

PSEGESPCEm Resource

From: Brian Quinn [Brian.Quinn@dep.state.nj.us]
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To: Fetter, Allen
Subject: Salem/Hope Creek Additional Nuclear Reactors Early Site Permit/Environmental Site Report
Attachments: Environmental Site Permit (Environmental Report) comment letter.doc; Environmental Site Permit (Environmental Report) supplemental Dredging comment letter.doc

I am requesting via e-mail that NRC consider my attached letters to PSEG on the ESP application as it contains some comments that are germane to the scoping process.

Thank You,

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September 15, 2010

Jeffrey J. Pantazes
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**RE: Early Site Permit/Environmental Site Report for up to Two Additional Nuclear Units
at Salem and Hope Creek Generating Stations
Lower Alloways Creek, Salem County
NRC Docket # 52-043**

Dear Mr. Pantazes,

The Office of Permit Coordination and Environmental Review of the New Jersey Department of Environmental Protection (NJDEP) has coordinated the review and comments by the applicable programs within the Department and compiled their responses herein for the Early Site Permit/Environmental Site Report for up to Two Additional Nuclear Units at Salem and Hope Creek Nuclear Generating Stations in Lower Alloways Creek, Salem County. We offer the following comments.

COMMENTS

BUREAU OF NUCLEAR ENGINEERING

Comments:

Page 13 of 136 – Land Use Impacts

“All necessary permits and authorizations will be obtained and appropriate environmental controls implemented (e.g., storm-water management systems, groundwater monitoring wells, and spill containment controls) prior to commencement of earth disturbing activities. Site preparation and construction activities affecting land use include clearing, grubbing, grading, excavating, and

stockpiling of soils. Soil management is an important element of construction sequencing. Materials excavated from the power block area will be stockpiled and/or disposed of on-site, or otherwise evaluated for reuse/disposal, potentially under a beneficial use determination (BUD), per NJDEP requirements as appropriate.”

Comment: The NJBNE is requesting split samples from any new groundwater monitoring wells installed in association with the new facility. The sampling of these new wells should be added to the existing licensee sampling plan and Groundwater Protection Program (GWPP). In addition, a one-time composite soil core boring sample from any new well is requested by the NJBNE. Initial sampling provides a baseline history prior to plant operation.

Page 24 of 136 – Hydrological Alterations

“Development of these areas resulting in the loss of the artificial ponds will result in localized runoff that is collected in engineered detention basins, and conveyed to the Delaware River.”

Comment: The NJBNE is requesting split samples of surface water from any new engineered basin as part of the pre-operational stage. Initial sampling provides a baseline history prior to plant operation.

In addition, the licensee should investigate whether the retention basins (being added as monitoring locations for non-radiological measurements such as Total Suspended Solids, Total Organic Compounds, pH, etc) need to be added to the Department’s NJPDES Permit for Discharge to Surface Water.

Page 27 of 136 – Hydrological Alterations

“Dredged material removed as part of this construction activity will be transported to and placed in an on-site or other approved upland disposal facility.”

Does the licensee plan on expanding the REMP program be expanded to include air particulate/iodine monitoring, surface water runoff, or soil sampling in the area of this CDF (if on-site area is used for materials)? An air monitoring site should be placed downwind of the CDF based on annual meteorological direction (SE). Also, will there be expanded ground water monitoring in the vicinity of the CDF?

Once complete sampling locations near the intake and discharge canals will be needed, especially for media such as aquatic biota and sediment. Since the structures are upstream in the Delaware, PSEG will need to rethink their exiting collection location north of the plant that is considered, ‘control’. This site may need to be moved further upstream.

Page 12 of 42, Section 6 – Environmental Measurements and Monitoring Programs

6.2.2.1 Radiological Monitoring Program

“The existing PSEG REMP serves as the new plant construction/preoperational radiological monitoring program. Additional on-site thermoluminescent dosimetry (TLD) monitoring locations will be added to the north of the HCGS to support the ODCM/REMP for the construction and preoperational period. A description of the new monitoring locations and other applicable parameters will be provided in the combined license (COL) application.”

Comment: The NJBNE requests that the licensee establish a Groundwater Protection Program for the proposed site at the construction/pre-operational stage rather than waiting for the operation of the facility. During the construction phase, there will be knowledge as to where all applicable tanks and pipes are going to be located, along with buildings containing radioactive fluids and areas of further investigation for potential tritium in groundwater.

