

# STATEMENT OF BASIS for GILBERT GENERATING STATION

## TITLE V OPERATING PERMIT RENEWAL

Program Interest (PI): 80002 / Permit Activity Number: BOP220001

### I. FACILITY INFORMATION

Gilbert Generating Station is located at 315 Riegelsville Road, Holland, NJ 08848, Hunterdon County and consists of a power generating station with 5 combustion turbines combusting natural gas and # 2 fuel oil. The facility is owned and operated by Gilbert Power LLC.

The facility is classified as a major facility based on its potential to emit 40.16 tons per year of volatile organic compounds, 489.5 tons per year of nitrogen oxides, 1765.1 tons per year of carbon monoxide, 4.97 tons per year of sulfur dioxide, 59.6 tons per year of total suspended particulate matter (TSP), 43.9 tons per year of PM-10 and 43.9 tons per year of PM-2.5 to the atmosphere.

This permit allows individual hazardous air pollutants to be emitted at a rate not to exceed: 1.68 pounds per year of 1,3-Butadiene, 660 pounds per year of Acetaldehyde, 106 pounds per year of Acrolein, 0.88 pounds per year of Arsenic, 230 pounds per year of Benzene, 0.24 pounds per year of Beryllium compounds, 1.408 pounds per year of Cadmium compounds, 0.0468 pounds per year of Chromium (Hexavalent), 0.346 pounds per year of Cobalt compounds, 528 pounds per year of Ethyl benzene, 448 pounds per year of Formaldehyde, 2.6 pounds per year of Lead compounds, 44.6 pounds per year of Manganese compounds, 42.6 pounds per year of Naphthalene, 212 pounds per year of Nickel compounds, 60.4 pounds per year of Polycyclic Organic Matter (POM), and 480 pounds per year of Propylene Oxide.

### 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: 5 combustion turbines, one #2 fuel oil fired boiler, an emergency diesel generator, and an emergency diesel fire pump.

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.

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

This is a Permit Renewal and includes the following changes:

1. U2406 (Auxiliary Boiler) – Gilbert Power proposes to remove U2406 from the permit because it is retired and no longer operational.
2. New HAP reporting thresholds – Gilbert Power has evaluated the revised, and in many cases lowered, HAP reporting thresholds in N.J.A.C. 7:27-17.9 that became operative in February 2018. Several previously unreportable HAPs have become reportable for U2210-U2213, U2323, and U26 (Natural Gas Heater).
3. Methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions – Gilbert Power proposes to add CH<sub>4</sub> and N<sub>2</sub>O emissions for U2210-U2213 and U2323 because they exceed 0.05 lb/hr.

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4. Delisting of pollutants with emissions below the applicable reporting threshold (e.g. SO<sub>2</sub> for U2520 and U2524; SO<sub>2</sub>, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub> for U2519).

The changes made during this permitting action result in allowable annual emissions changes as follows:

Allowable Emission Limits	Potential to Emit (Tons per Year)									
	VOC (Total)	NO <sub>x</sub>	CO	SO <sub>2</sub>	TSP	PM <sub>10</sub>	PM <sub>2.5</sub>	Pb	HAPs (Total)	CO <sub>2e</sub> (Total)
Current PTE	38.5	503.7	1,770.4	5.15	61	45.3	45.3	0.0013	0.2573	1,032,447
Proposed PTE	38.2	489.5	1,765.1	4.97	59.6	43.9	43.9	0.0013	1.416	1,001,520
Change (+/-)	-0.3	-14.2	-5.3	-0.18	-1.4	-1.4	-1.4	0	+1.1587	-30,927

VOC Volatile Organic Compounds  
NO<sub>x</sub> Nitrogen Oxides  
CO Carbon Monoxide  
SO<sub>2</sub> Sulfur Dioxide  
TSP Total Suspended Particulates

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. 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.

#### Combustion Turbines

For combustion turbines, the facility monitors the fuel use as the surrogate for the long-term (TPY) emissions limits for VOC, NO<sub>x</sub>, CO, SO<sub>2</sub>, TSP, PM-10 and PM-2.5. Surrogate monitoring for the short-term (lb/hr) emission limits are combustion process adjustment for NO<sub>x</sub> and CO, ratio of water to fuel being fired in the turbine for NO<sub>x</sub>, and fuel oil sulfur content for SO<sub>2</sub>.

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>

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The facility is also subject to Federal regulations listed below.

NSPS Subpart A:	General Provisions
NSPS Subpart Dc:	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.
NSPS Subpart GG:	Standards of Performance for Stationary Gas Turbines.
MACT Subpart A:	General Provisions
MACT Subpart ZZZZ:	National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.
MACT Subpart JJJJJJ:	National Emission Standard for Hazardous Air Pollutants for Industrial, Commercial, and Institutional boilers area sources.
40 CFR Part 72:	Acid Rain Program
40 CFR Part 97:	Cross-State Air Pollution Rule (CSAPR)

The Greenhouse Gas (GHG) emissions from this facility are 1,001,520 TPY CO<sub>2</sub>e and there is no GHG emissions increase. This renewal is not subject to PSD rules at 40 CFR 52.21.

### 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.

### 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.

New Jersey Department of Environmental Protection

Operating Permit Revision History

GILBERT GENERATING STATION      PI 80002

Permit Activity Number	Type of Revision	Description of Revision	Final Action Date
BOP230002	Administrative Amendment	Update facility contact and Responsible Official information.	12/21/2023
BOP230001	Minor Modification	Gilbert Generating Station is submitting this minor modification application as required under N.J.A.C. 7:27-22.28(c) to incorporate N.J.A.C. 7:27F requirements into its Title V permit.	10/17/2023

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