



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

February 2, 2010

Chris L. Burton, Vice President
Shearon Harris Nuclear Power Plant
Carolina Power & Light Company
Post Office Box 165, Mail Zone 1
New Hill, North Carolina 27562-0165

**SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 – REQUEST FOR
ADDITIONAL INFORMATION REGARDING AMENDMENT TO ALLOW THE
USE OF THERMAL-HYDRAULIC ANALYSIS CODE S-RELAP5 FOR
NON-LOSS-OF-COOLANT ACCIDENT TRANSIENTS (TAC NO. ME1735)**

Dear Mr. Burton:

By letter dated July 21, 2009 (Agencywide Documents Access and Management System Accession No. ML092150228), Carolina Power & Light Company, now doing business as Progress Energy Carolinas, Inc., submitted a proposed amendment for the Shearon Harris Nuclear Power Plant, Unit 1 (HNP). The proposed amendment would revise Technical Specification (TS) Section 6.9.1.6 to add the U.S. Nuclear Regulatory Commission (NRC)-approved topical report (TR) EMF-23 10(P)(A), "SRP Chapter 15 Non-LOCA [Loss-of-Coolant Accident] Methodology for Pressurized Water Reactors," to the Core Operating Limits Report methodologies list.

This change will allow the use of thermal-hydraulic analysis code S-RELAP5 for Final Safety Analysis Report (FSAR) Chapter 15 non-LOCA transients in the HNP safety analyses. TR EMF-23 10(P)(A), Revision 0, was approved by the NRC on May 11, 2001, for the application of the S-RELAP5 thermal-hydraulic analysis computer code to FSAR Chapter 15 non-LOCA transients. EMF-23 10(P)(A), Revision 1, approved by the NRC on May 19, 2004, updated Section 5.6 of the TR.

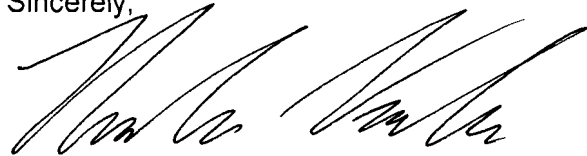
The NRC staff has determined that it needs additional information in order to complete its review of this application. Please respond to the enclosed requests by March 12, 2010, in order to facilitate a timely completion of the staff review.

C. Burton

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Please contact me at 301-415-3178 if you have any questions on this issue, would like to participate in a conference call, or require additional time to submit your responses.

Sincerely,

A handwritten signature in black ink, appearing to read 'Marlayna Vaaler', written in a cursive style.

Marlayna Vaaler, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-400

Enclosure: Request for Additional Information

cc w/enclosure: Distribution via ListServ

REQUEST FOR ADDITIONAL INFORMATION
SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1
AMENDMENT TO ALLOW THE USE OF THERMAL-HYDRAULIC ANALYSIS CODE
S-RELAP5 FOR NON-LOSS-OF-COOLANT ACCIDENT TRANSIENTS
DOCKET NO. 50-400

The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information submitted by the licensee, and based on this review determined the following information is required to complete the evaluation of the subject amendment request:

The NRC staff understands that S-RELAP5 is an updated version of the ANF-RELAP code. Please confirm whether or not the ANF-RELAP model will still be retained in the Technical Specification Core Operating Limits Report (COLR) references after the proposed addition of the S-RELAP5 code to the list of COLR references.

If so, please discuss any circumstances when the older version (i.e., the ANF-RELAP model) of the code may be applied for use in licensing calculations instead of the S-RELAP5 model, and why this choice would be appropriate.

Enclosure

C. Burton

- 2 -

Please contact me at 301-415-3178 if you have any questions on this issue, would like to participate in a conference call, or require additional time to submit your responses.

Sincerely,

/RA/

Marlayna Vaaler, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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