Page 13 of 42, Radiological Environmental Monitoring Program, Table 6.2-1

Comment: The NJBNE is requesting that the licensee consider increasing the REMP sample frequency from quarter annual to monthly, based on the public interest of tritium contamination in groundwater in New Jersey. Samples of groundwater, including local drinking water wells, are collected in order to provide assurance to the public that these water resources are not impacted.

Page 22 of 42, Meteorological Monitoring

Comment: Is there any concern with the existing cement pad for the main meteorological tower with regard to stress cracks and integrity? When was the last inspection of the tower pad performed?

AIR QUALITY PERMITTING

The Bureau of Air permit has reviewed the proposed Early Site Permit application for the proposed Nuclear Reactor Units at Salem and Hope Creek Generating Stations. The new plant is proposed to have supporting equipment such as cooling towers; auxiliary boilers, emergency diesel generators and/or combustion turbines that emit air pollutants. The application gives details of the expected size of each piece of equipment, the stack height and emissions from the equipment. These equipment will be subject to Federal and State Air Pollution Control Regulations and requires air pollution control permits. PSEG Nuclear will be required to submit a permit modification to incorporate these equipment and their associated emissions in the existing Title V Air Operating Permit for Hope Creek and Salem Generating Stations.

AIR QUALITY MODELING

The Bureau of Technical Services (BTS) has reviewed the air quality modeling sections of the proposed Early Site Permit application for the proposed Nuclear Reactor Units at Salem and Hope Creek Generating Stations. These sections briefly describe the results of a preliminary analysis of the air quality impacts of the proposed changes.

The new equipment being proposed that emit air pollutants (cooling towers; auxiliary boilers, emergency diesel generators and/or combustion turbines) will require a detailed modeling analysis of their impact on sulfur dioxide, nitrogen oxides, PM-10, and PM-2.5 air quality. This modeling must be part of their air permit application that incorporates the new equipment into the existing Title V Air Operating Permit for Hope Creek and Salem Generating Stations. Prior to submittal of the modeling analysis, a modeling protocol which describes the techniques and modeling assumption which will be used should be submitted to BTS prior to submittal of the modeling analysis. Note that the modeling analysis must address the new 1-hour sulfur dioxide National Ambient Air Quality Standard.

AIR QUALITY PLANNING

1) Part 3, Environmental Report, Chapter 1, Page 1.3-9, Table 1.3-2 Authorizations Required for Preconstruction, Construction, and Operation Activities

The Early Site Permit (ESP) states that, the requirements of the Federal Clean Air Act (42 USC 7401) for this project include a Title V Operating Permit and a Prevention of Significant Deterioration Preconstruction Permit.”

Comment

Section 40 CFR 93.150 (a) (Prohibition) of the Federal General Conformity regulation states, “ No department , agency or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license or permit, or approve any activity which does not conform to an applicable implementation plan.”

Also, Section 40 CFR 93.150 (b) of the Federal General Conformity regulation states, “A Federal agency must make a determination that a Federal action conforms to the applicable implementation plan in accordance with the requirements of this subpart before the action is taken.” The Federal General Conformity regulation requires that a General Conformity Applicability Analysis for ozone (Volatile Organic Compounds (VOCs) and Oxides of Nitrogen (NOx)) and if necessary a Conformity Determination is needed for this project.

In addition, Sections 93.153(b) and (1) (Applicability) in the Federal General Conformity regulation states, "...a conformity determination is required for each criteria pollutant or precursor where the total direct or indirect emissions of the criteria pollutant or precursor in a nonattainment or maintenance area caused by a Federal action would equal or exceed any of the rates in paragraphs (b) (1) of this section." Under the 1-hour Ozone National Ambient Air Quality Standards (NAAQS), the Philadelphia-Wilmington-Atlantic City (PA-DE-MD-NJ) nonattainment area was classified as a "severe" nonattainment area. Under this classification, the de minimis level for Oxides of Nitrogen (NOx) is 25 tons per year (tpy) and the de minimis level for Volatile Organic Compounds (VOCs) is 25 tpy. The State of New Jersey continues to be in nonattainment for the 8-hour ozone NAAQS. In order to prevent backsliding and to meet the goal of the Clean Air Act (42 U.S.C. 7502(e)) to achieve attainment of the Ozone NAAQS, it is necessary to use the de minimis emissions levels established for General Conformity projects under the 1-hour Ozone NAAQS at (40 CFR 93.153(b)(1). When preparing the Applicability Analysis, please use the de minimis levels for the 1-hour Ozone NAAQS.

