



PO Box 1551  
411 Fayetteville Street Mall  
Raleigh NC 27602

James Scarola  
Sr. Vice President and Chief Nuclear Officer  
Progress Energy, Inc.

Serial: NPD-NRC-2008-001  
February 18, 2008

Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

ATTN: R. William Borchardt, Director  
Office of New Reactors

**Subject: Application for Combined License for Shearon Harris Nuclear Power Plant  
Units 2 and 3  
NRC Project Number 738**

In accordance with 10 CFR Part 52, "Licenses, Certifications, and Approvals for Nuclear Power Plants," Progress Energy Carolinas, Inc. (PEC) hereby submits an application for a combined construction permit and operating license (COL) for two AP1000 advanced pressurized water reactor units to be located at the current North Carolina site of Shearon Harris Nuclear Power Plant Unit 1 (NRC License No. NPF-63). These new advanced reactor units are to be designated as Shearon Harris Nuclear Power Plant Units 2 and 3 (HAR 2 and HAR 3, respectively). In addition, PEC is requesting special nuclear material licenses, by-product licenses, and source material licenses as required under 10 CFR Parts 30, 40, and 70.

This COL application incorporates by reference Appendix D to 10 CFR Part 52, as amended by Westinghouse Electric Company's AP1000 Design Control Document (DCD), Revision 16 which was submitted to the NRC on May 26, 2007, and Westinghouse Technical Report APP-GW-GLR-134, "AP1000 DCD Impacts to Support COLA Standardization," Revision 3, which was submitted on January 14, 2008. This COL application includes the information required by 10 CFR Part 52, Appendix D, Section IV.A.2 and 3.

This COL application utilizes, to the maximum practical extent, the standard content contained and designated as such in the Tennessee Valley Authority's Bellefonte Unit 3 and 4 COL application, the AP1000 reference plant application developed by NuStart Energy Development, LLC.\* Standard content is identified as such, primarily in the Final Safety Analysis Report of this application.

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\* NuStart Energy Development, LLC, is the industry consortium organized as part of the U.S. Department of Energy's Nuclear Power 2010 initiative to demonstrate the viability of the licensing process defined in 10 CFR Part 52, associated regulations, and NRC guidance.

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This COL application is comprised of the following parts:

- Part 1 – Administrative and Financial Information
- Part 2 – Final Safety Analysis Report (FSAR)
- Part 3 – Applicant’s Environmental Report-Combined License Stage (Environmental Report)
- Part 4 – Technical Specifications
- Part 5 – Emergency Planning
- Part 6 – [Not Used in this COL Application. Reserved for applications requesting Limited Work Authorization]
- Part 7 – Departures and Exemption Requests
- Part 8 – Safeguards/Security Plans (provided under separate cover letter)
- Part 9 – Withheld Information
- Part 10 – Proposed License Conditions, including Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)
- Part 11 – Quality Assurance Program Description

This application contains no Restricted Data or other defense information requiring separation in accordance with 10 CFR 50.33(j). Part 8 of this application contains Safeguards Information, which is provided under separate cover and is controlled pursuant to 10 CFR 73.21 (c). Part 9 of this application contains certain financial and security-related information that PEC is requesting the NRC to withhold from public disclosure in accordance with the requirements of 10 CFR 2.390. An appropriate affidavit is included with this letter supporting proprietary treatment of PEC financial information pursuant to 10 CFR 2.390(a)(4).

Consistent with common licensing practice, most of the application text is written in the present tense, including discussion of facilities and programs not yet built or implemented. Exceptions to this approach are the discussions of operating experience and completed studies and evaluations, which are written in the past tense. It should be understood, however, that statements regarding facilities (e.g., structures, systems and components), and pre-construction, pre-operational, and operational activities (e.g., procedures and programs) typically address activities that have not yet been performed, and will not be performed until it is reasonable and appropriate to do so.

A complete set of application documents (identified above) is provided in electronic file format on the two enclosed disks (Enclosures 1 and 2). Enclosure 1 contains a publicly available version of

the COL application; Enclosure 2 contains the COL application with information requested to be withheld from public disclosure included in Part 9.

Appropriate pre-submission checks have been successfully performed on the files for both disks to ensure compliance with the guidelines provided on the NRC web site and they have been found acceptable for electronic submittal. Each disk includes a "packing slip" describing its contents, pursuant to NRC instructions for electronic filing.

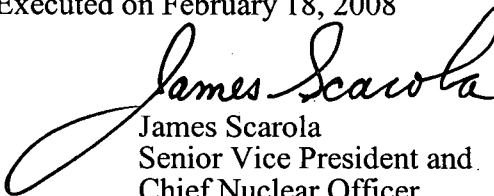
The NRC Quality Assurance team visit to review Progress Energy's development process for the HAR COL was completed the week of October 29, 2007. Progress Energy cannot formally respond to the audit until the audit report is received from the NRC. We have reviewed the preliminary feedback from the NRC QA visit and determined that there is not an impact to the information contained in this submittal. We will work with the NRC to resolve any Audit Response Requests that the NRC may identify in their report.

