



Progress Energy

James Scarola
Vice President
Brunswick Nuclear Plant
Progress Energy Carolinas, Inc.

JUL 18 2007

10 CFR 50.90

SERIAL: BSEP 07-0067
TSC-2006-06

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

Subject: Brunswick Steam Electric Plant, Unit Nos. 1 and 2
Docket Nos. 50-325 and 50-324/License Nos. DPR-71 and DPR-62
Additional Information in Support of Request for License Amendment
Regarding Linear Heat Generation Rate and Core Operating Limits Report
References for AREVA NP Fuel (NRC TAC Nos. MD4061 and MD4062)

References:

1. Letter from James Scarola to the U.S. Nuclear Regulatory Commission (Serial: BSEP 06-0129), "Request for License Amendment Regarding Linear Heat Generation Rate and Core Operating Limits Report References for AREVA NP Fuel," dated January 22, 2007 (ADAMS Accession Number ML070300570)
2. Letter from James Scarola to the U.S. Nuclear Regulatory Commission (Serial: BSEP 07-0053), "Additional Information in Support of Request for License Amendment Regarding Linear Heat Generation Rate and Core Operating Limits Report References for AREVA NP Fuel," dated June 21, 2007 (ADAMS Accession Number ML071840214)

Ladies and Gentlemen:

By letter dated January 22, 2007, as supplemented by letter dated June 21, 2007, Carolina Power & Light Company (CP&L), now doing business as Progress Energy Carolinas, Inc., requested a license amendment to revise the Technical Specifications (TS) for the Brunswick Steam Electric Plant (BSEP), Unit Nos. 1 and 2. The proposed changes include: (1) revising TS 5.6.5, "Core Operating Limits Report (COLR)" to add AREVA NP, Inc. (AREVA) topical report references applicable to the use of ATRIUM™-10 fuel, (2) adding a new definition and TS 3.2.3 for linear heat generation rate (LHGR) requirements, and (3) incorporating the new LHGR requirements into existing TS 3.4.1 and 3.7.6. These changes are being made to support the BSEP transition to AREVA manufactured fuel assemblies.

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HRR

On May 23, 2007, a meeting was held to review CP&L's plan and schedule for submitting additional information to support the transition to AREVA ATRIUM™-10 fuel. During this meeting, CP&L and AREVA discussed the fuel transition package being developed to document the analyses being performed to support the use of AREVA fuel for the upcoming Brunswick Unit 1 operating cycle.

The initial element of the fuel transition package was submitted by CP&L on June 21, 2007, and consisted of a copy of AREVA Topical Report ANP-2637, Revision 1, *Boiling Water Reactor Licensing Methodology Compendium*. The remainder of fuel transition package will consist of five reports: (1) the Thermal-Hydraulic Design Report, (2) the LOCA Break Spectrum Analysis Report, (3) the LOCA-ECCS Analysis MAPLHGR Limit Report, (4) the Fuel Cycle Design Report, and (5) the Reload Safety Analysis Report.

CP&L is providing, in Enclosure 1, a copy of AREVA Report ANP-2646(P), Revision 0, *Brunswick Unit 1 Thermal-Hydraulic Design Report for ATRIUM™-10 Fuel Assemblies*, dated June 2007. This report describes the thermal-hydraulic design characteristics of the ATRIUM™-10 fuel assembly, and also addresses the thermal-hydraulic compatibility of AREVA fuel with the co-resident fuel. ANP-2646(P), Revision 0, contains information that AREVA considers to be proprietary as defined by 10 CFR 2.390. AREVA, as the owner of the proprietary information, has executed the affidavit provided in Enclosure 2, which identifies that the enclosed proprietary information has been handled and classified as proprietary, is customarily held in confidence, and has been withheld from public disclosure. AREVA requests that the enclosed proprietary information be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390. A non-proprietary version of ANP-2646(P), Revision 0, is provided in Enclosure 3.

CP&L is providing, in Enclosure 4, a copy of AREVA Report ANP-2625(P), Revision 0, *Brunswick Units 1 and 2 LOCA Break Spectrum Analysis for ATRIUM™-10 Fuel*, dated June 2007. This report describes the LOCA break spectrum analyses for the plant and identifies the characteristics of the limiting break (i.e., break size, break location, single failure). ANP-2625(P), Revision 0, contains information that AREVA considers to be proprietary as defined by 10 CFR 2.390. AREVA, as the owner of the proprietary information, has executed the affidavit provided in Enclosure 5, which identifies that the enclosed proprietary information has been handled and classified as proprietary, is customarily held in confidence, and has been withheld from public disclosure. AREVA requests that the enclosed proprietary information be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390. A non-proprietary version of ANP-2625(P), Revision 0, is provided in Enclosure 6.

