

STATEMENT OF BASIS for JERSEY SHORE UNIVERSITY MEDICAL CENTER

TITLE V OPERATING PERMIT SIGNIFICANT MODIFICATION

Program Interest (PI): 21324 / Permit Activity Number: BOP250001

I. FACILITY INFORMATION

Jersey Shore University Medical Center is located at 1945 Corlies Ave, Neptune, Monmouth County, NJ 07753 and consists of a regional medical center and a university hospital. The facility is owned by Hackensack Meridian Health Corporation and is operated by Jersey Shore University Medical Center.

The facility is classified as a major facility based on its potential to emit 34.1 tons per year of oxides of nitrogen.

This permit allows individual hazardous air pollutants to be emitted at a rate not to exceed: 0.108 tons per year of formaldehyde.

VOC emissions are being corrected to include formaldehyde emissions previously not accounted for. This emission increase is meant to capture emissions already present and no new actual emissions are being generated. As a result, the Department is not revisiting the applicability of State of The Art (N.J.A.C. 7:27-22.35) and Federal New Source Review (40 CFR 52.21-PSD and N.J.A.C. 7:27-18).

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 emit air contaminants from this facility include: one boiler burning natural gas or #2 fuel oil with a maximum heat input of 40.35 MMBtu/hr; two boilers burning natural gas or #2 fuel oil each with a maximum heat input of 40.82 MMBtu/hr; five emergency generators burning diesel fuel, one fire pump burning diesel fuel, two cogeneration units burning natural gas with a maximum heat input of 15.13 MMBtu/hr controlled by 2 selective catalytic reduction units.

Health 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 Modification and includes the following changes:

The two 20.7 MMBTU/hr natural gas reciprocating engines in U21 (E2301, E2401) were replaced with 2 15.13 MMBTU/hr natural gas reciprocating engines. Annual emissions for U21 were updated as follows:

VOC was changed from 7.1 TPY to 6.64 TPY

PM-10 was changed from 1.51 TPY to 0.0047 TPY

PM-2.5 was changed from 1.51 TPY to 0.0047 TPY

TSP was changed from 1.51 TPY to 0.0047 TPY

NO_x and CO annual emissions remained unchanged (7.74 TPY and 25.8 TPY, respectively).

The two U21 secondary control devices, CD6 and CD8 (both are oxidizers), had their minimum operating temperatures lowered from ">=750 degrees F" to ">=700 degrees F".

Facility-wide CO_{2e} was changed from 96840 TPY to 91240 TPY as a result of this change.

*Note: TPY stands for "tons per year".

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

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Allowable Emission Limits	Facility's Potential Emissions (tons per year)*									
	VOC (total)	NO _x	CO	SO ₂	TSP (total)	PM ₁₀ (total)	PM _{2.5} (total)	Pb	HAPs (total)	CO _{2e} (total)
Current Permit	13.7	34.1	42.9	0.534	3.62	5.83	5.83	0.000	0.108	96,840
Proposed Permit	13.2	34.1	42.9	0.534	3.62	4.32	4.32	0.000	0.0791	91,240
Change (+ / -)	- 0.5	N/A	N/A	N/A	N/A	- 1.51	- 1.51	N/A	- 0.0289	- 5,600

VOC Volatile Organic Compounds

NO_x Nitrogen Oxides

CO Carbon Monoxide

SO₂ Sulfur Dioxide

TSP Total Suspended Particulates

* Other Any other air contaminant regulated under the Federal Clean Air Act. This permit does not contain any air pollutants under this category.

PM₁₀ Particulates under 10 microns

PM_{2.5} Particulates under 2.5 microns

Pb Lead

HAPs Hazardous Air Pollutants

CO_{2e} 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 the cogeneration unit in U21, the facility monitors the fuel usage as the surrogate for the long-term (TPY) emission limits for VOC, NO_x, CO, TSP, PM-10 and PM-2.5. Surrogate monitoring for the short-term (lb/hr) emission limits are combustion process adjustment and periodic monitoring for NO_x and CO, and fuel oil sulfur content for SO₂.

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.

40 CFR Part 60 Subpart A: NSPS General Provisions

40 CFR Part 63 Subpart A: MACT General Provisions

40 CFR Part 60 Subpart Dc: Small Industrial-Commercial-Institutional Steam Generating Units

40 CFR Part 63 Subpart JJJJJJ: Industrial, Commercial, and Institutional Boilers Area Sources

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40 CFR Part 60 Subpart JJJJ: Stationary Spark Ignition Internal Combustion Engines
40 CFR Part 60 Subpart IIII: Stationary Compression Ignition Internal Combustion Engines

The Greenhouse Gas (GHG) emissions from this facility are 91,240 TPY CO₂e 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