

# STATEMENT OF BASIS for ROWAN UNIVERSITY

## TITLE V OPERATING PERMIT RENEWAL

Program Interest (PI): 55779 / Permit Activity Number: BOP180003

### I. FACILITY INFORMATION

Rowan University is located at 201 Mullica Hill Rd, Glassboro, Gloucester County, New Jersey 08028 and consists of a college campus. The facility is owned and operated by Rowan University.

The facility is classified as a major facility based on its potential to emit 51.4 tons per year of nitrogen oxides to the atmosphere.

This permit does not contain any hazardous air pollutants.

### 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 turbine for electrical generation equipped with a selective catalytic reduction system for control of nitrogen oxides emissions and an oxidation catalyst for control of carbon monoxide emissions; one turbine for electrical generation equipped with a selective catalytic reduction system for control of nitrogen oxides emissions; 3 boilers fired by natural gas or #2 fuel oil for emergency only and 11 emergency generators.

This permit also incorporates four general operating permits (Activity #'s BOP170001, BOP180001, BOP180002 and BOP200001) that the facility obtained for a natural gas emergency generator (U500) with a heat input rate of 2.1 MMBTU/hr (HHV), a diesel emergency generator (U300) with a heat input rate of 2.44 MMBTU/hr (HHV), a diesel emergency generator (U400) with a heat input rate of 4.42 MMBTU/hr (HHV) and a natural gas emergency generator (U600) with a heat input rate of 6.3 MMBTU/hr (HHV), respectively. These emergency generators are permitted to operate up to 100 hours per year on diesel (for U300 & U400) or natural gas (for U500 & U600) for testing and maintenance. The total increase in facility emissions due to the addition of these new generators is 0.61 tons of NO<sub>x</sub>, 0.13 tons of VOC and 101 tons of CO<sub>2</sub>(e) per year.

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.

This is a Permit Renewal and includes the following changes:

-Included PM-2.5 PTE Emissions for U1, U2, U3, U4, U5, U6 and U200 consistent with N.J.A.C. 7:27-22.

-Incorporated Emergency Generator General Operating Permits BOP170001, BOP180001, BOP180002 and BOP200001 as U500, U300, U400 and U600 respectively.

-Updated SO<sub>2</sub> lb/hr PTE for applicable operating scenarios of U1, U2, U3, U4, U5, U6 and U200 firing Ultra Low Sulfur Diesel with maximum sulfur content of 15 ppmw. This results in a decrease of SO<sub>2</sub> tpy PTE for U1, U2, U3, GR2, U6 and U200.

# STATEMENT OF BASIS for ROWAN UNIVERSITY

## TITLE V OPERATING PERMIT RENEWAL

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-Added an NSPS Dc opacity standard with performance test requirements to GR1.

-Limited U1, U2 and U3 boilers to 48 hours per year of firing Ultra Low Sulfur Diesel for testing and maintenance.

-Corrected annual PTE of all pollutants for U200 (7 Emergency Generators) to be based on 100 hours per year of usage for each generator. This results in a decrease in annual PTE for all pollutants for U200.

-Removed IS11 Tech Center Emergency Generator.

The changes made during this permitting action result in allowable annual emissions changes as follows: VOC emissions decrease from 13.7 to 13.3 tons per year (tpy), NO<sub>x</sub> emissions decrease from 61.8 to 51.9 tpy, CO emissions decrease from 60.1 to 59.2 tpy, SO<sub>2</sub> emissions decrease from 40.2 to 2.3 tpy, TSP emissions decrease from 18.6 to 18.0 tpy, PM<sub>10</sub> emissions decrease from 18.6 to 18.0 tpy and PM<sub>2.5</sub> emissions were added as 18.0 tpy.

### 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.

For boiler U1, the facility monitors fuel use as the surrogate for the long-term (TPY) emission limits for VOC, NO<sub>x</sub>, CO, 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.

For boilers U2 and U3, the facility monitors fuel use as the surrogate for the long-term (TPY) emission 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, and fuel oil sulfur content for SO<sub>2</sub>.

For combustion turbine U4, 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 fuel oil sulfur content for SO<sub>2</sub> and flow rate of ammonia to the Selective Catalytic Reduction system (CD1) for NO<sub>x</sub>.

For combustion turbine U5, 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, fuel oil sulfur content for SO<sub>2</sub> and flow rate of ammonia to the Selective Catalytic Reduction system (CD3) for NO<sub>x</sub>.

For emergency generators in U6, U200, U300, U400, U500 and U600, the facility monitors the hours of operation for testing and maintenance as the surrogate for the long-term (TPY) emission limits for VOC, NO<sub>x</sub>, CO, TSP, PM<sub>10</sub>, and PM<sub>2.5</sub>.

# STATEMENT OF BASIS for ROWAN UNIVERSITY

## TITLE V OPERATING PERMIT RENEWAL

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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 Dc:	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units
NSPS Subpart IIII:	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines
NSPS Subpart JJJJ:	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines
NSPS Subpart KKKK:	Standards of Performance for Stationary Combustion Turbines

The Greenhouse Gas (GHG) emissions from this facility are 107,880 TPY CO<sub>2</sub>e. 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.

Table 1 - Operating Permit Revision History

Permit Activity Number	Type of Revision	Description of Revision	Final Action Date
BOP200001	General Operating Permit	6.3 MMBTU/hr (HHV) Emerg. Gen. (500 kW) Natural Gas, 100 hrs/yr Emission Unit U600	9/17/2020
BOP190001	Administrative Amendment	Administrative Amendment application for changing the Responsible Official at Rowan University. The facility's new Responsible Official is Gilbert Roberts, Director of Utility Management.	7/31/2019
BOP180004	Administrative Amendment	This administrative amendment application changes the Responsible Official for Rowan University.	6/13/2018
BOP180001	General Operating Permit	2.44 MMBTU/hr (HHV) Emerg. Gen. (250 kW) Diesel fuel, 100 hrs/yr Emission Unit U300	6/4/2018
BOP180002	General Operating Permit	4.42 MMBTU/hr (HHV) Emerg. Gen. (400 kW) Diesel fuel, 100 hrs/yr Emission Unit U400	6/4/2018
BOP170001	General Operating Permit	2.1 MMBTU/hr (HHV) Emerg. Gen. (200 kW) Natural Gas, 100 hrs/yr Emission Unit U500	5/18/2017

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