July 16, 2004

MEMORANDUM TO: James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

FROM: Daniel S. Collins, Senior Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: HOPE CREEK GENERATING STATION, FACSIMILE TRANSMISSION, DRAFT REQUEST FOR ADDITIONAL INFORMATION (RAI) TO BE DISCUSSED IN AN UPCOMING CONFERENCE CALL (TAC NO. MC3093)

The attached draft RAI was transmitted by facsimile on July 15, 2004, to Mr. Paul Duke, PSEG Nuclear LLC (the licensee). This draft RAI was transmitted to facilitate the technical review being conducted by the Office of Nuclear Reactor Regulation (NRR) and to support a conference call with the licensee to discuss the RAI. The RAI was related to the licensee's submittal dated April 27, 2004, concerning a revision of the Safety Limis Minimum Critical Power Ratio values for two recirculation loop and one recirculation loop operation. Review of the RAI would allow the licensee to determine and agree upon a schedule to respond to the RAI. This memorandum and the attachment do not convey or represent an NRR staff position regarding the licensee's request.

Docket No. 50-354

Attachment: Draft RAI

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Docket No. 50-354

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DRAFT-REQUEST FOR ADDITIONAL INFORMATION

REGARDING PROPOSED ALTERNATIVE TO

UTILIZE A RISK INFORMED-INSERVICE INSPECTION PLAN

HOPE CREEK GENERATING STATION

By letter dated April 27, 2004, PSEG Nuclear, LLC (PSEG) submitted a request to amend the Technical Specifications to revise the Safety Limit Minimum Critical Power Ratio (SLMCPR) values for two recirculation loop and one recirculation loop operation. The Nuclear Regulatory Commission staff has been reviewing your submittal and has determined that the following additional information is required to complete our review:

1. Describe the rationale for placing four twice burned type "C" fuel assemblies in the center of the core and twelve once burned type "E" fuel assemblies around the center core in a symmetric core loading pattern of the core design, as shown in Figure 1 of the non-proprietary version of the GNF document.

2. Describe in detail the process of calculating the difference of the SLMCPR value between the current and the next cycle operation in terms of the multiplication of bundle-by-bundle MCPR distribution and the bundle pin-by-pin power/R-factor distribution, the constant "c", and the standard deviation "σ". Also, justify that the equation is still valid for the mixed core from different fuel vendor, and provide the values for the constant "c" and standard deviation "σ" used in the approximation equation for Cycle 13 calculation and identify that the two parameters are constant or fuel dependent.

3. It appears that a higher value of the product of bundle-by-bundle MCPR distribution and the bundle pin-by-pin power/R-factor distribution would result in a higher SLMCPR, i.e., the Cycle 13 value would be larger than that of Cycle 12. Describe the impact on the results of the SLMCPR calculation due to the difference of the product of these two parameters and explain why the Cycle 13 SLMCPR value is much less than Cycle 12 value.

4. Describe in detail the major contributors for the 0.04 reduction of the SLMCPR value with respect to the Cycle 12 value and their bases for the reduction.

5. Provide a description of the power shape during the Cycle 13 operation. Also, in the SLMCPR calculation for Cycle 13 is there any penalty imposed if an upskew power shape occurs at the end of the cycle.

ENCLOSURE