In addition, Section 93.158 (d) of the Federal General Conformity regulation states, “Any analyses required under this section must be completed, and any mitigation requirements necessary for a finding of conformity must be identified before the determination of conformity is made.” A mitigation plan will be required for criteria pollutant emissions and precursors above the 1-hour de minimis levels.

2) Part 3, Environmental Report, Chapter 2 Page, 2.2-7, 2.2.3.4 Proposed Access Road

The ESP states, “Additional access road capacity is necessary to address future transportation needs for the PSEG Site. This access road is conceptually designed as a three-lane causeway to be constructed on elevated structures for its entire length through the coastal wetlands.”

Comment

Comment 1 (above) also applies to this portion of the project.

**3) Part 3, Environmental Report, Chapter 4, Page 4.2-3
4.2.1.1.2 Land Construction**

The ESP states, “Site preparation and construction activities will be conducted in accordance with federal, state, and local regulations, as appropriate. Necessary permits and authorizations will be obtained and appropriate environmental controls implemented (e.g. stormwater management systems, groundwater monitoring wells, and spill containment controls) prior to commencement of earth disturbing activities.”

Comment

Please see comment 1 for a description of one of the Federal regulations that is applicable to this project.

**4) Part 3, Environmental Report, Chapter 4, Page 4.4-2,
4.4.1.1.1 On-site Construction Activities**

The ESP states, “An increase in daily traffic (up to 3150 construction worker vehicles and 50 trucks) is expected during peak construction along roads passing through Elsinboro and Lower Alloways Creek Township and Salem City. The composition of this traffic includes passenger cars and light-duty trucks of the construction workforce, as well as truck traffic for delivery of construction materials and heavy equipment used to support facility construction (e.g. excavators, bulldozers, heavy haul trucks, cranes, etc). Potential effects of this daily traffic are considered as indirect impacts associated with on –site construction activities.”

Comment

Comment 1 (above) also applies to this portion of the project.

**5) Part 3, Environmental Report, Chapter 4, Page 4.4-2,
4.4.1.1.1.2 Off-Site Construction Activities**

The ESP states, “The proposed causeway and potential new transmission line are the major off-site new plant elements.”

Comment

Comment 1 (above) also applies to this portion of the project.

**6) Part 3, Environmental Report, Chapter 4, Page 4.4-2,
4.4.1.1.2.1 Proposed Causeway**

The ESP states, “Construction of the proposed causeway and any improvements of connecting roadways may expose residents of this and other nearby buildings to temporary and intermittent increases in noise, dust, and air pollution emissions associated with these activities.”

Comment

Comment 1 (above) also applies to this portion of the project.

**7) Part 3, Environmental Report, Chapter 4, Page 4.4-4,
4.4.1.1.2 Borrow Pits**

The ESP states, “To the extent possible, this fill material comes from within the PSEG site boundaries. If additional off-site fill material is required, it is expected to come from existing permitted borrow areas such as those used in the construction of HCGS.”

Comment

Comment 1 (above) also applies to this portion of the project.

**8) Part 3, Environmental Report, Chapter 4, Page 4.4-6
4.4.1.3 Dust and Other Emissions**

The ESP states, “Construction activities result in increased air emissions. Earthmoving and material handling activities may generate fugitive dust and fine particulate matter. Vehicles and engine-driven equipment (e.g. generators and compressors) generate combustion product emissions such as carbon monoxide, nitrogen oxides and, to a lesser extent, sulfur dioxides. Painting, coating and similar operations also generate emissions from the use of volatile organic compounds.”

Comment

Comment 1 (above) also applies to this portion of the project.

**9) Part 3, Environmental Report, Chapter 4, Page 4.6-2,
4.6.2 Adverse Environmental Impacts**

The ESP states, “Upon receipt of an ESP permit, PSEG may choose to obtain a Limited Work Authorization (LWA) to carry out site preparation and preconstruction activities. Additionally, site preparation activities, some excavation work, and construction of support buildings, roads, fences, parking lots, potable water systems, and other nonsafety-related facilities may be initiated prior to receipt of a combined license (COL). These preconstruction activities can be carried out prior to issuance of a COL and are separated from NRC-regulated construction activities.”

Comment

Comment 1 (above) also applies to this portion of the project.

**10) Part 3, Environmental Report, Chapter 4, Page 4.6-4
4.6.3 Measures and Controls to Limit Adverse Impacts**

The ESP states, “In addition to the general measures discussed above, the following specific factors limit potential adverse environmental impacts related to construction activities at the PSEG Site: compliance with federal, state, and local laws, ordinances, and regulations intended to prevent or minimize adverse environmental effects (for example, solid waste management, erosion and sediment control, air emissions...)”

