

STATEMENT OF BASIS for BERGEN COUNTY UTILITIES AUTHORITY WTP

TITLE V OPERATING PERMIT SIGNIFICANT MODIFICATION

Program Interest (PI): 02620 / Permit Activity Number: BOP220001

I. FACILITY INFORMATION

Bergen County Utilities Authority WTP is located at Foot of Mehrhof Road, Little Ferry, Bergen County, NJ 07643 and consists of sewage treatment facilities and a cogeneration plant. The facility is owned by Bergen County Utilities Authority and is operated by Bergen County Utilities Authority, Water Treatment Plant.

The facility is classified as a major facility based on its potential to emit 62.1 tons per year of Volatile Organic Compounds and 61.1 tons per year of Nitrogen Oxides.

This permit allows individual hazardous air pollutant to be emitted at a rate to not exceed: 560 pounds per year of acrolein and 8700 pounds per year of formaldehyde.

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: seven boilers, three standby gas generators, five sludge digesters, three cogeneration engines. The facility's current operating permit was approved on September 12, 2022.

This modification would allow the following changes to the facility's approved operating permit for Emission Unit U43, OS Summary Reference No. 31:

The current permit requires monthly testing of digester gas for the Pretreatment System for Engine 3 (E4303) for metals, siloxanes, chlorides, and sulfur compounds. There have been no exceedances for any compounds since July 2016. Therefore, the frequency of testing has been reduced to quarterly as is the requirement for the pretreatment system for Engines 1 and 2 (E4201 and E4302, Reference No. 30).

Changes made to Monitoring Requirement to "Monitored by gas sampling quarterly: once per quarter; quarters shall begin on January 1, April 1, July 1, and October 1 of each year."

Also, changes made to Recordkeeping Requirement to "Recordkeeping by manual logging of parameter or storing data in a computer data system quarterly: once per quarter; quarters shall begin on January 1, April 1, July 1, and October 1 of each year."

Engine 3 has not operated during the entire time period burning digester gas. However, all results show the concentrations are within compliance.

A Facility-Wide Risk Assessment was conducted on April 6, 2017 and health risk was determined to be negligible consistent with NJDEP Technical Manual 1003. A revised Health Risk Assessment was not conducted with this permit modification, since no changes were made to Air Toxics (including HAPs) emissions or risk parameters since the last risk assessment.

There are no proposed changes to air contaminant allowable emission rates.

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IV. CASE-BY-CASE DETERMINATIONS

No case-by-case determinations were required for this modification.

V. EMISSION OFFSET REQUIREMENTS

This modification is not subject to Emission Offset requirements.

VI. 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 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. In this case, monitoring of fuel consumption is required for three large boilers, three small boilers and three engines for purposes of monitoring compliance with the emission limits.
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.

VII. APPLICABLE STATE AND FEDERAL RULES

This modification 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>

This modification is also subject to Federal regulations listed below.

NSPS Subpart A: General Provisions

NSPS Subpart JJJJ: Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (Engine #3, E4303)

MACT Subpart A: General Provisions

MACT Subpart JJJJJJ: National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources (E601, E602, and E4601)

The Greenhouse Gas (GHG) emissions from this facility are 64,037 TPY CO₂e. Facility is not subject to PSD regulations for Greenhouse Gas (GHG) codified at 40 CFR 52.21.

VIII. 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

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review of the facility's compliance status, the Department has concluded that this air pollution control operating permit should be approved.

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.

IX. 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.

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