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10CFR50.4

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

**Subject:** First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses With Regard to Requirements for Mitigation Strategies for Beyond-Design-basis External Events (Order Number EA-12-049)

**References:**

1. NRC Order Number EA-12-049, Order Modifying Licensees With Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, dated March 12, 2012
2. NRC Interim Staff Guidance JLD-ISG-2012-01, Compliance With Order EA-12-049, Order Modifying Licensees with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events, Revision 0, dated August 29, 2012
3. NEI 12-06, Diverse and Flexible Coping Strategies (FLEX) Implementation Guide, dated August 2012
4. Duke Energy's Initial Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard To Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order EA-12-049), dated October 29, 2012
5. Oconee Nuclear Station Overall Integrated Plan in Response to March 12, 2012, Commission Order to Modify Licenses With Regard To Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order EA-12-049), dated February 28, 2013

On March 12, 2012, the NRC issued Order EA-12-049 (Reference 1) to Duke Energy. Reference 1 was immediately effective and directs Duke Energy to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities in the event of a beyond-design-basis external event.

Reference 1 required the submission of an Initial Status Report 60 days following issuance of the NRC's Interim Staff Guidance (Reference 2), and the submission of an Overall Integrated Plan by February 28, 2013. Reference 2 endorses, with clarifications and exceptions, the industry guidance document, NEI 12-06 (Reference 3). Duke Energy provided the Initial Status Report for Catawba, McGuire, and Oconee Nuclear Power Stations (Reference 4) on

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October 29, 2012 and the Overall Integrated Plan for Oconee Nuclear Station (Reference 5) on February 28, 2013.

Reference 1, Section IV, Condition C.2, also requires that status reports are to be submitted at six-month intervals, following the submittal of the Overall Integrated Plan. Reference 3 provides guidance for the status report content. This letter transmits Oconee's first six-month Status Report, which outlines the progress made since submittal of the Overall Integrated Plan.

This letter contains no new regulatory commitments.

If you have any questions regarding this report, please contact David Halle, Oconee Regulatory Affairs Group, at (864) 873-4742.

I declare under penalty of perjury that the foregoing is true and correct. Executed on August 29, 2013.

Respectfully submitted,



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Enclosure:

ONS - First Six-Month Status Report (Order EA-12-049), Units 1, 2, and 3.

xc:

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**ENCLOSURE**

**ONS - FIRST SIX-MONTH STATUS REPORT (ORDER EA-12-049)**

**UNITS 1, 2, AND 3**

**ENCLOSURE: ONS - FIRST SIX MONTH STATUS REPORT (ORDER EA-12-049)***(Note: The reference list for this Enclosure is contained in Section 8)***1. Introduction**

Oconee Nuclear Station (ONS) developed an Overall Integrated Plan (Reference A), documenting the diverse and flexible strategies (FLEX), in response to NRC Order EA-12-049 (Reference B). The Overall Integrated Plan was submitted to the NRC on February 28, 2013. This enclosure provides an update of milestone accomplishments including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any, that occurred during the period from February 28, 2013 to July 30, 2013 (hereafter referred to as "the update period").

**2. Milestone Accomplishments**

The following milestones were completed during the update period:

1. Submit Overall Integrated Plan – Complete.

**3. Milestone Schedule Status**

The following provides an update to Attachment 2 of the Overall Integrated Plan. It provides the activity status of each item, and whether the expected completion date has changed. The dates are planning dates subject to change as design and implementation details are developed.

The revised milestone target completion dates are not expected to impact the order implementation date.

