintain it in a safe shutdown condition. If a fire in the control room forces reactor operators to leave the control room, these MOVs can be operated from the remote/alternate shutdown panel. However, hot shorts, combined with the absence of thermal overload protection, could cause valve damage before the operator shifted control of the valves to the remote/alternate shutdown panel.

Thermal overload protection is absent for some valves. This configuration exists to ensure that the thermal overload protection does not prevent MOVs from performing their safety-related functions during an accident. As a result, the thermal overload protection is configured to be either continuously bypassed or bypassed only during an accident. Regulatory Guide (RG) 1.106, Revision 1, "Thermal Overload Protection for Electric Motors on Motor-Operated Valves," provides guidance in this area.

The hot short bypasses the push button that is normally used to close the MOV and thus provides power to the relay coil, which closes those contactors that provide power to drive the motor in the closed direction. Power will not be disconnected from the motor although it is stalled, because the same hot short bypasses the torque switch. With the motor stalled, current and torque are abnormally high, possibly causing the motor windings to fail and possibly causing mechanical damage to the valve. This mechanical damage may be sufficient to prevent reactor operators from manually operating the valve. A similar problem can occur for MOVs that are open. Shorts to other sources of power can also cause failure of MOVs."

IN 92-18 Status

Currently, Oconee is reviewing MOV information to determine specific actions needed to address IN 92-18 issues. Preliminarily, there are approximately 120 MOVs that may be affected. Once the initial review is complete, specific actions to eliminate IN 92-18 concerns can be identified. These results will be provided in the responses to the requests for additional information as discussed in the meeting between Duke and the NRC on May 13-14, 2009.

Modifications Removed From Attachment S

The following modifications will be removed from Attachment S:

Re-route of 3TD cable routed over 3TC – Originally, the 3TC/3TD cable re-route modification was credited for maintaining one high pressure injection pump free of fire damage and reducing risk associated with an overcooling event. However, the MSIV modification

discussed above will mitigate an overcooling event and reduce base risk to a level that will allow self approval going forward.

Spurious closure of Letdown Storage Tank Outlet Valve, HP-23 – A spurious closure caused by a hot short of HP-23 will be addressed via a change evaluation that will be provided in the responses to the requests for additional information as discussed in the meeting between Duke and the NRC on May 13-14, 2009. There is still an IN 92-18 concern with this valve that will be resolved as part of the IN 92-18 study described above.

Loss of Instrument Air to West Penetration (WP) rooms – There is no significant risk benefit to be gained from this modification. Loss of Instrument Air to WP rooms will be addressed through the change evaluation process.

ATTACHMENT 1
REGULATORY COMMITMENTS

Attachment 1
Regulatory Commitments

The following table identifies the regulatory commitments in this document. Any other statements in this submittal represent intended or planned actions. They are provided for information purposes and are not considered to be regulatory commitments.

Commitment	Due Date
Protected Service Water Modification – Refer to Tornado/HELB Mitigation Strategies and Regulatory Commitments letter dated 11/18/08.	December, 2010
Main Steam Isolation Valves - Refer to Tornado/HELB Mitigation Strategies and Regulatory Commitments letter dated 11/18/08. This modification will address the susceptibility to a three unit event due to the necessity of isolating Main Steam Branch Valves within 10 minutes upon verification of a fire.	Unit 1, December, 2012 Unit 2, December, 2014 Unit 3, December, 2013
Turbine Building/Auxiliary Building Wall upgrade to a three hour fire barrier.	Unit 1, June 30, 2013 Unit 2, February 29, 2012 Unit 3, October 31, 2012
Purge Inlet Room/Auxiliary Building Wall upgrade to a three hour fire barrier.	Unit 1, October 31, 2013 Unit 2, February 28, 2014 Unit 3, June 30, 2014
U1/2 Blockhouse Tornado Vent dampers – Upgrade 6 tornado pressure relief opening to be three hour fire rated barrier.	June 30, 2012
RCPs spurious start and ability to ensure pump trip – Scoping is not complete.	To be provided in RAI response
HPI Pressure pump spurious start and ability to ensure pump trip – Scoping is not complete.	To be provided in RAI response
Spurious operation of the RCS vent valves – Scoping is not complete.	To be provided in RAI response
IN 92-18 Study results	To be provided in RAI response
A revised TR, Attachment S, Plant Modifications	To be provided in RAI response