Comment

Please see comment 1 for a description of one of the Federal regulations that is applicable to this project.

**11) Part 3, Environmental Report, Chapter 4, Page 4.6-12 to 4.6-1
Table 4.6-1 Summary of Measures and Controls to Limit Adverse Impact During Construction**

Table 4.6-1 (Socioeconomic Impacts –Physical Impacts) of the ESP indicates that, “the adverse impacts include exposure to fugitive dust, exhaust emissions, and vibrations. The specific measures and controls include best management practices for controlling fugitive dust and proper maintenance of construction equipment for controlling emissions.”

Comment

Comment 1 (above) also applies to this portion of the project.

**12) Part 3, Environmental Report, Chapter 5, Page 5.5-3
5.5.1.3 Impacts of Discharges to Air**

The ESP states, “The new plant will comply with all regulatory requirements of the Clean Air Act, including requirements of the NJDEP Division of Air Quality and Delaware Department of Natural Resources and Environmental Control, Division of Air and Waste Management, thereby minimizing any impacts on state and regional air quality.”

Comment

Please see comment 1 for a description of one of the Federal regulations that is applicable to this project.

**13) Part 3, Environmental Report, Chapter 5, Page 5.6-1
5.6.1 Terrestrial Ecosystems**

The ESP states, “Transmission needs for the new plant include two or three new on-site transmission lines crossing between two proposed switchyards on the PSEG Site and a potential off-site transmission line.”

Comment

Comment 1 (above) also applies to this portion of the project.

14) Part 3, Environmental Report, Chapter 10, Page 10.1-5
Table 10.1-1 Construction-Related Unavoidable Adverse Environmental Impacts

Table 10.1-1 of the ESP indicates that the adverse land use impacts include construction of the new plant and causeway which will impact 500 acres of predominantly disturbed or otherwise degraded land. The mitigation measures in Table 10.1-1 states that construction activities will comply with all relevant federal, state, and local regulatory requirements, including BMPs and stormwater management plans to control erosion and runoff.

Comment

Comment 1 (above) also applies to this portion of the project. Please see comment 1 for a description of one of the Federal regulations that is applicable to this project.

15) Part 3, Environmental Report, Chapter 10, Page 10.1-11
Table 10.1-1 Construction-Related Unavoidable Adverse Environmental Impacts

Table 10.1-1 of the ESP indicates that the atmospheric and meteorological impacts of the project include an increase in dust and emissions from construction equipment and construction workforce vehicles occurs. The mitigation measures in Table 10.1-1 include BMPs for controlling fugitive dust and proper maintenance of construction equipment and vehicles is used to control air emissions.”

Comment

Comment 1 (above) also applies to this portion of the project.

DIVISION OF LAND USE REGULATION

The Division of Land Use Regulation has received the PSEG Early Site Permit (ESP) application and has determined that the project will require permits.

PSEG Power, LLC and PSEG Nuclear, LLC have submitted an application to the U.S. Nuclear Regulatory Commission (NRC) for an ESP for the development of up to two additional nuclear units on the PSEG site, which already contains the Salem and Hope Creek Generating Stations. Elements of the project under consideration include a new nuclear plant with a new intake structure and barge mooring area; a new access causeway; and new transmission lines. Approval of the ESP represents acceptance of a proposed site and does not allow PSEG to begin construction. Construction permits are required separately and independently of the ESP and must be obtained from all Federal, State and local authorities, including the Department.

As proposed, the project will require a CAFRA Individual Permit, Coastal Wetlands Permit, Waterfront Development Permit and Freshwater Wetlands Individual Permit from the Division. These permits must be obtained prior to any construction activities on the site related to the project described above. The Division has issued a consistency determination for the project that was sent to PSE&G representatives on July 19, 2010.

DIVISION OF FISH AND WILDLIFE

The New Jersey Division of Fish & Wildlife (DFW) continues to be concerned with the issue of impingement and entrainment of the eggs, larval forms, juveniles and adults of the fish, shellfish and other invertebrate species which exist in the Delaware River Estuary.

Six species of invertebrates occurring near the PSEG Site have been harvested commercially in NJ to include - blue crab, eastern oyster and other shellfish.

Part 3, Environmental Report, CHAPTER 6, ENVIRONMENTAL MEASUREMENTS AND MONITORING PROGRAMS, 6.5.3.2 Aquatic Ecology – includes proposals for monitoring programs to include impingement sampling and entrainment sampling at the new intake for fish and shellfish species.

