

Division of Air Quality
Air Quality Permitting Element
P.O. Box 027
Trenton, NJ 08625-0027

NOTICE OF PUBLIC HEARING AND OPPORTUNITY TO COMMENT

For Proposed:

- 1. Significant Modification To The Air Pollution Control Operating Permit**
- 2. Variance To N.J.A.C. 7:27-6.2, and,**
- 3. Revision To New Jersey's State Implementation Plan (SIP)**

For

PSEG Nuclear LLC Hope Creek And Salem Generating Stations

Lower Alloways Creek, New Jersey

APPLICANT:

PSEG Nuclear LLC
PO Box 236 M/C N09
Hancocks Bridge, NJ 08038

FACILITY LOCATION:

PSEG Nuclear LLC Hope Creek Generating Stations
Alloways Creek Neck Road
Lower Alloways Creek Township, NJ 08038

COUNTY:

Salem

Approved by:

John Preczewski P.E.
Assistant Director
Division of Air Quality

Date: _____

BACKGROUND:

Hope Creek and Salem Generating Stations are located on Alloways Creek Neck Road, Lower Alloways Creek Township, Hancocks Bridge, Salem County, NJ. These are two separate facilities located on contiguous or adjacent sites and belong to the same owner, PSEG Nuclear LLC. Hence, by regulation, they are listed as one facility under the Title V permit.

Hope Creek Generating Station (HCGS) consists of one nuclear-powered boiling water reactor and other ancillary equipment that support its operation. HCGS was first issued air pollution control permits in 1980 and 1981, for construction and operation. It commenced commercial operation in 1986. HCGS currently operates up to 1139 MW electric generation. The ancillary equipment responsible for emissions of criteria pollutants to the atmosphere include a natural draft cooling tower, auxiliary boilers, emergency diesel generators, diesel fire-pump, distillate oil fire-pump, fuel oil storage tanks, and low sulfur distillate oil air compressors.

PSEG Nuclear LLC is planning to increase the reactor power of Hope Creek Generating Station ("HCGS") to a maximum of 120% of its original licensed Thermal Power. The project to accomplish the increase in electric power is called the Extended Power Uprate Project ("EPU").

The EPU would increase the amount of heat from the condenser to the Hope Creek Cooling tower, which accepts heat rejected from the main condenser and transfers this heat indirectly to the atmosphere by evaporation of the cooling water circulating within it. Most of the cooling water not lost to evaporation is collected in the cooling tower basin. The remainder is lost as very fine sized water droplets (namely, the "drift"). The cooling tower is equipped with drift eliminators that are designed to limit drift losses to 0.0005% of the circulating water flow rate. Test data demonstrates that a drift rate of 0.00041% of the circulating water flow is being achieved in practice at the cooling tower.

The increased thermal load is estimated to increase the evaporation rate from the cooling tower by approximately 20%. This would increase the cooling tower particulate matter emissions from the currently permitted value of 29.4 lb/hr to 35 lbs per hour. The particulates are from the salt in the evaporated water and some trace amount of cooling tower additives. Under the worst case conditions of the ambient water salinity, hydrologic conditions and the tidal hydrodynamics of the Delaware Estuary, which is the source of the circulating cooling water, the maximum possible hourly emissions of particles, from the cooling tower are expected to be 42 lbs/hr.

The Responsible Official at the facility has certified that the facility currently meets all applicable requirements of the Federal Clean Air Act and the New Jersey Air Pollution Control Act.

PROPOSED VARIANCE

N.J.A.C. 7:27-6.5 allows the facility to apply for a variance from N.J.A.C. 7:27-6.2(a) whenever advances in the art of air pollution control for the kind and amount of particles emitted has not developed to a degree which would enable the requirements of section 2 of this subchapter (maximum allowable emission rate of 30 lb/hr) to be attained. The facility may apply to the Department for a variance, setting forth the reason and justifications. The Department may issue a variance from section 2(a), (b) and/or (d) of this subchapter for a period of five years from the date of issuance. If approved, the variance may be renewed upon application to the Department, setting forth reasons and justifications for its continuation.

Variance issued under the provisions of N.J.A.C. 7:27-6.5 are conditional upon the final approval by US EPA in NJ's State Implementation Plan (SIP).

As stated above, the TSP/PM10 hourly emissions from the cooling tower are expected to increase above the N.J.A.C. 7:27-6.2(a) limit of 30 lb/hr to a maximum of 42 lb/hr. PSEG Nuclear is requesting a variance from N.J.A.C. 7:27-6.2(a), for the cooling tower, based on the following:

1. The level of control already employed in the cooling tower will continue to meet the N.J.A.C. 7-27:6.2(a) concentration limit of 0.02 gr/scf.
2. PSEG Nuclear presented information that shows the state of art control for natural draft cooling towers has not advanced beyond the controls currently used by the cooling tower.

PROPOSED MODIFICATION TO THE EXISTING TITLE V OPERATING PERMIT:

Air Contaminant Emissions

The facility is classified as a major facility based on its potential to emit 470.9 tons per year (TPY) of Nitrogen Oxides (NO_x), 216.7 TPY of Carbon Monoxide (CO), 166.9 TPY of Total Suspended Particles (TSP), 227.8 TPY of Sulfur Dioxide (SO₂), 196.4 TPY of Particulate Matter less than 10 microns (PM10), and 27.0 TPY of Volatile Organic Compounds (VOC), to the atmosphere.

The existing Title V air permit for the facility limits the maximum hourly emission rate of TSP/PM10 from the cooling tower to 29.4 lb/hr and the annual emission rate of TSP/PM10 to 129 tpy.

The facility has submitted calculations showing the post-EPU annual actual emissions of TSP/PM10 would be 65.9 tpy, while the average pre-EPU annual actual emissions are 54.7 tons, as shown in the Table 1 below.

