**INFORMATION RELATIVE TO**

**THE TITLE V OPERATING PERMIT**

**October 2, 2020**

GENERAL FACILITY INFORMATION

**Facility Name:** EP Engineered Clays Corporation

**Facility Address:** 600 East McDowell Road, Jackson, Mississippi

**County:** Hinds

**SIC Code(s):** 3295 (Minerals and Earths, Ground or Otherwise Treated**)**

**NAICS Code(s):** 327992

APPLICATION SUMMARY

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| **Permit No.:** 1080-00145  **Permit Action:** Renewal  **Permit Folder:** 20200001  **Application Receipt Date:** January 30, 2020  **Application Deemed Complete:** May 1, 2020  **CBI Submitted?:** No | **NSPS (Part 60):** Dc, OOO, UUU  **NESHAP (Part 61):** N/A  **NESHAP (Part 63):** N/A  **112(r) / RMP:** N/A  **Other:** N/A |

FACILITY DESCRIPTION

EP Engineered Clays Corporation (“EP”) is an existing industrial facility that operates a bentonite clay beneficiation/activation and packaging process (the clay is originally mined in sister facility located in Aberdeen, MS). The formulated clay products are utilized in the food industry, in the petrochemical / specialty chemical industry, and as an animal feed additive. The primary source of emissions at EP originate from bentonite clay handling, processing, drying, and storage operations. The facility operates numerous bag filter control devices; two (2) 18.5 MMBTU / hour natural gas-fired flash dryers; three (3) 16.8 MMBTU / hour natural gas-fired rotary dryers; two (2) 26.0 MMBTU / hour natural gas-fired package boilers; and one (1) 4.0 MMBTU / hour natural gas-fired fluid bed dryer.

TITLE V SOURCE APPLICABILITY

The facility’s uncontrolled potential-to-emit particulate matter less than 10 µm in diameter (PM10) and particulate matter less than 2.5 µm in diameter (PM2.5) respectively exceed the applicable Title V threshold of 100 tpy.

However, the facility’s potential-to-emit hazardous air pollutants (HAPs) does not exceed either Title V major source threshold of 25 tons per year (tpy) for all HAPs combined or 10 tpy for any individual HAP. Consequently, this classifies EP as an area source for HAP emissions.

**Facility-Wide Potential-to-Emit Summary1**

| **Pollutant** | **PTE Emissions**  **(tons/yr)** |
| --- | --- |
| Particulate Matter (TSP) | 243.69 |
| PM10 | 243.69 |
| PM2.5 | 243.69 |
| Sulfur Dioxide (SO2) | 16.13 |
| Nitrogen Oxides (NOx) | 60.07 |
| Carbon Monoxide (CO) | 50.92 |
| Volatile Organic Compounds (VOCs) | 24.30 |
| Total Reduced Sulfur (TRS) | 0 |
| Lead | 0 |
| CFC/HCFC | 0 |
| Total HAP | 6.85 |

1 The PTE emissions reflect any emission limits or enforceable restrictions included in the proposed permit.

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) APPLICABILITY

The facility is not one (1) of the twenty-eight (28) categorical facilities listed in 40 CFR 52.21(b)(1)(i)(c)(iii); therefore, the PSD threshold for the facility is 250 tpy. Based on its maximum uncontrolled emissions, EPA has the potential-to-emit particulate matter (PM) in excess of 250 tpy. However, the utilization of dust collectors throughout the facility reduces PM emissions facility-wide below the noted PSD threshold. Therefore, the facility is considered a moderate stationary source. No modification to the facility is proposed with this permitting action; therefore, PSD applicability was not evaluated during the Title V renewal.

FACILITY MODIFICATIONS AND/OR PERMIT CHANGES

EP has not requested any physical modifications as part of this permitting action. However, new permit requirements have been included, which require quarterly opacity evaluations for Emission Point AA-029 (4.0 MMBTU / Hour Natural-Gas Fired Roller Compactor Fluid Bed Dryer). Additionally, numerous permit conditions have been incorporated into the draft permit in order to more define the requirements specified by NSPS – Subpart OOO and NSPS – Subpart UUU that were formerly generalized in the prior Title V Operating Permit.

COMPLIANCE ASSURANCE MONITORING (CAM) APPLICABILITY

40 CFR Part 64 specifies the requirements for CAM. The general applicability of this rule can be found in 40 CFR 64.2 and requires a Title V source to comply with the CAM requirements if all three of the following criteria are met for a pollutant-specific emission unit (PSEU):

1. The unit is subject to an emission limitation or standard for a regulated air pollutant other than exemptions under 40 CFR 64.2(b)(1);
2. The unit uses a control device to comply with the standard; and
3. The unit has pre-control emissions exceeding Title V major source threshold.

As the calculated pre-control particulate matter (PM) emissions for several process units exceed 100 tpy, PM is not considered at a regulated air pollutant under Part 70 of the Clean Air Act. Therefore, Compliance Assurance Monitoring does not apply.

NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS (NESHAP) APPLICABILITY

EP is an area source for HAP emissions, since the facility does not have the potential to emit more than 25 tpy of all HAPs combined or more than 10 tpy of any individual HAP.