At present the 1995 – 2009 BIOLOGICAL MONITORING PROGRAM ANNUAL REPORT; include data on finfish and blue crabs. The DFW feels that data on shellfish should be included in this report and in the pre-application, construction, pre-operational and operational monitoring.

The possible additional withdrawal of 78,196 gpm from the Delaware River for the CWS and SWS only adds to the existing concerns the DFW has for the impingement and entrainment of the eggs, larval forms, juveniles and adults of the fish, shellfish and other invertebrate species which exist in the Delaware River Estuary.

BUREAU OF WATER ALLOCATION

The Bureau of Water Allocation (BWA) has reviewed the Environmental Report (ER) submitted with PSE&G Early Site Permit (ESP) application for a proposed nuclear electric generating plant located adjacent to the existing Hope Creek Generating Station (HCGS) and Salem Generating Station, Units 1 and 2 (SGS) in Lower Alloways Creek Township, Salem County, New Jersey (NJ).

A specific reactor technology has not yet been selected. However, the design characteristics of four reactor technologies under consideration were used to establish a plant parameter envelope (PPE) (Site Safety Analysis Report [SSAR] Section 1.3). While issuance of the ESP does not authorize construction and operation of any new nuclear power units, this ER analyzes the environmental impacts that could result from the construction and operation of one or two new nuclear power units at the PSEG site. These impacts are analyzed to determine if the site is suitable for the addition of the new nuclear plant, and whether there is an alternative site that is environmentally preferable to the proposed site.

PSEG has not yet selected a specific reactor(s) technology. Four different technologies are under consideration including:

- Advanced Passive 1000 (AP1000)
- U.S. Evolutionary Power Reactor (U.S. EPR)
- Advanced Boiling Water Reactor (ABWR)
- U.S. Advanced Pressurized Water Reactor (US-APWR)

This ESP application uses a PPE approach that encompasses all four reactor technologies (SSAR Section 1.3). The ESP analyzes the environmental impacts of the four reactor technologies using

either one unit (U.S. EPR, ABWR, or U.S. APWR) or two units (AP 1000) at the PSEG site. Since a specific reactor technology has not been selected, the environmental impact analyses are based on reactor bounding conditions derived from detailed reactor information supplied by the vendors. The total bounding PPE value for the new plant is 6830 gross megawatts thermal (MWt) (SSAR Table 1.3-1 Item 17.3) and 2200 MWe net. Section 3.2, Reactor Power Conversion System, provides additional information on these reactor technologies.

The new plant uses a recirculating (closed-cycle) cooling water system that includes natural draft, mechanical, or fan-assisted natural draft cooling towers. A new shoreline intake structure supplies makeup water from the Delaware River to the new plant. A new discharge structure conveys cooling tower blowdown to the Delaware River in conformance with New Jersey Pollutant Discharge Elimination System (NJPDES) permit requirements. Section 3.4, Cooling System, provides additional detail on the intake, discharge, and cooling tower components of the plant cooling system.

In accordance with Water Supply Management Act, N.J.S.A. 58:1A-1 et seq. and its supporting regulations N.J.A.C. 7:19-1 et seq. the following will be required from BWA:

A Water Allocation Temporary Dewatering Permit will be required for construction dewatering where the dewatering rate is 100,000 gallons per day for more than 30 days in a consecutive 365-day period. If the dewatering period is 30 days or less, a Permit by Rule will suffice. A Dewatering Permit by Rule may be applicable if the dewatering occurs from within a coffer dam.

The current Water Allocation Permit, No. 2216P requires modification to allow additional ground water use for the new plant. Included with such a request for major modification of the Water Allocation Permit will be a Hydrogeologic Report prepared in accordance with GSR-29 Guidelines pursuant to N.J.A.C. 7:19-22(c).

The site is located in the Salem/Gloucester County USGS Study Area south of Critical Area No. 2. Increases in withdrawals from the PRM Aquifer are being reviewed by BWA due to concerns with safe yield and salt water intrusion. The results of the USGS study are anticipated this year and may significantly limit the availability of additional supply from the PRM.

The amount of water needed will depend upon the reactor(s) technologies used. The surface water intake(s) are not regulated by BWA since the surface water intake(s) are located south of the Delaware Memorial Bridge at River Mile (RM) 69. However, the Delaware River Basin Commission (DRBC) should be contacted to determine if their review of this project is required.

Well Drilling Permits for construction dewatering wells, permanent water supply wells and closure of abandoned wells will be required from the Bureau of Water Systems and Well Permitting (BWS&WP).

