



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

December 28, 2011

Christopher 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 – ACCEPTANCE OF REQUESTED LICENSING ACTION REGARDING REALISTIC LARGE BREAK LOSS-OF-COOLANT ACCIDENT (TAC NO. ME6999) (HNP-11-067)

Dear Mr. Burton:

By letter dated August 22, 2011, Carolina Power & Light Company, the licensee, submitted a license amendment request for Shearon Harris Nuclear Power Plant, Unit 1. The amendment request would revise Technical Specification (TS) 6.9.1.6, "Core Operating Limits Report," to add a plant-specific methodology that implements AREVA's Nuclear Regulatory Commission (NRC)-approved topical report, EMF-2103(P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors." The amendment request will also add EMF-2103(P)(A), "Realistic Large Break LOCA [loss-of-coolant accident] Methodology for Pressurized Water Reactors," Revision 2 (or higher, upon approval of the specific revision by the NRC) to the TS 6.9.1.6.2 listing of analytical methods used to determine the core operating limits, and will eliminate extraneous detail in TS 6.9.1.6 that cross references each method to the applicable specifications and parameters of TS Section 3.0

The purpose of this letter is to provide the results of the NRC staff's acceptance review of this license amendment request. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant. An initial confirmation of the NRC staff's acceptance was provided by electronic mail to Mr. John Caves of your staff on September 29, 2011.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license (including the technical specifications) must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

The NRC staff finds that while clearly based on extensive study, significant research, and judicial selection of modeling assumptions, the justification for omission of a clad ballooning and rupture, and fuel pellet relocation model, remains questionable. The complexity of this request will require a significant amount of information to be reviewed. The NRC staff recognizes that

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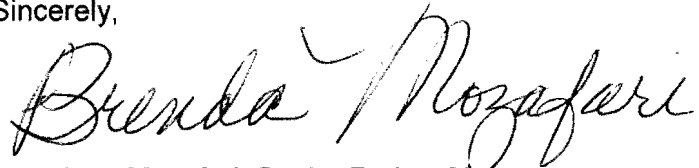
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the requested review schedule for this request is extremely tight and appears to be need-based. Timely support in providing responses to any information requests will be crucial to meeting your requested approval date. However, the NRC notes that, given the complexity and the tie to a topical report currently under review, approval of this request in the timeframe requested may not be achievable.

The NRC staff has reviewed your application and concluded that it provides technical information in sufficient detail to enable the staff to proceed with its detailed technical review and make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements and the protection of public health and safety and the environment. If additional information is need for the NRC staff to complete its technical review, you will be advised by separate correspondence.

If you have any questions, please feel free to contact me, at (301) 415-2020.

Sincerely,

A handwritten signature in black ink that reads "Brenda Mozafari". The signature is written in a cursive style with a large, sweeping initial "B".

Brenda L. 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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*/RA/*

Brenda L. 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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