CP&L is providing, in Enclosure 7, a copy of AREVA Report ANP-2624(P), Revision 0, *Brunswick Units 1 and 2 LOCA-ECCS Analysis MAPLHGR Limit for ATRIUM™-10 Fuel*, dated June 2007. This report describes the analyses performed to support the exposure dependent MAPLHGR limits, and includes results that demonstrate compliance with the

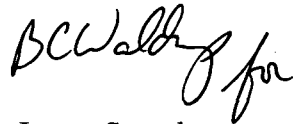
10 CFR 50.46 peak cladding temperature and metal water reaction criteria. ANP-2624(P), Revision 0, contains information that AREVA considers to be proprietary as defined by 10 CFR 2.390. AREVA, as the owner of the proprietary information, has executed the affidavit provided in Enclosure 8, which identifies that the enclosed proprietary information has been handled and classified as proprietary, is customarily held in confidence, and has been withheld from public disclosure. AREVA requests that the enclosed proprietary information be withheld from public disclosure in accordance with the provisions of 10 CFR 2.390. A non-proprietary version of ANP-2624(P), Revision 0, is provided in Enclosure 9.

Preparation of the Fuel Cycle Design Report and the Reload Safety Analysis Report is continuing. Preparation of a report describing applicability of AREVA BWR methods to extended power uprate conditions is also in progress. CP&L anticipates submittal of these remaining reports in accordance with the schedule discussed during the May 23, 2007, meeting.

No regulatory commitments are contained in this letter. Please refer any questions regarding this submittal to Mr. Randy C. Ivey, Manager – Support Services, at (910) 457-2447.

I declare, under penalty of perjury, that the foregoing is true and correct. Executed on July 18, 2007.

Sincerely,

A handwritten signature in black ink, appearing to read "BCWalby for", is written over the printed name James Scarola.

James Scarola

WRM/wrm

Enclosures:

1. AREVA Report ANP-2646(P), Revision 0, *Brunswick Unit 1 Thermal-Hydraulic Design Report for ATRIUM™-10 Fuel Assemblies*, dated June 2007
(Proprietary Information – Withhold from Public Disclosure in Accordance With 10 CFR 2.390)
2. AREVA Affidavit Regarding Withholding ANP-2646(P), Revision 0, from Public Disclosure
3. AREVA Report ANP-2646(NP), Revision 0, *Brunswick Unit 1 Thermal-Hydraulic Design Report for ATRIUM™-10 Fuel Assemblies*, dated June 2007
4. AREVA Report ANP-2625(P), Revision 0, *Brunswick Units 1 and 2 LOCA Break Spectrum Analysis for ATRIUM™-10 Fuel*, dated June 2007
(Proprietary Information – Withhold from Public Disclosure in Accordance With 10 CFR 2.390)
5. AREVA Affidavit Regarding Withholding ANP-2625(P), Revision 0, from Public Disclosure
6. AREVA Report ANP-2625(NP), Revision 0, *Brunswick Units 1 and 2 LOCA Break Spectrum Analysis for ATRIUM™-10 Fuel*, dated June 2007
7. AREVA Report ANP-2624(P), Revision 0, *Brunswick Units 1 and 2 LOCA-ECCS Analysis MAPLHGR Limit for ATRIUM™-10 Fuel*, dated June 2007
(Proprietary Information – Withhold from Public Disclosure in Accordance With 10 CFR 2.390)
8. AREVA Affidavit Regarding Withholding ANP-2624(P), Revision 0, from Public Disclosure
9. AREVA Report ANP-2624(NP), Revision 0, *Brunswick Units 1 and 2 LOCA-ECCS Analysis MAPLHGR Limit for ATRIUM™-10 Fuel*, dated June 2007

cc (with Enclosures 1 through 9):

U. S. Nuclear Regulatory Commission, Region II
ATTN: Dr. William D. Travers, Regional Administrator
Sam Nunn Atlanta Federal Center
61 Forsyth Street, SW, Suite 23T85
Atlanta, GA 30303-8931

U. S. Nuclear Regulatory Commission
ATTN: Mr. Eugene M. DiPaolo, NRC Senior Resident Inspector
8470 River Road
Southport, NC 28461-8869