BWA anticipates that its portion of a pre-application meeting would require approximately 1.5 hours. In addition, a representative of the New Jersey Geologic Survey (NJGS) would need to be present at the meeting (NJGS contact Jim Boyle).

Prior to any meeting, the BWA requests that the following information be provided:

- Anticipated allocation limits in gallons per minute (gpm), million gallons per month (mgm), and million gallons per year (mgy)
- Anticipated source of supply (aquifer) and quantity of water to be diverted from each source (gpm, mgm, and mgy).
- GIS mapping depicting source locations.
- A general discussion of proposed aquifer testing or basis for an aquifer testing waiver.

BUREAU OF SURFACE WATER PERMITTING

General Comments

The permittee included various estimates of projected impingement and entrainment values for the proposed system. Impingement and entrainment can be assessed by a wide variety of tools and it is not possible to comment on the accuracy of these estimates without understanding more regarding the underlying assumptions. However, as noted above, the Department supports the use of closed-cycle cooling as best technology available to minimize water withdrawal rates.

The Department recognizes that the proposed closed cycle cooling system using cooling towers and a low intake velocity of less than 0.5 feet per second constitutes the best technology available for minimizing impingement and entrainment impacts under Section 316(b) of the Clean Water Act.

Specific Comments

The Department takes issue with the following statement on page 5.2-7:

"NJDEP has issued a discharge permit for the SGS (reference 5.2-7) and determined that the SGSs thermal plume, including the maximum temperature, does not impact the balanced indigenous community...."

Rather, the Department stated the following in its June 29, 2001 NJPDES permit for PSEG-Salem:

"Therefore, based on a review of the current data and modeling pertaining to the thermal plume as well as the biothermal assessment, the Department has determined that a variance under Section 316(a) is warranted. A thermal discharge at the Station, which does not exceed a maximum of 115o F (46.1o C) is expected to assure the protection and propagation of the balanced indigenous population. These effluent limitations for temperature are set forth in Part III-B/C as described previously. In addition, effluent limitations are also retained for heat in this proposed renewal permit (applied to Units 1 and 2). "

Specifically, the Department did not include a statement in said permit that PSEG does not impact the balanced indigenous community.

HISTORIC PRESERVATION OFFICE

The New Jersey Historic Preservation Office (HPO) is currently in consultation with the Nuclear Regulatory Commission (NRC), and other interested parties, regarding the proposed Hope Creek/Salem Nuclear Power Station expansion project pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations 36 CFR part 800. Through ongoing consultation, this undertaking has identified underwater and terrestrial archaeological sites, as well

as, historic properties within the physical and visual area of potential effects. Additional investigations are on-going. If historic properties will be adversely affected by the undertaking, NRC, through consultation, shall work to avoid, minimize, and/or mitigate those effects pursuant to the Section 106 process.

Thank you for giving the New Jersey Department of Environmental Protection the opportunity to comment on the DEA.

Sincerely,

Scott Brubaker, Director
Office of Permit Coordination
and Environmental Review

C: Marilyn Lennon, NJDEP
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December 10, 2010

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RE: Early Site Permit/Environmental Site Report for up to Two Additional Nuclear Units at Salem and Hope Creek Generating Stations Supplemental Comments Lower Alloways Creek, Salem County NRC Docket # 52-043

Dear Mr. Pantazes,

The Office of Permit Coordination and Environmental Review of the New Jersey Department of Environmental Protection (NJDEP) is submitting the following supplemental comments to our original comment letter on the Early Site Permit/Environmental Site Report for up to Two Additional Nuclear Units at Salem and Hope Creek Nuclear Generating Stations in Lower Alloways Creek, Salem County.

COMMENTS

OFFICE OF DREDGING AND SEDIMENT TECHNOLOGY

The Office of Dredging and Sediment Technology's (ODST) primary overall concern is that the final "product" of the Early Site Permit Application (ESPA) process could be a conclusion that the PSEG Salem site is suitable for the construction and operation of a new nuclear power facility, with the resulting future inability of the NJDEP (or anyone else) to raise any concerns about potential environmental impacts of the proposed project. This is because all environmental impacts concerns are supposed to be addressed in the ESPA process - but they have not (at least in the application documents developed to date).

Further, this is problematic because many of the detailed analyses needed to evaluate the potential impacts of the proposed project are to be conducted as part of future State and federal permit review processes. Likewise, the development of potential measures to mitigate identified impacts are also relegated to future State and Federal permitting processes. Thus, it is not clear if "approval" of the construction and operation of a new nuclear power facility at the Salem site via the ESPA process would preclude the ability of NJDEP (and other regulatory agencies) to deny issuance of any required permits based on environmental impact concerns.

