

STATEMENT OF BASIS for NJDOC Bayside State Prison

TITLE V OPERATING PERMIT RENEWAL

Program Interest (PI): 75499 / Permit Activity Number: BOP200009

I. FACILITY INFORMATION

NJDOC Bayside State Prison is located at 4293 Route 47, Leesburg, NJ 08327, Cumberland County and consists of a correctional institution. The facility is owned by the New Jersey Department of Corrections and is operated by Joseph Saunders.

The facility is classified as a major facility based on its potential to emit 49.47 tons per year of nitrogen oxides.

This permit allows individual hazardous air pollutants to be emitted at a rate not to exceed 0.00005 tons per year (0.1 pounds per year) of Arsenic, 0.00115 tons per year (2.3 pounds per year) of Benzene, 0.000356 tons per year (0.712 pounds per year) of Cadmium, 0.000023 tons per year (0.046 pounds per year) of Cobalt, 0.00000457 tons per year (0.00914 pounds per year) of Dimethylbenz(a)anthracene (7,12-), 0.0212 tons per year (42.4 pounds per year) of Formaldehyde, 0.00053 tons per year (1.06 pounds per year) of Nickel, and 0.000671 tons per year (1.34 pounds per year) of Polycyclic Organic Matter.

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 natural gas fired boilers, natural gas and #2 fuel oil fired boilers, diesel fired emergency generators, bakery ovens and mixers, inkers, a federal press controlled by a bag filter, and above ground gasoline storage vessels.

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) Updated FC requirements in accordance with NJDEP policy;
- 2) Added Arsenic, Benzene, Cadmium, Cobalt, Dimethylbenz(a)anthracene (7,12-), Formaldehyde, Nickel, and Polycyclic Organic Matter as HAPs to the permit in accordance with N.J.A.C. 7:27-17 Table 2 thresholds;
- 3) Added PM-2.5 emissions in accordance with NJDEP policy;
- 4) Added an 840,000 BTU/hr hot water heater as an insignificant source (IS28); and
- 5) Incorporated a minor modification BOP220001 to update emission calculations in Emission Units U1002, U1004, and U10010 based on AP-42 emission factors.

STATEMENT OF BASIS for NJDOC Bayside State Prison

TITLE V OPERATING PERMIT RENEWAL

Program Interest (PI): 75499 / Permit Activity Number: BOP200009

The changes made during this permitting action result in allowable annual emissions changes as follows: VOC (Total) decreased by 7.32 tons per year, NOx increased by 15.41 tons per year, CO increased by 11.53 tons per year, SO2 decreased by 8.967 tons per year, TSP decreased by 1.612 tons per year, PM-10 decreased by 1.582 tons per year, PM-2.5 increased by 2.82 tons per year, HAPs (Total) increased by 0.024 tons per year, Arsenic increased by 0.00005 tons per year, Benzene increased by 0.00115 tons per year, Cadmium increased by 0.000356 tons per year, Cobalt increased by 0.000023 tons per year, Dimethylbenz(a)anthracene (7,12-) increased by 0.00000457 tons per year, Formaldehyde increased by 0.0212 tons per year, Nickel increased by 0.00053 tons per year, and Polycyclic Organic Matter increased by 0.00067 tons per year.

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 emergency generators U6 and U1002, the facility monitors the hours of operation for testing and maintenance (hr/yr) as the surrogate for the long-term (TPY) emission limits for VOC, NOx, CO, TSP, PM-10, and PM-2.5.

For ovens U51, U52, and U53, the facility monitors the hours of operation (hr/yr) and total production rate (tons/yr) as the surrogate for the long-term (TPY) emission limits for VOC and NOx.

For above ground storage tank U1009, the facility monitors the total throughput (gal/yr) as the surrogate for the long-term (TPY) emission limits for VOC.

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.

MACT Subpart ZZZZ: Stationary Reciprocating Internal Combustion Engines
NSPS Subpart A: General Provisions

STATEMENT OF BASIS for NJDOC Bayside State Prison

TITLE V OPERATING PERMIT RENEWAL

Program Interest (PI): 75499 / Permit Activity Number: BOP200009

NSPS Subpart IIII: Stationary Compression Ignition Internal Combustion Engines

The Greenhouse Gas (GHG) emissions from this facility are 37,398 TPY CO₂e 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's operating permit has expired without an application shield, but the facility and the Department have entered into Administrative Consent Order to address this situation.

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
BOP210001	Minor Modification	<p>The following changes were made to the operating permit during this modification process:</p> <p>1) Removed Emission Unit 901, E901, and PT9 due to the Boiler (2.52 MMBTU/hr) being shut down, disconnected, and no longer in operation.</p> <p>2) Added two Fugitive Sources FG3 & FG4 for farming operations and roads; and</p> <p>3) Added four Insignificant Sources IS24-27 for fuel combustion equipment under 1 MMBTU/hr,</p> <p>The changes made during this permit activity results in an increase of allowable annual emissions of VOC by 0.036 tons, SO₂ by 0.006 tons, TSP by 0.061 tons, and PM-10 by 0.061 tons and a decrease of allowable annual emissions of NO_x by 0.655 tons and CO by 1.045 tons.</p>	12/7/2021
BOP200007	Minor Modification	<p>The following changes were made to the operating permit during this modification process:</p> <p>1) Added three bakery ovens to Emission Units U51-53;</p> <p>2) Added six general operating permits GOP200001-200006 to Emission Units U1-U6; and</p> <p>3) Updated the FC section conditions in accordance with NJDEP policy.</p> <p>The changes made during this permit activity result in an increase of allowable annual emissions of VOC by 4.312 tons, NO_x by 4.65 tons, CO by 3.69 tons, TSP by 0.032 tons, and PM-10 by 0.013 tons.</p>	4/28/2021
BOP200001	General Operating Permit	Bread Mixers Emission Unit U1	5/28/2020
BOP200001	General Operating Permit	Cake Mixers Emission Unit U1	5/28/2020
BOP200001	General Operating Permit	Proof Boxes Emission Unit U1	5/28/2020
BOP200002	General Operating Permit	2.07 MMBTU/hr (HHV), Boiler Natural Gas Only Emission Unit U2	5/28/2020
BOP200003	General Operating Permit	2.07 MMBTU/hr (HHV), Boiler Natural Gas Only Emission Unit U3	5/28/2020
BOP200004	General Operating Permit	1.26 MMBTU/hr (HHV), Boiler Natural Gas Only Emission Unit U4	5/28/2020
BOP200005	General Operating Permit	1.26 MMBTU/hr (HHV), Boiler Natural Gas Only Emission Unit U5	5/28/2020
BOP200006	General Operating Permit	6.932 MMBTU/hr (HHV) Emerg. Gen. (480 kW) Natural Gas, 100 hrs/yr Emission Unit U6	5/28/2020

BOP190001	Administrative Amendment	<p>The following change was made to the operating permit during this modification process:</p> <p>- Updated the responsible official contact (James Hamilton).</p>	10/28/2019
BOP180001	Administrative Amendment	<p>The following changes were made to the operating permit during this modification process:</p> <p>1) Adds Edward Watts as Responsible Official, Air Permit Information Contact, BAQE - Engineering, BOP - Operating Permits, Emission Statements, Fees/Billing Contact, NOx RACT Annual Adjust. Report Contact, On-Site Manager, and Title V Compliance Certification Contact.</p> <p>2) Adds Richard M. Cestone as Consultant.</p> <p>There are no proposed changes to air contaminant allowable annual emission rates.</p>	6/7/2018

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