



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

September 8, 2015

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

SUBJECT: NUCLEAR REGULATORY COMMISSION PLAN FOR THE AUDIT OF DUKE ENERGY PROGRESS, INC. INTERIM EVALUATION ASSOCIATED WITH REEVALUATED SEISMIC HAZARD IMPLEMENTING NEAR-TERM TASK FORCE RECOMMENDATION 2.1 - SEISMIC FOR: BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2 (TAC NOS. MF3824 AND MF3825)

Dear Mr. Gideon:

This letter documents the U.S Nuclear Regulatory Commission (NRC) staff's plan to perform a regulatory audit of Duke Energy Progress, Inc. (Duke, the licensee) interim evaluation, also referred to as the Expedited Seismic Evaluation Process (ESEP), associated with reevaluated seismic hazard implementing Near-Term Task Force (NTTF) Recommendation 2.1 Seismic for Brunswick Steam Electric Plant Units 1 and 2 (Brunswick).

The audit will take place in Rockville, MD via e-portal access provided by Duke. This technical audit will be performed consistent with NRC Office of Nuclear Reactor Regulation, Office Instruction LIC-111, "Regulatory Audits," dated December 29, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML082900195). The NRC staff will develop an audit summary report to document its observations and conclusions within 90 days of the completion of the audit.

The audit will provide the NRC with a better understanding of the ESEP interim evaluations associated with NTTF Recommendation 2.1 "Seismic" and evaluate implementation of the staff's endorsed Electric Power Research Institute (EPRI) guidance<sup>1</sup>, as described by each of

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<sup>1</sup> The ESEP guidance document can be found in ADAMS under Accession No. ML13102A142.

W. Gideon

- 2 -

the sites. The audit is intended to support the NRC staff review of the ESEP evaluations and the subsequent issuance of letters documenting its review. Additional information is provided below.

The enclosed audit plan outlines the process that will allow the NRC staff to review the ESEP related documentation and discuss technical concerns.

If you have any questions, please contact me at (301) 415-1115 or by e-mail at Nicholas.DiFrancesco@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Nicholas J. DiFrancesco", with a long horizontal flourish extending to the right.

Nicholas J. DiFrancesco, Senior Project Manager  
Hazards Management Branch  
Japan Lessons-Learned Division  
Office of Nuclear Reactor Regulation

Docket Nos. 50-325 and 50-324

Enclosures:

1. Audit Plan
2. Correspondence associated with  
ESEP reports and NRC staff review

cc w/encl: Distribution via Listserv

NUCLEAR REGULATORY COMMISSION PLAN FOR THE AUDIT OF DUKE ENERGY  
PROGRESS, INC. INTERIM EVALUATION ASSOCIATED WITH REEVALUATED SEISMIC  
HAZARD IMPLEMENTING NEAR-TERM TASK FORCE RECOMMENDATION 2.1- SEISMIC FOR:  
BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2

BACKGROUND AND AUDIT BASIS:

On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) issued a request for information pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 50.54(f) (hereafter referred to as the 50.54(f) letter)(Agencywide Documents Access and Management System (ADAMS) Accession No. ML12053A340). The purpose of that request was to gather information concerning, in part, the seismic hazards at operating reactor sites to enable the NRC staff to determine whether your license should be modified, suspended, or revoked.

Requested Information Item (6) in Enclosure 1 to the 50.54(f) letter requests licensees to provide an interim evaluation and actions taken or planned to address the higher seismic hazard relative to the design-basis, as appropriate, prior to completion and submission of the seismic risk evaluation. By letter dated April 8, 2013 (ADAMS Accession No. ML13102A142), the Electric Power Research Institute (EPRI) staff submitted EPRI TR 3002000704 "Seismic Evaluation guidance; Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic" (hereafter referred to as the guidance). The Augmented Approach (also called the Expedited Seismic Evaluation Process (ESEP)), proposed that licensees would use a simplified seismic margins assessment process to provide additional assurance that key pieces of plant equipment in one safe shutdown pathway would be able to perform certain safety functions following a beyond-design-basis seismic event. By letter dated May 7, 2013 (ADAMS Accession No. ML13106A331, the NRC staff endorsed the guidance.

