



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

April 26, 2017

Mr. Peter P. Sena, III
President and Chief Nuclear Officer
PSEG Nuclear LLC - N09
P.O. Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION – SUPPLEMENTAL INFORMATION
NEEDED FOR ACCEPTANCE OF REQUESTED LICENSING ACTION
RE: REVISE AND RELOCATE THE PRESSURE-TEMPERATURE LIMIT
CURVES TO A PRESSURE AND TEMPERATURE LIMITS REPORT
(CAC NO. MF9502)

Dear Mr. Sena:

By letter dated March 27, 2017, PSEG Nuclear LLC (PSEG) submitted a license amendment request for Hope Creek Generating Station (Hope Creek). The proposed amendment to the Hope Creek Technical Specifications (TSs) would revise and relocate the Pressure-Temperature Limit Curves to a licensee-controlled Pressure and Temperature Limits Report. The request was submitted in accordance with guidance provided in U.S. Nuclear Regulatory Commission (NRC) Generic Letter 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits," dated January 31, 1996.

The purpose of this letter is to provide the results of the NRC staff's acceptance review of this 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.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an amendment to the license (including the TSs) 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 has reviewed your application and concluded that the information delineated in the enclosure to this letter is necessary to enable the staff to 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.

In order to make the application complete, the NRC staff requests that PSEG supplement the application to address the information requested in the enclosure by April 28, 2017. This will enable the NRC staff to begin its detailed technical review. If the information responsive to the NRC staff's request is not received by the above date, the application will not be accepted for review pursuant to 10 CFR 2.101, and the NRC will cease its review activities associated with

the application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter were discussed with Mr. Paul Duke of your staff on April 26, 2017.

If you have any questions, please contact Carleen Parker at (301) 415-1603 or Carleen.Parker@nrc.gov.

Sincerely,

Handwritten signature of Audrey L. Klett in black ink, with a small 'LAK' monogram to the right.

Audrey L. Klett, Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-354

Enclosure:
Supplemental Information Needed

cc w/encl: Distribution via Listserv

SUPPLEMENTAL INFORMATION NEEDED
AMENDMENT REQUEST REGARDING
REVISION AND RELOCATION OF THE PRESSURE-TEMPERATURE LIMIT CURVES
TO A PRESSURE AND TEMPERATURE LIMITS REPORT
PSEG NUCLEAR LLC
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

By letter dated March 27, 2017,¹ PSEG Nuclear LLC (PSEG) submitted a license amendment request for Hope Creek Generating Station (Hope Creek). The proposed amendment to the Hope Creek Technical Specifications would revise and relocate the Pressure-Temperature (PT) Limit Curves to a licensee-controlled Pressure and Temperature Limits Report (PTLR). The request was submitted in accordance with guidance provided in U.S. Nuclear Regulatory Commission (NRC) Generic Letter (GL) 96-03, "Relocation of the Pressure Temperature Limit Curves and Low Temperature Overpressure Protection System Limits."²

In order to implement a PTLR, requesting licensees are required, among other things, to propose to (1) use NRC-approved methodology to develop the PTLR, (2) describe how the neutron fluence is calculated, and (3) provide the values of neutron fluences that are used in the adjusted reference temperature calculation.

PSEG proposes to implement Revision 1-A to Licensing Topical Report (LTR) SIR-05-044, "Pressure-Temperature Limits Report Methodology for Boiling Water Reactors."³ Regarding reactor vessel neutron fluence, Table 1-1 of the LTR states, "Fluence methods and results must comply with RG 1.190 and have NRC approval for use with this LTR." In the March 27, 2017, license amendment request, PSEG indicates that the fluence calculations were performed using the Radiation Analysis Modeling Application (RAMA) fluence methodology. The description provided is not sufficiently detailed to permit the NRC staff to review the fluence calculations and make a conclusion regarding their adherence to the guidance in Regulatory Guide (RG) 1.190, "Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence," issued March 2001.⁴

In addition, the NRC staff reviewed the Hope Creek licensing basis and determined that the presently approved PT curves are based on General Electric fluence methods, as reviewed and approved by the NRC staff in Hope Creek License Amendment No. 157.⁵ Therefore, the use of the RAMA fluence methodology to develop PT curves is a change in methodology from the current licensing basis at Hope Creek. As such, a detailed review of the RAMA fluence methodology for Hope Creek has not been performed by the NRC staff.

¹ Agencywide Documents Access and Management System (ADAMS) Accession No. ML17086A364

² ADAMS Accession No. ML031110004

³ ADAMS Accession No. ML13277A557

⁴ ADAMS Accession No. ML010890301

⁵ ADAMS Package Accession No. ML043080359

As stated in Office Instruction LIC-109, Revision 2, "Acceptance Review Procedures",⁶ it is the policy of the Office of Nuclear Reactor Regulation to review an application to amend a license for completeness and acceptability for docketing. The quality of a requested licensing action (RLAs) has a significant impact on the amount of NRC staff resources expended in the review process. When an application lacks critical information necessary for the NRC staff to complete its review, an excessive amount of NRC staff time is spent gathering this information. As a result, time spent on RLAs that are unacceptable for review results in longer review periods for the RLA and adversely impacts the resources and schedules of other acceptable RLAs. In accordance with LIC-109, and in conjunction with NRC GL 96-03 and RG 1.190, the NRC staff has completed the acceptance review of the license amendment request and has concluded that the description of the fluence calculations provided do not include sufficient information to enable the NRC staff to make an independent assessment regarding adherence to RG 1.190 guidance.

Attachment 4 to the March 27, 2017, license amendment request provides a reference (Reference 4) to the fluence calculation supporting the PTLR, as follows:

TransWare Report No. EPR-HC1-001-R-002, Revision 0, "Hope Creek Nuclear Generating Station Unit 1 Reactor Pressure Vessel Fluence Evaluation at End of Cycle 19 with Projections to 56 EFPY," March 30, 2016, SI File No. 1600507.201.

Provide the above reference for NRC staff review.

⁶ ADAMS Accession No. ML16144A521

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 (CAC NO. MF9502) DATED APRIL 26, 2017.

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*by e-mail

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NAME	CParker	LRonewicz	RLukes
DATE	04/26/2017	04/25/2017	04/12/2017
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NAME	JDanna	AKlett	
DATE	04/26/2017	04/26/2017	

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