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Chief, Rules and Directives Branch  
Office of Administration  
US Nuclear Regulatory Commission  
Mail Stop T-6D59  
Washington, DC 20555-0001

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

Subject: Comments on Draft Environmental Assessment and Finding of No Significant Impact Related to the Proposed Extended Power Uprate (TAC No. MD3002)

Reference: 72 Federal Register 59563 et. seq.

The referenced Federal Register Notice provided a public comment period for the "PSEG Nuclear LLC; Hope Creek Generating Station Draft Environmental Assessment and Finding of No Significant Impact Related to the Proposed License Amendment To Increase the Maximum Reactor Power Level."

PSEG Nuclear appreciates the opportunity to submit comments on the draft. PSEG Nuclear's comments are contained in the Attachment to this letter.

If you have any questions or require additional information, please contact Mr. Edward Keating at (856) 339-7902 or [Edward.Keating@PSEG.com](mailto:Edward.Keating@PSEG.com).

Sincerely,

John F. Perry  
Plant Manager  
Hope Creek Generating Station

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SOUSI Review Complete  
Template = ADM-013

F-RIDS = ADM-03  
Add = J. Lamb (JAL1)

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Attachment

cc: S. Collins, Regional Administrator – NRC Region I  
J. Lamb, Project Manager - USNRC  
NRC Senior Resident Inspector - Hope Creek  
P. Mulligan, Manager IV, NJBNE

## ATTACHMENT 1

### Hope Creek Generating Station

#### Facility Operating License No. NPF-57 NRC Docket No. 50-354

Comments on Draft Environmental Assessment and Finding of No Significant Impact Related to the Proposed Extended Power Uprate (TAC No. MD3002)

**Note:** The following comments on the Draft Environmental Assessment and Finding of No Significant Impact are shown in full paragraph form for convenience with ~~strikeout~~/underline for all changes below. Page numbers refer to the draft assessment transmitted by NRC letter dated October 12, 2007 (Accession No. ML072200141)

#### **Comment 1: (page 7)**

Modify the Cooling Tower Impacts section to more clearly reflect that NJDEP has issued the Title V Air Operating Permit authorizing emissions at 42 lbs/hr upon approval of the USEPA.

The proposed EPU would increase the particulates emission rate from the HCGS cooling tower from the current permitted rate of 29.4 pounds per hour (lbs/hr) to ~~an average~~ rate of 35.6 lbs/hr (maximum 42.0 lbs/hr). Particulates (primarily salts) from the cooling tower have an aerodynamic particle size of less than 10 microns in diameter (PM10). The NJDEP has imposed a maximum hourly emission rate for particulates at 30 lbs/hr. Therefore, the projected particulate emission rate from the HCGS cooling tower, due to the proposed EPU, ~~would~~could exceed the NJDEP emission regulatory limit. On March 30, 2007, NJDEP issued a Public Notice and Draft Title V Air Operating Permit for the HCGS cooling tower, proposing to authorize a variance to the HCGS air operating permit with an hourly emission rate of 42 lbs/hr (NJDEP 2007a). On June 13, 2007, NJDEP issued the final Title V Air Operating Permit for HCGS allowing a 42 lbs/hr particulate emission rate for the proposed EPU upon approval of the State Implementation Plan by USEPA.

#### **Comment 2: (page 11)**

Modify the Discharge Impacts section to reflect that the TDS limits are indirectly in the Title V Air Operating Permit and not in the NJPDES Permit.

Potential impacts to a water body from power plant discharge include increased turbidity, scouring, erosion, sedimentation, contamination, and water temperature. Because the proposed EPU would not increase the amount of cooling tower blowdown discharged to the Delaware Estuary, turbidity, scouring, erosion, and sedimentation would not be expected to significantly impact the estuary. Additionally, the proposed EPU would not introduce any new

contaminants to the Delaware Estuary and would not significantly increase any potential contaminants that are presently regulated by the station's NJPDES permit. The concentration of total dissolved solids (TDS) in the cooling tower blowdown would increase due to the increased rate of evaporation; however, the amount of blowdown discharged to the estuary would decrease, and the concentration of TDS would remain within the station's NJPDES air permit limits.

**Comment 3: (page 12)**

Modify the Discharge Impacts section to reflect that total suspended solids and TOC are not routinely monitored and acute and chronic biological toxicity tests are performed during each NJPDES Permit renewal.

