



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

August 5, 2011

Mr. William Jefferson, Jr.
Vice President
Carolina Power & Light Company
Shearon Harris Nuclear Plant
P.O. Box 165, Mail Zone 1
New Hill, NC 27562-0165

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1 - REQUEST FOR
ADDITIONAL INFORMATION REGARDING MEASUREMENT UNCERTAINTY
RECAPTURE POWER UPRATE (TAC NO. ME6169)

Dear Mr. Jefferson:

By letter dated April 28, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML11124A180), as supplemented by letter dated June 23, 2011 (ADAMS Accession No. ML11179A052), Carolina Power & Light Company requested approval from the U.S. Nuclear Regulatory Commission (NRC) to increase the core thermal power level of Shearon Harris Nuclear Power Plant, Unit 1, from 2,900 megawatts thermal (MWt) to 2,948 MWt, an increase of approximately 1.66% over the present licensed power level and to change the power plant technical specifications accordingly.

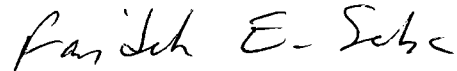
The NRC staff is reviewing your submittal and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). It is requested that your RAI response be provided by August 30, 2011, as discussed with your staff on July 29, 2011. If more time is needed to respond to the RAI, your request for additional time should include a basis for the need for an extension.

W. Jefferson

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Please feel free to contact me at 301-415-2020 or by e-mail at brenda.mozafari@nrc.gov if you have any questions on this issue or require additional time to submit your response.

Sincerely,



for Brenda Mozafari, Senior 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/encl: Distribution via Listserv

SHEARON HARRIS NUCLEAR POWER PLANT, UNIT 1
REQUEST FOR ADDITIONAL INFORMATION REGARDING
MEASUREMENT UNCERTAINTY RECAPTURE POWER UPRATE
TAC NO. ME6169

By letter dated April 28, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML11124A180), as supplemented by letter dated June 23, 2011 (ADAMS Accession No. ML11179A052), Carolina Power & Light Company (the licensee) requested approval from the U.S. Nuclear Regulatory Commission (NRC) to increase the core thermal power level of Shearon Harris Nuclear Power Plant (HNP), Unit 1, from 2,900 megawatts thermal (MWt) to 2,948 MWt, an increase of approximately 1.66% over the present licensed power level and to change the power plant technical specifications accordingly.

The NRC staff has reviewed your supplemented information, specifically Section II.2.2.40, "Mass and Energy Releases – FSAR [Final Safety Analysis Report] 6.2.1," of Enclosure 2 to your supplemented letter dated June 23, 2011, that discussed the EPITOME Code error. EPITOME is a code used by Westinghouse in the loss-of-coolant accident (LOCA) long-term mass and energy (M&E) calculation, which supplies input to the containment response. Westinghouse discovered that the computer code (EPITOME) used to generate the M&E inputs for the containment peak pressure analysis contains an error which could result in an increase in the containment pressure and temperature for the double ended pump suction LOCA, including a maximum increase in the peak containment pressure of up to 5 psi and temperature of up to 5.5°F. The licensee states:

HNP power uprate LOCA long-term mass and energy evaluation was predicated on no changes to the existing mass and energy release analysis of record due to the power uprate.

Since the licensee used the EPITOME code in its existing M&E release analysis for HNP, provide information on how this code error affects HNP's containment response analysis for a LOCA, specifically regarding the calculated peak pressure and peak temperature.

Enclosure

W. Jefferson

- 2 -

Please feel free to contact me at 301-415-2020 or by e-mail at brenda.mozafari@nrc.gov if you have any questions on this issue or require additional time to submit your response.

Sincerely,

/RA by FSaba for/

Brenda Mozafari, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-400

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Request for Additional Information

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* By memo

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