



William R. Gideon  
Vice President  
Brunswick Nuclear Plant  
P.O. Box 10429  
Southport, NC 28461

o: 910.457.3698

February 27, 2015

Serial: BSEP 15-0009

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  
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)

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 No. 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 No. 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 No. 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 No. 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 No. ML13242A010

A001  
NRR

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 No. 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 No. ML14254A176

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 Duke Energy initial status report regarding spent fuel pool instrumentation. Reference 5 provided the Duke Energy OIP.


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, and 8 provided the first, second, and third 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 fourth 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 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 February 27, 2015.

Sincerely,  


William R. Gideon

Enclosure: 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), Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2

cc (with enclosure):

U.S. Nuclear Regulatory Commission, Region II  
ATTN: Mr. Victor M. McCree, Regional Administrator  
245 Peachtree Center Ave, NE, Suite 1200  
Atlanta, GA 30303-1257

U.S. Nuclear Regulatory Commission  
ATTN: Mr. Andrew Hon (Mail Stop OWFN 8G9A) **(Electronic Copy Only)**  
11555 Rockville Pike  
Rockville, MD 20852-2738

U.S. Nuclear Regulatory Commission  
ATTN: Mr. Peter Bamford (Mail Stop OWFN 8B3) **(Electronic Copy Only)**  
11555 Rockville Pike  
Rockville, MD 20852-2738

U. S. Nuclear Regulatory Commission  
ATTN: Ms. Michelle P. Catts, NRC Senior Resident Inspector  
8470 River Road  
Southport, NC 28461-8869

Chair - North Carolina Utilities Commission  
P.O. Box 29510  
Raleigh, NC 27626-0510

**ENCLOSURE**

**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)**

**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**

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

### **1 Introduction**

Brunswick Steam Electric Plant (BSEP) developed an Overall Integrated Plan (OIP) (Reference 1 in Section 7), documenting the requirements to install reliable spent fuel pool level instrumentation in response to 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 in Section 7). The second six-month update was provided to the NRC on February 27, 2014 (Reference 3 in Section 7). The third six-month update was provided to the NRC on August 28, 2014 (Reference 4 in Section 7). This enclosure provides an update of milestone accomplishments since submittal of the third 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 July 28, 2014, and January 28, 2015, (hereafter referred to as "the update period").

### **2 Milestone Accomplishments**

The following milestones were completed during the update period:

- Submit Third Six-Month Status Report

### **3 Schedule Status**

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

### **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.

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

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

There are no open items documented in the OIP or in the Interim Staff Evaluation (ISE). The ISE received (Reference 9 in Section 7) included Request for Additional Information (RAI). Reference 10 instructs that responses to the RAI do not need to be formally submitted on the docket but instead to place the response in the BSEP ePortal. Following the NRC Audit, two RAI's remain open. Those items are:

NRC Audit Open RAI's	Status
<p>1. SFPI RAI.10</p> <p>Please provide the following:</p> <ul style="list-style-type: none"><li>a) A description of the capability and provisions the proposed level sensing equipment will have to enable periodic testing and calibration, including how this capability enables the equipment to be tested in-situ.</li><li>b) A description of how such testing and calibration will enable the conduct of regular channel checks of each independent channel against the other, and against any other permanently-installed SFP level instrumentation.</li><li>c) A description of how functional checks will be performed, and the frequency at which they will be conducted. Describe how calibration tests will be performed, and the frequency at which they will be conducted. Provide a discussion as to how these surveillances will be incorporated into the plant surveillance program.</li><li>d) A description of what preventive maintenance tasks are required to be performed during normal operation, and the planned maximum surveillance interval that is necessary to ensure that the channels are fully conditioned to accurately and reliably perform their functions when needed.</li></ul> <p>(This information was previously requested as RAI-8 in NRC letter dated May 23, 2013)</p>	<p>Post response to BSEP ePortal by 3/6/2015.</p>

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

NRC Audit Open RAI's	Status
<p>2. SFPI RAI.13</p> <p>Please provide the following:</p> <p>a) Further information describing the maintenance and testing program the licensee will establish and implement to ensure that regular testing and calibration is performed and verified by inspection and audit to demonstrate conformance with design and system readiness requirements. Include a description of your plans for ensuring that necessary channel checks, functional tests, periodic calibration, and maintenance will be conducted for the level measurement system and its supporting equipment.</p> <p>b) A description of how the guidance in NEI12-02 section 4.3 regarding compensatory actions for one or both non-functioning channels will be addressed.</p> <p>c) A description of what compensatory actions are planned in the event that one of the non-functioning instrument channels cannot be restored to functional status within 90 days.</p> <p>(This information was previously requested as RAI-11 in NRC letter dated May 23, 2013)</p>	<p>Post response to BSEP ePortal by 3/6/2015.</p>

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

### 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 No. 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 No. 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 No. ML14073A063.
4. 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 No. ML14254A176.
5. NRC Order Number EA-12-051, *Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation*, dated March 12, 2012, ADAMS Accession No. ML12054A679.
6. 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 No. ML12221A339.
7. 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 No. ML12240A307.
8. 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 No. ML12307A020.
9. 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 No. ML13269A345
10. 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 No. ML13219B117