

STATEMENT OF BASIS for SAYREVILLE POWER GENERATION LP.

TITLE V OPERATING PERMIT RENEWAL

Program Interest (PI): 18072 / Permit Activity Number: BOP190002

I. FACILITY INFORMATION

Sayreville Power Generation LP. is located at 601 Jernee Mill Road, Sayreville, Middlesex County, NJ 08872, and consists of power energy plant including two identical combined cycle combustion turbines (128 MW each) combusting natural gas. The facility is owned and operated by Sayreville Power Generation, LP.

The facility is classified as a major facility based on its potential to emit 51.44 tons per year of volatile organic compounds, 970.8 tons per year of nitrogen oxide, 581.27 tons per year of carbon monoxide.

This permit allows individual hazardous air pollutants to be emitted at a rate not to exceed: 160 pounds per year of Acrolein, 299 pounds per year of benzene, 17600 pounds per year of formaldehyde, 22.8 pounds per year of polycyclic organic matter, 980 pounds per year of acetaldehyde, 10.6 pounds per year of Butadiene (1,3-), 780 pounds per year of ethylbenzene, and 32 pounds per year of naphthalene.

II. AREA ATTAINMENT CLASSIFICATION

The Federal Clean Air Act (CAA) sets National Ambient Air Quality Standards (NAAQS) for six common air pollutants. These commonly found air pollutants (also known as "criteria pollutants") are particulate matter, ground-level ozone, carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and lead. The US Environmental Protection Agency (USEPA) also classifies areas as "attainment" or "nonattainment" for each criteria pollutant, based on the magnitude of an area's problem. Nonattainment classifications are used to specify what air pollution reduction measures an area must adopt, and when the area must reach attainment. Currently, the entire State of New Jersey is designated as nonattainment for the 8-hour ozone NAAQS. New Jersey is designated attainment for all other pollutants. For nonattainment classification refer to <https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information>.

III. BACKGROUND AND HISTORY

The equipment that emits air contaminants from this facility include: two identical combined cycle combustion turbines (128 MW each) combusting natural gas, one 2.1 MMBtu/hr diesel emergency fire pump and three 3.25 MW each, (4680 BHP) Black Start diesel Emergency Generators. The facility holds Prevention of Significant Deterioration (PSD) permit issued on May 22, 1989.

Table 1 - Operating Permit Revision History (located at the end of this document) provides a summary of all the changes that have been incorporated into the operating permit through seven-day notice changes, administrative amendments, minor modifications, or significant modifications since the approval of the initial operating permit or the most recent renewal thereof. Please refer to the attached explanation sheet for the structure and configuration of conditions of approval, included in the Facility Specific Requirements section of this permit.

Health Risk Assessment was conducted as part of the review of this permit application and health risk was determined to be negligible to the Department consistent with NJDEP Technical Manual 1003.

This is a Five-year Permit Renewal and includes the following changes:

HAPs emissions from emission units U1 and U2 were added based on the new N.J.A.C. 7:27-17 reporting thresholds. HAPs added include: acetaldehyde, 1,3-butadiene, ethylbenzene, and naphthalene.

The changes made during this permitting action result in allowable annual emissions changes as follows: The total increase in facility emissions is 0.78 tons of Total HAPs.

IV. BASIS FOR MONITORING AND RECORDKEEPING REQUIREMENTS

The facility's operating permit includes monitoring, recordkeeping and reporting requirements that are sufficient to demonstrate the facility's continued compliance with the applicable requirements consistent with the following:

1. Provisions to implement the testing and monitoring requirements of N.J.A.C. 7:27-22.18, the recordkeeping and reporting requirements of N.J.A.C. 7:27-22.19, and all emissions monitoring

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and analysis procedures or compliance assurance methods required under the applicable requirements, including any procedures and methods promulgated pursuant to 40 CFR 64; and

2. Where the applicable requirement does not require direct periodic monitoring of emissions, the Department requires periodic monitoring of surrogate parameters sufficient to yield reliable data from the relevant time period that are representative of the facility's compliance with the permit.
3. In some cases, direct periodic monitoring of emissions and/or surrogate parameters is not required due to one or more of the following:
 - Equipment size and capacity limitations,
 - Subject equipment being permitted at the maximum rated capacity,
 - There is no specific state or Federal standard that applies to this piece of equipment,
 - Not a pollutant of concern for this piece of equipment,
 - Agreements with EPA on the frequency of testing and monitoring for combustion sources.

V. APPLICABLE STATE AND FEDERAL RULES

The facility is subject to New Jersey Air Pollution Control Regulations, codified in N.J.A.C. 7:27-1 through 34, as applicable. A complete text of these regulations is available at:

<http://www.nj.gov/dep/aqm/rules27.html>

The facility is also subject to Federal regulations listed below.

