

STATEMENT OF BASIS for DSM NUTRITIONAL PRODUCTS LLC.

TITLE V OPERATING PERMIT RENEWAL

Program Interest (PI): 85452 / Permit Activity Number: BOP18001

I. FACILITY INFORMATION

DSM Nutritional Products LLC is located at 205 Macks Island Drive, Belvidere, NJ 07823, Warren County and consists of pharmaceutical manufacturing plant which produces nutritional products, dietary supplements, and liquid based nutrient blends and products. It also has a cogeneration system and three boilers combusting natural gas and distillate oil. The facility is owned and operated by DSM Nutritional Products LLC.

The facility is classified as a major facility based on its potential to emit 56.48 tons per year of volatile organic compounds and 92.3 tons per year of nitrogen oxide compounds to the atmosphere.

This permit allows individual hazardous air pollutants to be emitted at a rate not to exceed 0.024 pound per year of arsenic, 0.13 pound per year of cadmium, 0.01 pound per year of cobalt, 0.002 pound per year of 7,12-Dimethylbenz(a)anthracene and 1208.9 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 (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: a vacuum system, packaging systems, dump stations, storage silos, hoppers, blenders, fillers, bins, kettles, mills, towers, unloading stations, weighing stations, grinders equipped with a dust collector with a control efficiency of 99% for TSP and PM-10; dryers, process tanks, reactor systems, a furnace equipped with scrubbers with a control efficiency of 99% for TSP and PM-10; inoculum tanks and fermentors equipped with scrubbers with a control efficiency of 85% for VOC; storage tanks, boilers, cogeneration system, emergency generators, and wastewater treatment units with no control devices.

This permit also incorporates two general operating permits (Activity # BOP160001 and 160002) that the facility obtained for two emergency generators with a heat input rate of 1.02 and 1.8 MMBTU/hr (HHV) respectively. These generators are permitted to operate up to 100 hours per year on fuel oil and natural gas respectively for testing and maintenance. The total increase in facility emissions due to the addition of these new generators are 0.046 tons of NO_x, and 0.046 tons of VOC and 0.0116 tons of CO 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.

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

This is a Permit Renewal and includes the following changes:

1. All equipment in Production Building # 214 has been removed since the building has been torn down. The equipment that has been removed is as follows: E214524, E214525, E214623 thru E214663.

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2. The following tanks have been removed from the permit: E218001, E2180002, E2180006, E218007, E218008, E218018, and E218019.
3. Two 400 gallon vessels which are classified as insignificant sources have been added under IS15.

The changes made during this permitting action result in allowable annual emissions changes as follows: 2.1 tons emission decreases of TSP, PM-10 and PM-2.5 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 manufacturing and materials handling equipment, production records are maintained.

Boiler:

For the Boilers in U202, the facility monitors fuel use as the surrogate for the long-term (TPY) emission limits for VOC, NOx, CO, SO₂, and HAPs and monitors hours of operation as the surrogate for long term emission limits for TSP, PM-10 and PM-2.5. Surrogate monitoring for the short-term (lb/hr) emission limits are combustion process adjustment for NOx and CO and the maximum gross heat input is surrogate for short-term emission of VOC, SO₂, TSP, PM-10, PM-2.5, and HAPs.

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 Db: Industrial-Commercial-Institutional Steam Generating Units

NSPS Subpart Dc: Industrial-Commercial-Institutional Steam Generating Units

NSPS Subpart KKKK: Stationary Combustion Turbines

MACT Subpart ZZZZ: National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

The Greenhouse Gas (GHG) emissions from this facility are 98,768 TPY CO₂e and there is no GHG emissions increase. This renewal is not subject to PSD rules at 40 CFR 52.21

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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 its 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 |
|------------------------|--------------------------|--|-------------------|
| BOP190001 | Significant Modification | <p>This modification includes the following changes:</p> <p>(1) The addition of a temporary boiler (94.7 MMBtu/hr) with its own Operating Scenario (OS17) under the existing Emission Unit for Boiler/Utility Operations (U202). The temporary boiler (E-202012) will serve as a backup to the cogeneration unit and it is permitted for restricted operation (118 million cubic feet per year of natural gas) to keep it under the threshold for documenting advances in the art of air pollution control pursuant to N.J.A.C. 7:27-22.35. There will be no increase in total emissions for the emission unit as the facility will maintain the current capped emission limits for the criteria pollutants for the emission unit U202 to avoid becoming a major Prevention of Significant Deterioration (PSD) source pursuant to 40 CFR 52.21. Calculations of annual emission limits (tons per year) have been revised to include the temporary boiler.</p> <p>(2) In the operating scenarios OS5 and OS9 for Boiler #2 and #4, the hourly emission limit requirements had exemptions during start-up and shutdown periods. These exemptions have been removed.</p> <p>(3) Addition of a requirement to monitor hours of operation for Boiler # 2 and #4. Hours of operation will be used in the 12-month emission calculations for TSP, PM-10, and PM-2.5.</p> <p>(4) Group 1 (CO2e cap at the facility) has been removed.</p> <p>(5) Boiler #3 (E-202005) has been disconnected and removed from service in the facility. Therefore, Boiler #3 has been deleted from the permit.</p> | 12/18/19 |

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