<b>Milestone</b>	<b>Target Completion Date</b>	<b>Activity Status</b>	<b>Revised Target Completion Date</b>
Submit Overall Integrated Plan	Feb 2013	Complete	Date Not Revised
<b>Submit 6 Month Updates:</b>			
Update 1	Aug 2013	Started	Date Not Revised
Update 2	Feb 2014	Not Started	Date Not Revised
Update 3	Aug 2014	Not Started	Date Not Revised
Update 4	Feb 2015	Not Started	Date Not Revised
Update 5	Aug 2015	Not Started	Date Not Revised
Update 6	Feb 2016	Not Started	Date Not Revised
Update 7	Aug 2016	Not Started	Date Not Revised
<b>Modifications:</b>			
Develop Modifications	Aug 2016	Started	Date Not Revised
<b>Procurement:</b>			
Identify Significant Material/Equipment	Sept 2013	Started	Date Not Revised
Material/Equipment Procurement/Delivery	May 2015	Not Started	Date Not Revised

**ENCLOSURE: ONS - FIRST SIX MONTH STATUS REPORT (ORDER EA-12-049)**

*(Note: The reference list for this Enclosure is contained in Section 8)*

<b>Milestone</b>	<b>Target Completion Date</b>	<b>Activity Status</b>	<b>Revised Target Completion Date</b>
<b>Implementation Walkdowns:</b>			
Conduct N-1 Outage Walkdowns for U1	Nov 2014	Not Started	Date Not Revised
Conduct N-1 Outage Walkdowns for U2	Nov 2013	Not Started	Date Not Revised
Conduct N-1 Outage Walkdowns for U3	May 2014	Not Started	Date Not Revised
<b>Conduct Implementation Walkdowns for U1</b>			
Conduct Implementation Walkdowns for U1	Oct 2016	Not Started	Date Not Revised
Conduct Implementation Walkdowns for U2	Oct 2015	Not Started	Date Not Revised
Conduct Implementation Walkdowns for U3	April 2016	Not Started	Date Not Revised
<b>Staffing:</b>			
Conduct Staffing Analysis	July 2016	Started	Date Not Revised
<b>Training:</b>			
Develop U1 Training program	July 2016	Not Started	Date Not Revised
Develop U2 Training program	July 2015	Not Started	Date Not Revised
Develop U3 Training program	Jan 2016	Not Started	Date Not Revised
<b>Implement U1 Training</b>			
Implement U1 Training	Oct 2016	Not Started	Date Not Revised
<b>Implement U2 Training</b>			
Implement U2 Training	Oct 2015	Not Started	Date Not Revised
<b>Implement U3 Training</b>			
Implement U3 Training	April 2016	Not Started	Date Not Revised
<b>Procedures:</b>			
Develop FLEX Supporting Guidelines (FSGs)	June 2016	Not Started	Date Not Revised
Develop Maintenance Procedures	June 2016	Not Started	Date Not Revised
<b>Regional Response Centers:</b>			
Develop Strategies/Playbook with RRC	April 2015	Started	Date Not Revised
Install Offsite Delivery Pad	March 2015	Not Started	Date Not Revised
<b>Implementation:</b>			
Implement U1 Modifications	Nov 2016	Not Started	Date Not Revised
Implement U2 Modifications	Nov 2015	Not Started	Date Not Revised
Implement U3 Modifications	May 2016	Not Started	Date Not Revised

**ENCLOSURE: ONS - FIRST SIX MONTH STATUS REPORT (ORDER EA-12-049)***(Note: The reference list for this Enclosure is contained in Section 8)***4. Changes to Compliance Method**

No changes were made during the update period.

**5. Need for Relief/Relaxation and Basis for the Relief/Relaxation**

ONS expects to comply with the order implementation date and no relief/relaxation is required at this time.

**6. Open Items**

The following tables provide a summary status of the Open Items.

- Table 6a provides a status of the open items identified in the original submittal of the Overall Integrated Plan (Reference A).
- Table 6b provides a status of open items which were added after submittal of the Overall Integrated Plan.
- Table 6c will provide a status of open items to address the Draft Safety Evaluation.

