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August 26, 2015

Serial: BSEP 15-0064

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

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2  
Renewed Facility Operating License Nos. DPR-71 and DPR-62  
Docket Nos. 50-325 and 50-324  
Fifth Six-Month Status Report in Response to March 12, 2012, Commission  
Order Modifying Licenses with Regard to Reliable Spent Fuel Pool  
Instrumentation (Order Number EA-12-051)

References:

1. Nuclear Regulatory Commission (NRC) Order Number EA-12-051, *Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation*, dated March 12, 2012, Agencywide Documents Access and Management System (ADAMS) Accession Number ML12054A679
2. NRC Interim Staff Guidance JLD-ISG-2012-03, *Compliance with Order EA-12-051, Reliable Spent Fuel Pool Instrumentation*, Revision 0, dated August 29, 2012, ADAMS Accession Number ML12221A339
3. NEI 12-02, *Industry Guidance for Compliance with NRC Order EA-12-051, "To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation"*, Revision 1, dated August 2012, ADAMS Accession Number ML12240A307
4. Duke Energy Letter, *Carolina Power & Light Company and Florida Power Corporation's Initial Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated October 29, 2012, ADAMS Accession Number ML12307A020
5. Duke Energy Letter, *Carolina Power and Light Company's Overall Integrated Plans in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated February 28, 2013, ADAMS Accession Number ML13086A096
6. Duke Energy Letter, *First Six-Month Status Reports in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated August 26, 2013, ADAMS Accession Number ML13242A010

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7. Duke Energy Letter, *Second Six-Month Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated February 27, 2014, ADAMS Accession Number ML14073A063
8. Duke Energy Letter, *Third Six-Month Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated August 28, 2014, ADAMS Accession Number ML14254A404
9. Duke Energy Letter, *Fourth Six-Month Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated February 27, 2015, ADAMS Accession Number ML15075A024
10. Duke Energy Letter, *Notification of Full Compliance with Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design Basis External Events" and Order EA-12-051, "Order to Modify Licenses With Regard To Reliable Spent Fuel Pool Instrumentation" for BSEP, Unit 2*, dated June 3, 2015, ADAMS Accession Number ML15173A013

Ladies and Gentlemen:

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Order EA-12-051 (i.e., Reference 1) to Duke Energy Progress, Inc. (Duke Energy). Reference 1 was immediately effective and directs Duke Energy to have a reliable indication of water level in associated spent fuel storage pools. Specific requirements are outlined in Attachment 2 of Reference 1.

Reference 1 required submission of an initial status report 60 days following issuance of the final interim staff guidance (i.e., Reference 2) and an Overall Integrated Plan (OIP) pursuant to Section IV, Condition C. Reference 2 endorses industry guidance document NEI 12-02, Revision 1 (i.e., Reference 3) with clarifications and exceptions identified in Reference 2. Reference 4 provided the initial status report regarding mitigation strategies at the Brunswick, Robinson, and Shearon Harris Nuclear Power Plants. Reference 5 provided the OIP for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2.

Reference 1 required submission of a status report at six-month intervals following submittal of the OIP. Reference 3 provides direction regarding the content of the status reports. References 6, 7, 8, and 9 provided the first, second, third, and fourth six-month status reports, respectively, for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2.

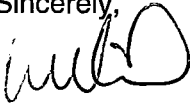
The purpose of this letter is to provide the fifth six-month status report pursuant to Section IV, Condition C.2, of Reference 1. The enclosed report provides an update of milestone accomplishments since the last status report, including any changes to the compliance method, schedule, or need for relief and the basis, if any. This status report also includes an update to milestone accomplishments that confirms full compliance with Order EA-12-051, for BSEP, Unit 2 (i.e., Reference 10).

This letter contains no new regulatory commitments.

If you have any questions regarding this submittal, please contact Mr. Lee Grzeck, Manager - Regulatory Affairs, at (910) 457-2487.

I declare under penalty of perjury that the foregoing is true and correct, executed on August 26, 2015.

Sincerely,

A handwritten signature in black ink, appearing to read "W. R. Gideon", written over a white background.