In part, this is due to a lack of specifics concerning the proposed project (reactor design, the need for an off-site transmission line, etc.). However, more detailed, site-specific analyses could be conducted as part of the ESPA process at a level sufficient for a preliminary determination that the site is suitable for use. Issuance of a CZM Consistency Determination by the NJDEP for the project would essentially constitute such a determination. However, as highlighted below in **Comment A**, although PSEG is seeking a CZM Consistency Determination from NJDEP as part of the ESPA process, the information in the ESPA documents submitted to date is incomplete and not at level sufficient to issue such a determination.

Below please see the comments on the above referenced document received by the NJDEP Office of Dredging and Sediment Technology, focusing solely on issues relating to dredging and dredged material management activities:

A - PSEG is seeking a Coastal Zone Consistency Determination from NJ as part of the ESPA process (Environmental Report, Section 1.3, page, 1.3-1). The Department's CZM review must consider the potential impacts resulting from dredging and dredged material management activities associated with the proposed project.

B - The ESPA includes only a cursory and simplistic evaluation of the potential impacts to the aquatic ecosystem (water quality, biota, wetlands, etc.) that could result from the construction and operation of the proposed project (Chapter 3 of the Environmental Report). Likewise, measures to mitigate such impacts are described in only a general manner. In general, the detailed evaluation of potential impacts is relegated to future permit and other approval actions.

(1) SSAR, Section 1.2.1, page 1.2-1, para. #1 and para. #2: states that PSEG is planning to acquire 85 acres of land, located immediately north of the Hope Creek Generating Station, from the United States Army Corp of Engineers (USACE). This land is part of the Artificial Island Upland Confined Disposal Facility (CDF) used by the USACE for the disposal of sediments dredged from the Delaware River. The document also notes that the specific timing of this acquisition is not known. Paragraph #2 states that PSEG will obtain a lease on the remaining portion (~ 45 acres - see Section 1.2.2) of the upland CDF for temporary (duration unspecified) construction purposes. [Note: also see ER Sections 2.1.1, 2.2.1.1, and 2.8.1.2.]

The potential impacts of these acquisition and lease activities on the future dredged material disposal capacity available to the USACE for deepening and maintenance dredging activities needs to be evaluated. If acquisition of/leasing this land by PSEG will result in the need for the

USACE to develop additional upland CDFs to meet its dredged material disposal needs, this indirect/cumulative impact of the proposed PSEG project must be evaluated.

(2) SSAR, Section 2.1.2.1, page 2.1-2, para. #2: indicates that the use of 146 acres of land currently owned by USACE may ultimately be controlled by PSEG. See Comment #1 - potential impacts of such "PSEG use control" of this land on the USACE's dredged material disposal capacity should be addressed.

(3) SSAR, Section 2.1.2.2, page 2.1-3, paras. #2 and #3: see Comments #1 and #2.

(4) Environmental Report [ER], Section 1.2.2, page 1.2-1, para. #2: see Comments #1 and #2.

(5) ER, Table 1.3-1, page 1.3-4: use of the USACE Artificial Island CDF, and any other dredging or dredged material management activities, associated with the proposed project must be evaluated as part of the CZM Consistency, Clean Water Act Section 401, and NJ Waterfront Development Permit review processes. The NJDEP Office of Dredging and Sediment Technology (Site Remediation Program) will be the NJDEP lead on such evaluations.

(6) ER, Section 3.0, page 3.0-1, paras. #2 and #3: see Comments #1 and #2.

(7) ER, Section, 4.1.1.1, page 4.1-4, para. #2: states that PSEG use of 45 acres of the USACE Artificial Island Upland CDF will not impact the use of the remaining portion of the facility. Additional evaluation is needed to verify this statement.

(8) ER Section 4.1.2.2, page 4.1-7: indicates that dredged material from the USACE Artificial Island CDF and from dredging activities associated with the "intake and barge facility areas" would be used as fill material on-site.

At a May 9, 2010 meeting with the NJDEP, PSEG representatives indicated that dredging of ~975,000 cubic yards of sediments from the Delaware River would be needed to support the project - this has apparently been reduced to ~ 590,000 CY (see Comment #9). All dredging and dredged material management activities associated with the construction of the proposed project must be described and comprehensively evaluated. This would include testing of dredged material consistent with the requirements of the 1997 NJDEP Dredging Technical Manual. The documents submitted in support of the ESPA barely discuss dredging and dredged material aspects of the proposed project. Section 2.3.1 of the Environmental Report only briefly summarizes some Delaware River sediment samples collected in the vicinity of the project site and subjected only to grain size analyses.

