

# STATEMENT OF BASIS for Burlington County Resource Recovery Complex

## TITLE V OPERATING PERMIT SIGNIFICANT MODIFICATION

Program Interest (PI): 45949 / Permit Activity Number: BOP200001

### I. FACILITY INFORMATION

Burlington County Resource Recovery Complex is located at 21939 Columbus Road, Mansfield Township, NJ 08022, Burlington County and consists of a Municipal Solid Waste Landfill, Composting Facility, and Landfill Gas to Energy Facility. The facility is owned and operated by Burlington County Board of Chosen Freeholders.

The facility is classified as a major facility based on its potential to emit 59.4 tons per year of volatile organic compounds (VOC), 109 tons per year of nitrogen oxides (NO<sub>x</sub>), 387.8 tons per year of carbon monoxide (CO) and 4,968 tons per year of methane to the atmosphere.

This permit allows individual hazardous air pollutants to be emitted at a rate not to exceed: 682 pounds per year of benzene, 10.2 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 (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), 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: One Landfill controlled by three flares, One boiler with heat input of less than 5 MM BTU/hr, One diesel fuel emergency generator, one Co-Composting Facility, One 3.5 MMBTU Micro turbine combusting landfill gas, and 4 microturbines with heat input less than 1 MMBTU/hr. Five (5) LFG Engines with an enclosed flare as control device, Two diesel fuel internal combustion engines with heat input less than 10 MMBTU/hr. Six Leachate Surge, and Aeration Tanks equipped with Aerated Flow Equalization Tank (Carbon Adsorber).

A Facility-Wide Risk Assessment will be conducted during the next Operating Permit Renewal process. Health Risk Assessment was not conducted with this permit modification, since no changes were made to Air Toxics (including HAPs) emissions.

This Permit Modification is replacing a broken down Co-Composting trommel screen at U37 with a new Doppstadt Screen Engine at U50 as follows:

1. Removal of the Co-composting trommel screen at emission unit U37 with its operating scenarios, OS1 for equipment E39, one 0.44 MMBTU/hr engine; OS2 for E40, one screen; and OS3 for E41, one conveyor; and their corresponding emission points PT39, PT40, and PT41 from the permit, as well as the IS34-One 90 Gallon Diesel Tank on Screen.
2. Addition of a new Doppstadt Screen as U50 and the operating scenarios OS1 for equipment E50, one diesel ICE 0.93MMBTU/hr, OS2 for E51 one Doppstadt Screen, OS3 & OS4 for E52 & E53 Doppstadt Screen Conveyor 1&2, and their corresponding emission points PT50, PT51, PT52, and PT53.

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This modification will also change the facility-wide emission limits as listed in the following table:

Allowable Emission Limits	Facility's Potential Emissions (tons per year)*									
	VOC (total)	NO <sub>x</sub>	CO	SO <sub>2</sub>	TSP (total)	PM <sub>10</sub> (total)	PM <sub>2.5</sub> (total)	Pb	HAPs (total)	CO <sub>2e</sub> (total)
Current Permit	61.2	110.7	386.7	55.2	35.1	31.4	16.1	N/A	0.346	844,392
Proposed Permit	59.4	109	387.8	55.2	34.6	31.2	16.1	N/A	0.346	844,365
Change (+ / -)	-1.8	-1.7	+1.1	-	-0.5	-0.2	-	-	-	-27

VOC Volatile Organic Compounds

NO<sub>x</sub> Nitrogen Oxides

CO Carbon Monoxide

SO<sub>2</sub> Sulfur Dioxide

TSP Total Suspended Particulates

\* Other Any other air contaminant regulated under the Federal Clean Air Act. There is no change to the ammonia emissions.

PM<sub>10</sub> Particulates under 10 microns

PM<sub>2.5</sub> Particulates under 2.5 microns

Pb Lead

HAPs Hazardous Air Pollutants

CO<sub>2e</sub> Carbon Dioxide equivalent

#### 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:

- 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
- 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.

For manufacturing and materials handling equipment U50, the facility monitors the total material transferred (TPY) as the surrogate for the long-term (TPY) emission limits for TSP, PM-10, and PM-2.5. Raw materials and total material transferred short-term (lb/hr) are monitored as surrogates for the emission limits of TSP, PM-10, and PM-2.5.

- 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.

For the engine at U50, OS1, direct periodic monitoring of emissions and/or surrogate parameters is not required as it is being permitted at the maximum rated capacity.

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#### **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 IIII - STANDARDS OF PERFORMANCE FOR STATIONARY COMPRESSION IGNITION  
INTERNAL COMBUSTION ENGINES

The Greenhouse Gas (GHG) emissions from this facility are 844,365 TPY CO<sub>2</sub>e and there is no GHG emissions increase. This modification is not subject to PSD rules 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 review of the facility's compliance status, the Department has concluded that this air pollution control operating permit should be approved.

This operating permit 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.

Prior to the expiration of the Operating Permit's five-year term, the facility will be required to apply for a renewal, 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**