The NRC staff is conducting regulatory audits on the licensee's interim evaluation to determine if the information provided met the intent of the ESEP guidance and if licensees responded appropriately to Requested Information Item (6) in Enclosure 1 to the 50.54(f) letter.

By letter dated in December 18, 2014, to The NRC, Duke Energy Progress, Inc. (Duke, the licensee) submitted for NRC review its ESEP evaluations for Brunswick Steam Electric Plant, Units 1 and 2 (Brunswick). By email dated June 23, 2015, The NRC staff issued a request for additional information (RAI) to gain a better understanding of the information provided in the ESEP reports. In lieu of responding the NRC staff continues to review the information provided by Duke and plans to conduct a regulatory audit of the ESEP evaluations, including the information provided in RAI responses. Specific documents that will be reviewed by the staff during the audit are provided below.

REGULATORY AUDIT SCOPE AND METHODOLGY:

The scope of this audit will be limited to the information provided to the NRC staff RAIs. The purpose of this audit is to enable the NRC staff to determine if the information provided as part of the ESEP submittals met the intent of the guidance and if licensees responded appropriately to Requested Information Item (6) in Enclosure 1 to the 50.54(f).

DOCUMENTS REQUESTED FOR STAFF EXAMINATION

**Brunswick:**

- ESEP clarification questions (1) and (2), email dated June 23, 2015, (ADAMS Accession No.ML15224B251)
- Regarding Brunswick ESEP clarification question (3), the staff needs to assess the current condition of the items using items described in sub bullets a, b, and c of clarification question (3):
  - a. If photographic evidence was used as part of the Seismic Review Team (SRT) review to safely disposition the inaccessible items, as stated in various instances in Section 7 (i.e. Motor Control Center (MCC), distribution panels, torus temperature elements, switchgear transformers, etc), please provide dates or range of dates said pictures were taken.
  - b. MCCs and Distribution Panels:
    - i. Provide date or range of dates the items were externally inspected
    - ii. Identify "other documentation and calculations", as stated in subsection 7.1.2, used in the SRT review
  - c. Switchgear Transformers:
    - i. Identify and provide dates of previous walkdowns, inspections and engineering packages and calculations, stated in subsection 7.1.4, used in the SRT review.

NRC AUDIT TEAM:

<b>Title</b>	<b>Team Member</b>
Technical Support (NRC/NRO)	Sunwoo Park
Technical Support (NRC)	Robert Hsu
Technical Support (NRC/NRO)	Ricardo Rodriguez
Technical Support (BNL/Consultant)	Joe Braverman

LOGISTICS:

E-portal, teleconference with Duke staff should be sufficient.

DELIVERABLES:

Within 90 days of the audit, the NRC staff will prepare a detailed audit report documenting the information reviewed during the audit, and any open items identified as a result of the audit. The NRC staff will also document its understanding of the proposed resolution of any identified open items.

Correspondence Associated with  
Expedited Seismic Evaluation Process evaluations and staff's review for Brunswick

<b>Plant Name</b>	<b>ESEP report  Date of letter (ADAMS Accession Nos.)</b>	<b>RAI  Date of letter (ADAMS Accession Nos.)</b>
Brunswick Steam Electric Plant, Units 1 and 2	December 18, 2014 (ML15005A074)	June 23, 2015 (ML15224B251)

W. Gideon

- 2 -

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Sincerely,  
*/RA/*  
Nicholas J. DiFrancesco, Senior Project Manager  
Hazards Management Branch  
Japan Lessons-Learned Division  
Office of Nuclear Reactor Regulation

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**ADAMS Accession No.: ML15231A022**

\*via e-mail

<b>OFFICE</b>	NRR/JLD/JHMB/PM	NRR/JLD/JHMB/LA	NRO/DSEA/RGS/BC	NRR/JLD/JHMB/BC	NRR/JLD/JHMB/PM
<b>NAME</b>	NDiFrancesco	SLent	DJackson	MShams	NDiFrancesco
<b>DATE</b>	08/24/15	08/20/15	08/24/15	08/26/15	09/08/15

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