NSPS Subpart A: General Provisions

NSPS Subpart GG: Standards of Performance for Stationary Gas Turbines

NSPS Subpart IIII: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

MACT Subpart A: General Provisions

MACT Subpart ZZZZ: National Emission Standards for HAPS for Reciprocating Internal Combustion Engines

40 CFR 52.21 Prevention of Significant Deterioration (PSD)

40 CFR 72 Phase II Acid Rain Rule

40 CFR 97 Cross-State Air Pollution Rule (CSAPR)

The Greenhouse Gas (GHG) emissions from this facility are 1,302,516 TPY CO₂e and there is no GHG emissions increase.

VI. FACILITY'S COMPLIANCE STATUS

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. Based on this certification, the Department's evaluation of the information included in the facility's application, and a review of the facility's compliance status, the Department has concluded that this air pollution control operating permit should be approved.

The facility has submitted a timely and complete application to renew their operating permit, and an application shield is in effect.

This operating permit also includes a permit shield, pursuant to the provisions of N.J.A.C. 7:27-22.17. A permit shield provides that compliance with the relevant conditions of the operating permit shall be deemed compliance with the specific applicable requirements that are in effect on the date of issuance of the draft operating permit, and which form the basis for the conditions in the operating permit.

Also, prior to the expiration of the five-year period, the facility will be required to apply for a renewal of this operating permit, at which time the Department will evaluate the facility and issue a public notice with its findings.

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VII. EXEMPT ACTIVITIES

The facility's operating permit does not include exempt activities such as office and interior maintenance activities, maintenance shop activities, food preparation facilities, cafeterias and dining rooms, etc. A complete list of exempt activities, as allowed by the Operating Permit rule, can be found at N.J.A.C. 7:27-22.1.

Table 1 - Operating Permit Revision History

New Jersey Department of Environmental Protection

Operating Permit Revision History

SAYREVILLE POWER GENERATION LP PI 18072

Permit Activity Number	Type of Revision	Description of Revision	Final Action Date
BOP230001	Minor Modification	Permit Modification for Chapter 27F, Control and Prohibition of Carbon Dioxide Emissions: (d) An existing EGU with a nameplate capacity equal to or greater than 25 MWe shall meet the following emission limits by the specified compliance date: 1. On or before June 1, 2024, an emission rate of 1,700 pounds of CO2 per MWh gross energy output; 2. On or before June 1, 2027, an emission rate of 1,300 pounds of CO2 per MWh gross energy output; and 3. On or before June 1, 2035, an emission rate of 1,000 pounds of CO2 per MWh gross energy output.	9/25/23
BOP210001	Administrative Amendment	This administrative amendment includes the facility name change to Sayreville Power LP, from North Jersey Energy Associates A LP. Also the facility changes the responsible official (RO) to Cory R. Finn.	8/16/21

FACILITY NAME (FACILITY ID NUMBER)
BOP050001

Activity Number assigned by the Department

**New Jersey Department of Environmental Protection
Facility Specific Requirements**

Emission Unit Number assigned by the Facility

Brief description of emission unit

Emission Unit: U40 Sewage Sludge Incinerators
Operating Scenario: OS Summary

OR OS2 Fluidized Bed Incinerator

OS Summary lists all rules and requirements that apply to an emission unit. An emission unit may contain one or more pieces of equipment and corresponding operating scenarios.

OSX denotes the operating scenario number and lists the rules and requirements that apply to a scenario. An operating scenario represents various ways (or scenarios) a piece of equipment is permitted to operate.

Item Number

Description of applicable requirement

Monitoring method to ensure compliance

Recordkeeping to show facility's compliance

Actions and submittals required for the facility

Ref.#	Applicable Requirement	Monitoring Requirement	Recordkeeping Requirement	Submittal/Action Requirement
3	The permittee shall conduct an annual performance test for each pollutant in Table 2 of 40CFR62 Subpart LLL between 11 and 13 calendar months after the previous performance test or within 60 days of a process change. [40 CFR 62.16000(a)]	Other: Conduct the performance test using the test methods, averaging methods and minimum sampling volumes or durations as specified in 40CFR62 Subpart LLL and according to the testing, monitoring and calibration requirements specified in 40 CFR 62.16015(a). [40 CFR 62.16000(a)].	Other: (1) Maintain records of the results of initial, annual and any subsequent performance tests conducted to determine compliance with the emission limits and standards and/or to establish operating limits, as applicable. [40 CFR 62.16025(e)].	Submit a report: Annually to the Administrator and to the Department. The permittee shall submit an annual compliance report as specified in 40 CFR 62. [40 CFR 62.16000(d)]

Rule citation for applicable requirement

Rule citation for monitoring requirement

Rule citation for recordkeeping requirement

Rule citation for submittal/ action requirement

Explanation Sheet for Facility Specific Requirements