U. S. Nuclear Regulatory Commission **(Electronic Copy Only)**
ATTN: Mr. Stewart N. Bailey (Mail Stop OWFN 8B1)
11555 Rockville Pike
Rockville, MD 20852-2738

cc (with only Enclosures 2, 3, 5, 6, 8, and 9):

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

Ms. Beverly O. Hall, Section Chief
Radiation Protection Section, Division of Environmental Health
North Carolina Department of Environment and Natural Resources
3825 Barrett Drive
Raleigh, NC 27609-7221

BSEP 07-0067

Enclosure 2

AREVA Affidavit Regarding
Withholding ANP-2646(P), Revision 0,
from Public Disclosure

AFFIDAVIT

STATE OF WASHINGTON)
) ss.
COUNTY OF BENTON)

1. My name is Jerald S. Holm. I am Manager, Product Licensing, for AREVA NP Inc. and as such I am authorized to execute this Affidavit.

2. I am familiar with the criteria applied by AREVA NP to determine whether certain AREVA NP information is proprietary. I am familiar with the policies established by AREVA NP to ensure the proper application of these criteria.

3. I am familiar with the AREVA NP information contained in the report ANP-2646P Revision 0, *Brunswick Unit 1 Thermal-Hydraulic Design Report for ATRIUM™-10 Fuel Assemblies*, dated June 2007, and referred to herein as "Document." Information contained in this Document has been classified by AREVA NP as proprietary in accordance with the policies established by AREVA NP for the control and protection of proprietary and confidential information.

4. This Document contains information of a proprietary and confidential nature and is of the type customarily held in confidence by AREVA NP and not made available to the public. Based on my experience, I am aware that other companies regard information of the kind contained in this Document as proprietary and confidential.

5. This Document has been made available to the U.S. Nuclear Regulatory Commission in confidence with the request that the information contained in this Document be withheld from public disclosure. The request for withholding of proprietary information is made in accordance with 10 CFR 2.390. The information for which withholding from disclosure is

requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information".

6. The following criteria are customarily applied by AREVA NP to determine whether information should be classified as proprietary:

- (a) The information reveals details of AREVA NP's research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for AREVA NP.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for AREVA NP in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by AREVA NP, would be helpful to competitors to AREVA NP, and would likely cause substantial harm to the competitive position of AREVA NP.

The information in the Document is considered proprietary for the reasons set forth in paragraphs 6(b) and 6(d) above.

7. In accordance with AREVA NP's policies governing the protection and control of information, proprietary information contained in this Document have been made available, on a limited basis, to others outside AREVA NP only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. AREVA NP policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

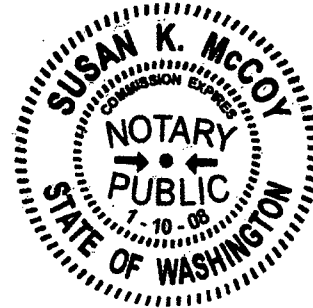
9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

Gerald S Holm

SUBSCRIBED before me this 28th
day of June, 2007.

Susan K McCoy

Susan K. McCoy
NOTARY PUBLIC, STATE OF WASHINGTON
MY COMMISSION EXPIRES: 1/10/2008



BSEP 07-0067
Enclosure 5

AREVA Affidavit Regarding
Withholding ANP-2625(P), Revision 0,
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COUNTY OF BENTON)

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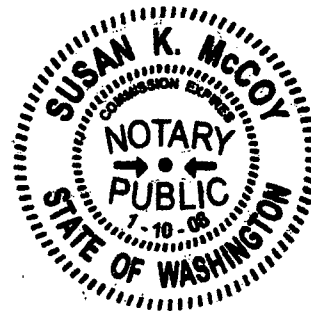
9. The foregoing statements are true and correct to the best of my knowledge,
information, and belief.

Gerald S Holm

SUBSCRIBED before me this 22nd
day of June, 2007.

Susan K McCoy

Susan K. McCoy
NOTARY PUBLIC, STATE OF WASHINGTON
MY COMMISSION EXPIRES: 1/10/2008



BSEP 07-0067
Enclosure 8

AREVA Affidavit Regarding
Withholding ANP-2624(P), Revision 0,
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STATE OF WASHINGTON)
) ss.
COUNTY OF BENTON)

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Jerald S Holm

SUBSCRIBED before me this 22nd
day of June, 2007.

Susan K McCoy

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NOTARY PUBLIC, STATE OF WASHINGTON
MY COMMISSION EXPIRES: 1/10/2008