Dredging and dredged material management activities will also require a variety of permits from the NJDEP, including a CZM Consistency Determination. The use of any dredged material as on-site fill - including material excavated from the USACE Artificial Island Upland CDF - will require an Acceptable Use Determination from the Department.

At the May 9, 2010 meeting, it was also stated that construction of a new dredged material upland CDF on the PSEG property may be needed. If still needed, the potential impacts of the

construction and use of such a facility must also be comprehensively evaluated and approved by the Department, consistent with the requirements specified in the 1997 NJDEP Dredging Technical Manual.

(9) ER, Section 4.2.1.1.4, page 4.2-5: briefly describes construction and dredging activities along the Delaware River shoreline. A total area of 92 acres - approximately 590,000 CY of sediment - is proposed to be dredged. The document concludes that impacts associated with dredging are "small". However, much more work is needed to comprehensively evaluate the potential impacts resulting from dredging and dredged material management activities - see Comment #8.

(10) ER, Section 4.2.3.1, page 4.2-13, para #2: states that "Based on the findings of the USACE's Delaware River main channel deepening project Environmental Assessment, dredging is not expected to result in degradation of water quality." The evaluation of potential impacts presented in the referenced Environmental Assessment are of little relevance to the evaluation of the potential impacts of dredging and dredged material management activities associated with the proposed PSEG project; see Comments #8 and #9.

(11) ER, Section 4.3.1, page 4.3-1, para. #5: references a "permitted disposal facility on the PSEG site [that] is used for disposal of materials dredged from the intake structures ..." Is this referring to an existing dredged material upland CDF on the PSEG property? If so, this facility should be identified in an appropriate figure and described in more detail. [Note: also see Sections 2.3.1.1, 2.4.1.3.4, and 2.4.2.1.1]

(12) ER, Section 4.3.2.3, page 4.3-19, para. #3: see Comment #9. The ~590,000 CY of sediments to be dredged have not been tested/evaluated, nor has a disposal site been selected.

(13) ER, Section 4.3.2.3, page 4.3-19, para. #3: concludes that impacts associated with dredging activities are "small"; see Comment #9.

(14) ER, Section 4.3.2.5, page 4.3-21, paras. #1 and #2: briefly discuss potential impacts to a variety of fish, including T/E species that could result from construction of the proposed project - particularly as a result of dredging activities. The ER must also consider the various dredging windows that have been established in the Delaware River and Estuary when evaluating potential project impacts.

(15) ER, Table 4.6-1: regarding potential measures to mitigate potential water quality and aquatic ecosystem impacts resulting from dredging and dredged material management activities - see Comments #9 and #14.

(16) ER, Section 2.8.1.2, page 2.8-3, para. #2: delegates the evaluation of the potential environmental impacts of the transfer of a portion of the USACE Artificial Island Upland CDF to PSEG to a future federal review process. As noted in this paragraph, this transfer "is expected to be a relevant factor to the overall nature and composition of impacts associated

with the construction and operation of the new plant." Therefore, the impacts of this proposed land transfer should be evaluated as part of the ESPA process. Also see Comment B and Comments #1, #2, and #7.

(17) Section 5.1.1.1, page 5.1-1, para. #2: briefly discusses dredging activities that may be needed during operation of the proposed facility, and concludes that - since the dredged material will be "disposed of in approved upland areas" - any resulting impacts will be "small". See Comments #8 and #9. [Also see Sections 5.2.1.2 and 10.5.2.1]

(18) Table 10.1-1, Hydrologic Alterations and Water Quality: see Comment #9.

(19) Table 10.1-2, Water Quality: see Comment #9.

(20) Section 12.2.1.2, page 10.2-2: see Comments #1 and #2.

(21) Section 10.5.1.1, page 10.5-19: see Comments #1 and #2.

(22) Section 10.5.1.2, page 10.5-20: see Comment #9.

(23) Section 10.5.1.3, page 10.5-21: see Comment #9.

Thank you for giving the New Jersey Department of Environmental Protection the opportunity to comment on the Early Site Permit/Environmental Site Report.

Sincerely,

Scott Brubaker, Director
Office of Permit Coordination
and Environmental Review

C: Sue Dietrick, NJDEP
Joel Pecchioli, NJDEP