**Table 6a: Open Items Documented in the Overall Integrated Plan.**

<b>Overall Integrated Plan Open Item</b>	<b>Status</b>
1- Revised PMP HMR51 Analysis	In Progress: 2.1 Flood Re-analysis Completed, Pending NRC Approval
2- Max flood level on site (after modifications)	In Progress: 2.1 Flood Re-analysis Completed, Pending NRC Approval
3- Deployment Path Program	Not Started
4- Procedures and FSGs	Not Started
5- FLEX Equipment Programmatic Control	Not Started
6- Personnel Training	Not Started
7- FLEX Basis Document	Not Started
8- Configuration Control	Not Started
9- Regional Response Center (RRC) Playbook	Started
10- Cooldown Analysis	Started
11- ADV Survivability and Accessibility	Not Started
12- Load Shed Analysis	Not Started
13- Hydraulic Analysis for Pump Flow (Intake Canal to SGs)	Not Started
14- Fuel Oil Consumption	Not Started
15- Hydraulic Analysis for Pump Flow (CTP-1 to SGs)	Not Started
16- Water in embedded CCW lines & Hydraulic Analysis for Pumping Configuration	Not Started
17- PSW Modification (EC 91877)	Started
18- Alternate FLEX Connections Modification (SG Makeup)	Started
19- Breaking Siphons in Embedded CCW Piping	Started

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<b>Table 6a: Open Items Documented in the Overall Integrated Plan.</b>	
<b>Overall Integrated Plan Open Item</b>	<b>Status</b>
20- Instrumentation Repower (Alternate Repower Strategy)	Started
21- FLEX Equipment Storage	Started
22- Portable Power Distribution (Primary Repower Strategy)	Started
23- Long term SG and SFP Makeup	Started
24- Hydrogen Buildup Analysis	Not Started
25- BWST Tap Analysis and Modification (RCS Makeup)	Started
26- Containment Analysis	Started
27- Hydraulic Analysis for Pump Flow (CTP-1 to SFPs & Intake Canal to SFPs)	Not Started
28- Robustness of SFP Refill Lines	Completed: Validated SFP Refill Lines are installed as QA-1 and are seismically robust (Reference C & D).
29- Lighting Evaluation	Not Started
30- Communication Assessment	Started
31- NEI 12-01 Staffing Study	Started
32- HVAC Analysis	Started

<b>Table 6b: Open Items added after February 28, 2013</b>	
<b>Overall Integrated Plan Open Item</b>	<b>Status</b>
33- Evaluate changes to the RCSMU FLEX Strategy recommended by independent audit to eliminate the SSF RCMUP repower strategy and implement train specific diesel powered pump strategies (primary and alternate).	Started
34- Evaluate changing the alternate repower FLEX strategy to enhance deployment times by utilizing a small 120 VAC portable diesel generator (approximately 6000 watts) deployed on the Turbine Building deck to provide 120 VAC feeds to connections in the control room and cable room to repower the key instrumentation parameters.	Started
35- Validate the 10' assumed inundation level discussed in the OIP [Assumption #8] is still conservative with respect to the Defense in Depth Modifications analyzed in OIP reference 48 (which used a slightly modified model run) and the credited CAL model run in OIP reference 14.	Not Started
36- Perform raw water fouling analysis for core cooling and heat removal.	Not Started



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<b>Table 6c: Draft Safety Evaluation Open Items</b> <i>(A Draft Safety Evaluation has not yet been provided by the NRC).</i>	
<b>Draft Safety Evaluation Open Item</b>	<b>Status</b>
N/A	N/A

**7. Potential Draft Safety Evaluation Impacts**

A Draft Safety Evaluation has not yet been issued at this time.

**8. References**

The following references support the updates to the Overall Integrated Plan described in this attachment.

- A) Oconee Nuclear Station, Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049), dated February 28, 2013
- B) NRC Order Number EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2013
- C) OFD-104A-1.1, Spent Fuel Cooling System (Units 1 & 2), Revision 53.
- D) OFD-104A-3.1, Spent Fuel Cooling System (Unit 3), Revision 48.