William R. Gideon

Enclosure: Fifth Six-Month Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2

cc (with enclosure):

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ENCLOSURE

FIFTH SIX-MONTH STATUS REPORT IN RESPONSE TO MARCH 12, 2012, COMMISSION  
ORDER MODIFYING LICENSES WITH REGARD TO RELIABLE SPENT FUEL POOL  
INSTRUMENTATION (ORDER NUMBER EA-12-051)

BRUNSWICK STEAM ELECTRIC PLANT (BSEP), UNIT NOS. 1 AND 2

DOCKET NOS. 50-325 AND 50-324

RENEWED FACILITY OPERATING LICENSE NOS. DPR-71 AND DPR-62

## FIFTH SIX-MONTH STATUS REPORT (ORDER NUMBER EA-12-051)

### **1 Introduction**

Note: References are provided in Section 7 of this enclosure.

Brunswick Steam Electric Plant (BSEP) developed an Overall Integrated Plan (OIP) (Reference 1), documenting the requirements to install reliable spent fuel pool level instrumentation in response to Nuclear Regulatory Commission (NRC) Order EA-12-051. The OIP was submitted to the NRC on February 28, 2013. The first six-month update was provided to the NRC on August 26, 2013 (Reference 2). The second six-month update was provided to the NRC on February 27, 2014 (Reference 3). The third six-month update was provided to the NRC on August 28, 2014 (Reference 4). The fourth six-month update was provided to the NRC on February 27, 2015 (Reference 5). This enclosure provides an update of milestone accomplishments since submittal of the fourth six-month update, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any, that occurred during the period from January 28, 2015, and July 28, 2015, (hereafter referred to as "the update period"). This status report also includes an update to milestone accomplishments that confirms full compliance with Order EA-12-051, for BSEP, Unit 2 (Reference 6).

### **2 Milestone Accomplishments**

The following milestones were completed during the update period:

- Submit Fourth Six-Month Status Report
- Full compliance with Order EA-12-051, for BSEP, Unit 2

### **3 Milestone Schedule Status**

No changes were made to the schedule as reported in Section 7 of Reference 1.

### **4 Changes to Compliance Method**

No changes to the compliance method were made during the update period.

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

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

## FIFTH SIX-MONTH STATUS REPORT (ORDER NUMBER EA-12-051)

### 6 Open Items from Overall Integrated Plan and Interim Staff Evaluation

All open items from the OIP or the Interim Staff Evaluation (ISE) are closed.

### 7 References

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

1. Duke Energy Letter, *Carolina Power & Light Company's Overall Integrated Plans in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated February 28, 2013, ADAMS Accession Number ML13086A096
2. Duke Energy Letter, *First Six-month Status Reports in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, Dated August 26, 2013, ADAMS Accession Number ML13242A010
3. Duke Energy Letter, *Second Six-month Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated February 27, 2014, ADAMS Accession Number ML14073A063
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5. Duke Energy Letter, *Fourth Six-Month Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated February 27, 2015, ADAMS Accession Number ML15075A024
6. Duke Energy Letter, *Notification of Full Compliance with Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design Basis External Events" and Order EA-12-051, "Order to Modify Licenses With Regard To Reliable Spent Fuel Pool Instrumentation" for BSEP, Unit 2*, dated June 3, 2015, ADAMS Accession Number ML15173A013
7. NRC letter, *Brunswick Steam Electric Plant, Units 1 and 2 - Interim Staff Evaluation and Request for Additional Information Regarding the Overall Integrated Plan for Implementation of Order EA-12-051, Reliable Spent Fuel Pool Instrumentation (TAC Nos. MF0973 AND MF0974)*, dated November 18, 2013, ADAMS Accession Number ML13269A345

FIFTH SIX-MONTH STATUS REPORT (ORDER NUMBER EA-12-051)

8. Duke Energy Letter, *Response to Request for Additional Information Regarding Overall Integrated Plan Submitted in Response to the Commission Order Modifying Licenses With Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated July 22, 2013, ADAMS Accession Number ML13219B117
9. Nuclear Regulatory Commission (NRC) Order Number EA-12-051, *Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation*, dated March 12, 2012, Agencywide Documents Access and Management System (ADAMS) Accession Number ML12054A679
10. NRC Interim Staff Guidance JLD-ISG-2012-03, *Compliance with Order EA-12-051, Reliable Spent Fuel Pool Instrumentation*, Revision 0, dated August 29, 2012, ADAMS Accession Number ML12221A339.
11. NEI 12-02, *Industry Guidance for Compliance with NRC Order EA-12-051, "To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation"*, Revision 1, dated August 2012, ADAMS Accession Number ML12240A307
12. Duke Energy Letter, *Carolina Power & Light Company and Florida Power Corporation's Initial Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated October 29, 2012, ADAMS Accession Number ML12307A020