The facility is not proposing any increase in allowable annual emissions.

Particulate Emissions	Current	Post EPU
Allowable Emissions in tpy	129	129
Actual Emissions in tpy	54.7	65.9

Prevention of Significant Deterioration (PSD) Of Air Quality

PSD non-applicability analysis was submitted to United State Environmental Protection Agency (USEPA or EPA) Region 2 by PSEG Nuclear LLC, dated March 4, 2004. Based on the information provided by the applicant, USEPA concluded that the EPU project will not result in significant increase in emissions and would not be subject to PSD review (letter dated March 17, 2004 from Steven C. Riva of USEPA to Mr. John Carlin of PSEG Nuclear LLC).

The permitted annual emissions of TSP/PM10 for the cooling tower are currently 129 tons per year. Actual annual emissions have been up to 54.7 tpy. PSEG in their letter to EPA stated that actual annual emissions will not exceed 65.9 tpy. Since this was used in the PSD non-applicability determination, it becomes the new maximum allowable emissions effective the first day after the start of post-EPU operations of the Hope Creek Generating Station.

Air Quality Modeling Analysis

The Bureau of Technical Services (BTS) reviewed the Air Quality Modeling for the proposed Hope Creek uprate project and determined that the project will not cause a violation of National Ambient Air Quality Standards (NAAQS), New Jersey Ambient Air Quality Standards NJAAQS, or PM₁₀ PSD increment.

PUBLIC HEARING AND THE OPPORTUNITY FOR COMMENTS:

The New Jersey State Department of Environmental Protection (NJDEP) is seeking public comment on this proposed significant modification to the approved Air Pollution Control Operating Permit for Hope Creek and Salem Generating Stations, pursuant to the provisions of Title V of the Federal Clean Air Act, the federal rules promulgated at 40 CFR 70, and the state regulations promulgated at N.J.A.C. 7:27-22. These rules require that changes to existing significant source operations shall be made as a significant modification if the change relaxes any Federally enforceable provision of the compliance plan.

The public also has opportunity to comment on the proposed variance from N.J.A.C. 7-27:6.2(a) and single source revision to New Jersey's SIP. The application, draft permit,

and draft variance, are available for inspection at the address below, and at the Southern Regional Field Office located at 2 Riverside Drive, One Port Center, Suite 201, Camden NJ 08102, phone number (856-614-3601). If you would like to inspect these documents at either location, please call in advance for an appointment. You may also inspect the application and supporting materials, and other information and documents contained in the supporting file for the draft permit, at the NJDEP Trenton location listed below, by calling for an appointment.

Yogesh Doshi
New Jersey Department of Environmental Protection
Air Quality Permitting Program
Bureau of Operating Permits
401 East State St. - 2nd Floor, Box 27
Trenton, NJ 08625-0027
(609) 633-7249

Any person, including the applicant, who believes that any condition of the draft operating permit modification, proposed variance from N.J.A.C. 7-27:6.2(a), and proposed single source revision to New Jersey's SIP is inappropriate, can raise all reasonable issues of concern, and submit all arguments and factual grounds or materials supporting their position during the public hearing, or in writing during the public comment period.

The public hearing will be held on May 1, 2007 in the Auditorium of Pennsville Memorial High School, 110 South Broadway, Pennsville, New Jersey 08070. The public hearing will start at 7:00 PM and end at 8:00 PM. If there are still persons wishing to comment, the meeting will be extended until all persons present have had the opportunity to present their comments. At the public hearing, written and oral comments will be accepted by the Department. The public must submit all comments by the close of the public comment period.

The close of the public comment period will be 5:00 PM on the third State business day following the date of the public hearing.

The Department will consider and respond to all relevant and timely submitted written comments. The applicant, and each person who submits written comments, will receive a notice of the Department's final decision regarding this permit action.

EPA COMMENT ON THE PROPOSED OPERATING PERMIT

After the close of the public comment period and consideration of the comments, the Department will prepare a proposed operating permit modification for EPA review. The Department will transmit the proposed operating permit, variance from N.J.A.C. 7-27:6.2(a) and single source revision to New Jersey's SIP to USEPA, together with a

copy of any comments received from the public and from any affected state during the public comment period, and the Department's response to those comments. The Department will also provide a copy, upon request, to any other interested person.

If EPA objects to the proposed operating permit modification during the 45 days following EPA's receipt of the proposed permit, the Department may revise the proposed permit to address EPA objection(s), and will submit the revised proposed permit to EPA, the applicant (if applicable), and, upon request, to any other interested person.

If EPA does not object to the proposed operating permit within 45 days following EPA's receipt of the proposed permit, the Department will take final action on the application related to the proposed operating permit pursuant to N.J.A.C. 7:27-22.13.

If EPA does not object to the proposed operating permit modification, within the 45 day period, any person may petition the EPA during the 60 days after the expiration of EPA's 45 - day comment period, and may request that EPA object to the proposed operating permit. Any petition to EPA shall be based only on an objection that was raised by the petitioner with reasonable specificity during the public comment period unless:

1. The petitioner demonstrates that it was impracticable for the petitioner to raise the objection during the public comment period; or
2. The grounds for the objection arose after the public comment period closed.

If EPA, in response to a petition, objects to the proposed operating permit, before the Department has issued the permit, the Department will not issue a final operating permit until the EPA's objection is addressed to EPA's satisfaction.

Any petition for EPA review of a final operating permit decision must be made to the Administrator, U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Ave., N.W., Washington, D. C. 20460. A copy of the petition should be sent to Regional Administrator, U.S. EPA, Region 2 Office, 290 Broadway, New York, NY 10007-1866.