

**Enclosure 6 (6.1, 6.2, and 6.3) Contains Proprietary Information to be
Withheld from Public Disclosure Pursuant to 10 CFR 2.390**

PSEG Nuclear LLC
P.O. Box 236, Hancocks Bridge, NJ 08038-0236



10 CFR 50.90

SEP 12 2016

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LAR H15-01

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Hope Creek Generating Station
Renewed Facility Operating License No. NPF-57
NRC Docket No. 50-354

**Subject: PHASE 2 SUPPLEMENT - LICENSE AMENDMENT REQUEST – DIGITAL
POWER RANGE NEUTRON MONITORING (PRNM) SYSTEM UPGRADE (CAC
NO. MF6768)**

- References
1. PSEG letter to NRC, "License Amendment Request - Digital Power Range Neutron Monitoring (PRNM) System Upgrade," dated September 21, 2015 (ADAMS Accession Nos. ML15265A224 and ML15265A225)
 2. NRC letter to PSEG, " Hope Creek Generating Station, Acceptance of Requested Licensing Action Re: Amendment Request Regarding Digital Power Range Neutron Monitoring System Upgrade," dated December 21, 2015 (ADAMS Accession No. ML15338A182)

In the Reference 1 letter, PSEG Nuclear LLC (PSEG) submitted a license amendment request for Hope Creek Generating Station (HCGS). The proposed amendment would revise the HCGS Technical Specifications to reflect the installation of the General Electric-Hitachi (GEH) digital Nuclear Measurement Analysis and Control (NUMAC) Power Range Neutron Monitoring (PRNM) system. Reference 1 provided the Phase 1 information in accordance with Digital I&C ISG-06 Licensing Process. The attachments and enclosures of this letter provide the ISG-06 Phase 2 supplemental information, plus additional supplemental information, as described below:

- **Enclosure 1: Human Factors Engineering Assessment (Non-Proprietary).** As discussed in References 1 and 2, an assessment of compliance with NUREG-0700 is provided for the PRNM upgrade. This assessment addresses the review elements

SEP 12 2016

Page 2
LR-N16-0113

10 CFR 50.90

identified in NUREG-0711, verifying that human factors engineering (HFE) has been integrated into the PRNM upgrade. The assessment inclusively addresses the two HFE elements of the PRNM Licensing Topical Report (LTR) "Confirmation of Plant-Specific Actions" Items 5 and 6 (Section 4.11 of Attachment 1 of Reference 1). This assessment also includes a description of the procedure development and the administrative controls required for the PRNM upgrade. This document was previously made available (on June 8, 2016) for audit in the PRNM Reading Room portal. (Proprietary version provided in Enclosure 6.3)

- **Enclosure 2: NUREG-0800 Appendix 18-A Assessment.** As discussed in Reference 2, and as part of the public teleconference meetings supporting the review of the PRNM upgrade (Open Item #15), an assessment of manual operator actions credited in the diversity and defense-in-depth analyses is provided for the PRNM upgrade. This document was previously made available (on June 8, 2016) for audit in the PRNM Reading Room portal.
- **Enclosure 3: Phase 2 ISG-06 Enclosure B Roadmap.** A roadmap, or cross-reference, between the ISG-06 Enclosure B document name and the equivalent Phase 2 GEH document is provided. Two variations of the roadmap are included:

1. ISG-06 Enclosure B Item mapped to the HCGS PRNM GEH Document(s)
2. HCGS PRNM GEH Document mapped to the ISG-06 Enclosure B Item(s)

The Phase 2 GEH documents are provided in Enclosure 4.1 (NEDO-33872, Non-Proprietary) and Enclosure 6.1 (NEDC-33872P, Proprietary).