In addition to setting thermal discharge limits, the NJPDES permit also regulates all surface and wastewater discharges from the station. The NJPDES permit, effective March 1, 2003, regulates discharge from six outfalls at HCGS, including the cooling tower blowdown, low volume oily wastewater, stormwater, and sewage treatment; these discharges ultimately flow to the Delaware Estuary. As required by the NJPDES permit, in addition to temperature, cooling tower blowdown is monitored for flow, pH, chlorine produced oxidants (CPOs), ~~total suspended solids, TDS,~~ and total organic carbon. HCGS operates a dechlorination system that utilizes ammonium bisulfate to reduce CPOs in the blowdown. Furthermore, acute and chronic biological toxicity tests were routinely performed on cooling tower blowdown from 1998 through 2001 and are performed at each NJPDES Permit renewal to comply with NJDEP non-toxicity regulations (PSEG 2005).

**Comment 4: (page 16)**

Modify the Impacts on Aquatic Biota section, Table 1, to reflect that Atlantic Croaker are considered to be a single Atlantic coast stock.

Atlantic Croaker

*Micropogonias undulatus*

Drum family. ~~Delaware Estuary stock may be single population~~ Atlantic coast population is considered a single stock. Recreational and commercial species.

**Comment 5: (page 17)**

Modify the Impacts on Aquatic Biota section to identify inland silversides instead of tidewater silversides.

HCGS is located in the Delaware Estuary between the Delaware River upstream and the wide Delaware Bay downstream. Estuaries are drowned river valleys where fresh water from rivers mixes with the higher salinity water of the ocean and bays. In estuaries, salinity and water temperature may change with season, tides, and meteorological conditions. Typically, few species are resident in an estuary all of their lives, perhaps because surviving the wide variations in salinity

and temperature poses physiological challenges to fish and invertebrates. The predominant resident fish species in the Delaware Estuary are hogchoker (*Trinectes maculatus*), white perch (*Morone americana*), bay anchovy (*Anchoa mitchelli*), Atlantic and ~~tidewater~~inland silversides (*Menidia menidia* and *M. peninsulaeberyllina*, respectively), naked goby (*Gobiosoma bosc*), and mummichog (*Fundulus heteroclitus*).

**Comment 6: (page 20)**

Modify the Impacts on Aquatic Biota section to reflect the extensive biological monitoring program at the adjacent Salem Generating Station, reflect the potential escape mechanism at the intake based on the low intake velocity, and change “no environmental monitoring” to “no intake aquatic monitoring”. There are extensive environmental monitoring programs in place at HCGS.

While the identity of species potentially affected by entrainment, impingement, and heat shock may be inferred from ecological information about the Delaware Estuary and the adjacent Salem Generating Station, the species affected cannot be verified, and the numbers cannot be quantified because no ~~environmental~~intake aquatic monitoring programs are conducted at the HCGS. Impinged organisms are ~~most likely to~~may die, and the fish-return system does not function continuously to minimize mortality, but the intake velocity should allow most to escape the plant. All organisms entrained at HCGS, which operates a cooling tower, are probably killed from exposure to heat, mechanical, pressure-related stresses, and possibly biocidal chemicals before being discharged to the estuary.

**Comment 7: (page 26)**

Modify the Radioactive Waste Stream Impacts section to remove the redundant use of the word “waste”.

The licensee has indicated that operation at EPU conditions would not result in any changes in the operation or design of equipment in the radioactive waste solid waste, liquid waste, or gaseous waste management systems (GWMS).

**Comment 8: (page 26)**

Modify the Gaseous Radioactive Waste and Offsite Doses section to reflect values in Table 5-3 of PSEG's Environmental Report for EPU.

During normal operation, HCGS's GWMS processes and controls the release of gaseous radioactive effluents to the environment. The GWMS includes the off-gas system and various building ventilation systems. The radioactive release rate of the gaseous effluent is well monitored and administratively controlled by the HCGS ODCM (PSEG 2005). The single year highest annual releases of

gaseous radioactive material, for the time period 2000-2004, were ~~6.3963.0~~ Curies (Ci) for noble gases in 2003, ~~0.00600.060~~ Ci for particulates in 2000, and 0.014 Ci for iodines in ~~2004~~2003 (PSEG 2005).

**Comment 9 (page 30)**

Modify the Offsite Radiation Doses section to reflect the information contained in section 5.2.1 of PSEG's Environmental Report for EPU.

The licensee estimated that the offsite radiation dose from skyshine would increase linearly with the increase in power level from the EPU (~~15 percent~~)approximately 16% for a 20% increase in steam flow, which bounds the proposed EPU;

**Comment 10: (page 33)**

Modify the Summary section, Table 3, to reflect only those values that were discussed in the main text.

**Gaseous Radiological Effluents**

Increased gaseous effluents (~~20 percent~~) would remain within NRC limits and dose design objectives.

**Solid Radioactive Waste**

Increased amount of solid radioactive waste generated (14.7 percent by volume & ~~20 percent by radioactivity~~) would remain bounded by evaluation in the FES.