We understand that the NRC will review the PEC COL application to determine its sufficiency for docketing. At the end of this review period, which is expected to take no more than 60 days, the NRC will issue a detailed schedule to review this application in accordance with the combined licensing process.

If you have any questions, or need additional information, please contact Bob Kitchen at (919)546-6992, or Garry Miller at (919)546-6107.

*I declare under penalty of perjury that the foregoing is true and correct.*

Executed on February 18, 2008

  
James Scarola  
Senior Vice President and  
Chief Nuclear Officer

Enclosures:

1. Shearon Harris Nuclear Power Plant Units 2 and 3 COL Application, Public Version (electronic submittal)
2. Shearon Harris Nuclear Power Plant Units 2 and 3 COL Application, Non-Public Version (electronic submittal)

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cc (w/o enclosures): U.S. NRC Director, Office of New Reactors/NRLPO  
U.S. NRC Office of Nuclear Reactor Regulation/NRLPO  
U.S. NRC Region II, Regional Administrator  
U.S. NRC Resident Inspector, SHNPP Unit 1

**AFFIDAVIT OF JAMES SCAROLA**

STATE OF NORTH CAROLINA )

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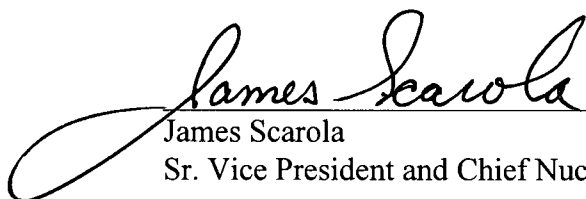
COUNTY OF WAKE )

I, James Scarola, Senior Vice President & Chief Nuclear Officer, Progress Energy Carolinas, Inc., do hereby affirm and state:

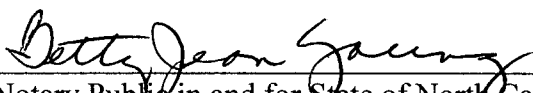
1. I am authorized to execute this affidavit on behalf of Progress Energy Carolinas, Inc., (hereinafter referred to as "PEC"). I am further authorized to review information submitted to the Nuclear Regulatory Commission ("NRC") and apply for the withholding of information from disclosure. I am making this affidavit in conformance with the provisions of the NRC's regulations at 10 CFR 2.390 and in support of PEC's request for proprietary treatment of certain financial information.
2. I have knowledge of the criteria used by PEC in designating information as sensitive, proprietary, or confidential.
3. Pursuant to the provision of paragraph (a)(4) of 10 CFR 2.390, the following is furnished for consideration by the NRC in determining whether the information sought to be withheld from public disclosure should be withheld.
  - a. The information sought to be withheld from public disclosure is owned by PEC and has been held in confidence by PEC.
  - b. The information sought to be protected is not available to the public to the best of our knowledge and belief.
  - c. The information is of the type that would customarily be held in confidence by PEC. This financial information consists of PEC's projection for construction, fuel supply, and operating costs. Public disclosure of this information is likely to cause harm to PEC because it would allow contractors, vendors, and competitors to understand PEC's competitive position and schedule prior to securing the related contracts and services or pricing competitive services.

- d. The proprietary information sought to be withheld from public disclosure is identified in Part 9 of the COL application and is marked as proprietary as it appears in the application.
- e. The information is transmitted to the NRC in confidence and under the provisions of 10 CFR 2.390; it is to be received in confidence by the NRC.

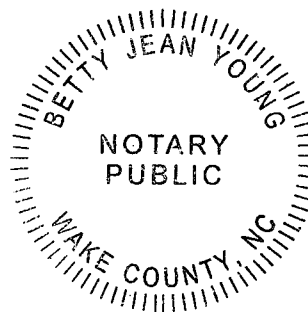
James Scarola, being dully sworn, states that he is Sr. Vice President and Chief Nuclear Officer, Progress Energy Carolinas, Inc., that he is authorized on the part of said Company to sign and file with the U. S. Nuclear Regulatory Commission this combined license application for the Shearon Harris Nuclear Power Plant Units 2 and 3, and that all the matter and facts set forth herein are true and correct to the best of his knowledge.

  
James Scarola  
Sr. Vice President and Chief Nuclear Officer

Subscribed and sworn to before me, a Notary Public, in and for the county and state above named, this 18<sup>th</sup> day of February, 2008.

  
Notary Public in and for State of North Carolina

My Commission Expires: October 5, 2008



bc : Bill Johnson, Chairman and CEO  
Joe Donahue, VP-NESD  
Daniel Roderick, VP-Nuclear Projects & Construction  
Garry Miller, General Manager-Nuclear Plant Development  
Robert Kitchen, Manager-Nuclear Plant Licensing  
Paul Fulford, Manager-PE&RAS  
John O'Neill, Jr. (Pillsbury Winthrop Shaw Pittman, LLP)

File: NGG-NPD (Betsy Cox)