

February 4, 2016

MEMORANDUM TO: Benjamin G. Beasley, Chief  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Operation

FROM: Eric R. Oesterle, Chief */RA/*  
Reactor Systems Branch  
Division of Safety System  
Office of Nuclear Reactor Regulation

SUBJECT: AUDIT REPORT; BRUNSWICK STEAM ELECTRIC PLANT, UNIT  
NOS. 1 AND 2 NUCLEAR FACILITY REQUEST FOR LICENSE  
AMENDMENTS – ADOPTION OF TOPICAL REPORT ANP-1  
0298P-A, REVISION 1 (TAC NO.: MF5852)

By letter dated February 19, 2015 (ADAMS Accession No. ML15075A021), Duke Energy (the licensee) submitted a license amendment request (LAR) for Brunswick Steam Electric Plant, Unit Nos. 1 and 2 Nuclear Facility. The proposed amendment would revise TS 5.6.5.b. Technical Specification 5.6.5.b identifies the analytical methods that should be used to determine core operating limits.

The U. S. Nuclear Regulatory Commission staff conducted a regulatory audit to increase the efficiency of the LAR review. The audit report is enclosed.

Enclosure:  
As stated

CONTACT: Fred M. Forsaty, NRR/DSS  
(301) 415-8523

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**NRR-106**

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DATE	02/03/2016	2/ 4 /2016

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**AUDIT REPORT BY THE REACTOR SYSTEMS BRANCH RELATED TO LICENSE  
AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATIONS FOR THE ANALYTICAL  
METHODS TO BE USED TO DETERMINE THE REACTOR CORE CRITICAL POWER LIMITS.  
BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2, DPR-71 AND DPR-62,  
RESPECTIVELY (TAC NO. 5852)**

**1.0 BACKGROUND**

By letter dated February 19, 2015 (ADAMS Accession No. ML15075A021), Duke Energy (the licensee) submitted a license amendment request (LAR) for Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. The proposed LAR contains changes to analytical methods used to determine core operating limits. The licensee requests the use of methods described in Topical Report ANP-10298P-A, Revision 1. Currently, methods described in AREVA Topical Report ANP-10298PA, ACE/TRIUM 10XM Critical Power Correlation, Revision 0 are used.

The U. S. Nuclear Regulatory Commission (NRC) staff conducted two teleconferences to increase the efficiency of the LAR review.

Subsequent to the teleconferences, an audit was performed by the NRC and its contractors of information from the applicant which was available in an electronic reading room (ERR).

**2.0 AUDIT REPORT**

To facilitate an expedited review and to develop a clear understanding of the information provided by the licensee, two teleconferences were conducted on September 1 and September 22, 2015. These teleconferences were followed by an audit in the ERR.

- 2.1 Teleconference 1 - In the first teleconference, the NRC staff and the licensee discussed operability assessments made using revision 0 of the AREVA correlation. The NRC reviewed the evaluations and scheduled a subsequent conference call to discuss the limiting Anticipated Operational Occurrences (AOO) that would be evaluated.
- 2.2 Teleconference 2 - In the second teleconference, the NRC and the licensee discussed a request that analysis be performed for three limiting AOOs for the purpose of comparing delta CPR using revision 1 of the AREVA correlation with the results from the revision 0 computer runs.
- 2.3 Audit - Once the sensitivity computer runs were completed, the NRC and its contractors audited the licensee analysis in the ERR. The audit determined that the limiting AOOs had been analyzed, conservative inputs and assumptions had been used in the analyses, the results were clearly identified for each limiting event, and benchmarked against the Revision 0 of the AREVA correlation. The licensee then captured the results of the analysis in a letter to report to the NRC (ML15329A377). The tabulated results are also reflected in Table 1 of the SER (ML15355A396).

An exit meeting call was conducted with the licensee on 2/4/16. There are no open items.

**ENCLOSURE**