- **Enclosure 4: Non-Proprietary GEH Documents**
 - **4.1: NEDO-33872, Hope Creek Generating Station NUMAC PRNM Upgrade Phase 2 (Non-Proprietary).** The Phase 2 documents associated with the PRNM upgrade are provided (Non-Proprietary).
 - **4.2: NEDO-33864 Appendix B (NEDO-33834), NUMAC Systems Engineering Development Plan (Non-Proprietary).** As discussed in the public teleconference meetings (Open Item #5), the proprietary markings in the Phase 1 NEDC-33864P (NEDO-33864) Appendix B and D are inconsistent. Sections 4.2 and 4.3 in Appendix B are not marked proprietary, but the same information is also provided in Sections 4.2 and 4.3 of Appendix D, where it is marked as proprietary. Appendix B Sections 4.2 and 4.3 should be marked proprietary to match Appendix D. Corrected versions of Appendix B proprietary and non-proprietary are provided (Proprietary in Enclosure 6.2).
- **Enclosure 5: GEH Affidavits supporting the withholding of information in Enclosure 6 from public disclosure**

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Page 3
LR-N16-0113

10 CFR 50.90

- **Enclosure 6: Proprietary Documents**
 - **6.1: NEDC-33872P, Hope Creek Generating Station NUMAC PRNM Upgrade Phase 2 (Proprietary).** The Phase 2 documents associated with the PRNM upgrade are provided (Proprietary).
 - **6.2: NEDC-33864P Appendix B (NEDE-33834), NUMAC Systems Engineering Development Plan (Proprietary).** Corrected proprietary version of Appendix B.
 - **6.3: Human Factors Engineering Assessment (Proprietary)**

Enclosure 6 (6.1, 6.2, and 6.3) contains proprietary information as defined by 10 CFR 2.390. GEH, as the owner of the proprietary information, has executed affidavit(s) (provided in Enclosure 5) identifying that the proprietary information has been handled and classified as proprietary, is customarily held in confidence, and has been withheld from public disclosure. GEH requests that the proprietary information in Enclosure 6 (6.1, 6.2, and 6.3) be withheld from public disclosure, in accordance with the requirements of 10 CFR 2.390(a)(4).

PSEG has determined that the information provided in this submittal does not alter the conclusions reached in the 10 CFR 50.92 no significant hazards determination previously submitted. In addition, the information provided in this submittal does not affect the bases for concluding that neither an environmental impact statement nor an environmental assessment needs to be prepared in connection with the proposed amendment.

No new regulatory commitments are established by this submittal. If you have any questions or require additional information, please do not hesitate to contact Mr. Brian Thomas at (856) 339-2022.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on September 12, 2016
(Date)

Respectfully,



Paul Davison
Site Vice President
Hope Creek Generating Station

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SEP 12 2016

Page 4
LR-N16-0113

10 CFR 50.90

Enclosures

1. Human Factors Engineering Assessment – Non-Proprietary
2. NUREG-0800 Appendix 18-A Assessment, Crediting Manual Operator Actions in the Diversity and Defense-in-Depth Analyses
3. HCGS PRNM Upgrade –ISG-06 Enclosure B Roadmap, Phase 2 Documents
4. Non-Proprietary GEH Documents
 - 4.1 NEDO-33872: Hope Creek Generating Station NUMAC PRNM Upgrade - Non-Proprietary
 - 4.2. NEDO-33864 Appendix B (NEDO-33834), NUMAC Systems Engineering Development Plan - Non-Proprietary
5. GEH Affidavits supporting the withholding of information in Enclosure 6 from public disclosure
6. Proprietary Documents
 - 6.1 NEDC-33872P: Hope Creek Generating Station NUMAC PRNM Upgrade - Proprietary (*Withhold from Public Disclosure Pursuant to 10 CFR 2.390*)
 - 6.2. NEDC-33864P Appendix B (NEDE-33834P), NUMAC Systems Engineering Development Plan – Proprietary (*Withhold from Public Disclosure Pursuant to 10 CFR 2.390*)
 - 6.3 Human Factors Engineering Assessment – Proprietary (*Withhold from Public Disclosure Pursuant to 10 CFR 2.390*)

cc: Mr. D. Dorman, Administrator, Region I, NRC
Ms. C. Parker, Project Manager, NRC
NRC Senior Resident Inspector, Hope Creek
Mr. P. Mulligan, Chief, NJBNE
Mr. L. Marabella, Corporate Commitment Tracking Coordinator
Mr. T. MacEwen, Hope Creek Commitment Tracking Coordinator