**40 CFR Part 63, Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources**

EP operates two (2) natural gas-fired package boilers (Emission Points AA-025 and AA-026). Since the boilers are only capable of combusting natural gas, the boilers meet the definition of a “*gas-fired boiler*” within the subpart. As such, these units are **not** subject to any requirements found in Subpart JJJJJJ (the dryers are not affected sources under this subpart).

NEW SOURCE PERFORMANCE STANDARDS (NSPS) APPLICABILITY

**40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

As previously stated, EP operates two (2) package boilers [i.e. steam generating units – Emission Points AA-025 and AA-026] that were constructed after the applicable date of June 9, 1989 and each have a respective heat input capacity within the applicable heat input range (in MMBTU / hour) [i.e. 10 ≤ Heat Input ≤ 100]. Therefore, each boiler is subject to the applicable requirements found in Subpart Dc. However, Emission Points AA-025 and AA-026 are only required to monitor and record the volume of fuel combusted in each boiler monthly given that these boilers only utilize natural gas as a fuel source.

**40 CFR Part 60, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants**

The provisions of this subpart are applicable to various equipment located at fixed or portable nonmetallic mineral processing plants that commenced construction, modification, or reconstruction after August 31, 1983. Emission Points AA-004g (Silo No. 6), AA-004h (Silo No. 7), AA-018 (Bulk Load-Out No. 2), AA-021 (F-24 Feed Bin), AA-022 (Bulk Load-Out No. 3), AA-027 (Roller Compaction F20X Bin Vent), and AA-028 (Reactor Floor Dust Collector) were installed after the effective date of this subpart. Therefore, these mentioned sources are subject to the following requirements in Subpart OOO:

* Emission Points AA-004g, AA-004h, AA-018, AA-021, AA-022, AA-027, and AA-028, are subject to a 7% opacity limitation at each stack.
* Emission Points AA-004g, AA-004h, AA-018, AA-021, and AA-022 are subject to a 10% opacity limitation for fugitive emissions and a PM emission limitation of 0.05 grams per dry standard cubic meter (dscm) at each stack.
* Emission Points AA-027 and AA-028 are subject to a PM emissions limitation of 0.032 grams per dscm at each stack.

Moreover, quarterly opacity evaluations (in accordance with EPA Test Method 22) and recordkeeping in a logbook are required to demonstrate compliance with applicable opacity limitations. Additionally, Subpart OOO allows for alternative means of compliance.

**40 CFR Part 60, Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries**

The provisions of this subpart are applicable to each calciner and dryer at a mineral processing plant (feed and product conveyors are not considered affected sources). For the brick and related clay products industry, only the calcining and drying of raw materials prior to firing of the brick are covered that commenced construction, modification, or reconstruction after April 23, 1986.

Emission Point AA-029 (4.0 MMBTU / Hour Natural-Gas Fired Roller Compactor Fluid Bed Dryer) was installed after the effective date of this subpart. Therefore, this source is subject to the applicable requirements of Subpart UUU. Emission Point AA-029 is subject to a 10% opacity limitation from fugitive emissions and a PM emissions restriction of 0.057 grams per dscm. However, since the fluid bed dryer does not meet the definition of any of the sources described in 40 CFR 60.734(b) – (d), the fluid bed dryer would be subject to the continuous monitoring system requirements to measure and record opacity pursuant to 40 CFR 60.734(a). However, according to the U.S. Environmental Protection Agency Applicability Determination Index Control Number: 0600020, since the source has a potential-to-emit particulate matter (PM) < 11 tpy, the source is exempt from the opacity continuous monitoring system requirements.

In lieu of the opacity continuous monitoring system requirements, quarterly opacity evaluations (in accordance with EPA Test Method 22) and recordkeeping have been included for Emission Point AA-029.

SPECIFIC APPLICABLE REQUIREMENTS

| **Emission Point No.** | **Pollutant** | **Draft Permit Emission Limits** | **Monitoring Requirements** |
| --- | --- | --- | --- |
| AA-003  through AA-013  AA-016 through AA-018  AA-021  AA-022  AA-027 through  AA-029 | PM | E = 4.1\*(p)0.67 | Daily Baghouse Pressure Drop Monitoring Requirements, Weekly Inspection and Maintenance Requirements, and Biennial Performance Stack Testing |
| AA-009 through AA-013  AA-025  AA-026 | PM | E = 0.8808\*(I)-0.1667 | Fuel Monitoring Requirements |
| AA-025  AA-026 | SO2 | 4.8 lbs/MMBTU |
| AA-029 | SO2 | 0.6 lbs/MMBTU |
| AA-009  through  AA-013  AA-025  AA-026  AA-029 | Fuel | Combust natural gas only | Fuel Monitoring Requirements |
| AA-003 | PM | 0.57 lbs/hr and 2.48 tpy | Daily Baghouse Pressure Drop Monitoring Requirements, Weekly Inspection and Maintenance Requirements, and Biennial Performance Stack Testing |
| AA-004a  through  AA-004f | PM | 0.16 lbs/hr and 0.68 tpy | Weekly Inspection and Maintenance Requirements and Biennial Performance Stack Testing |
| AA-004g  AA-004h | PM | 0.05 g/dscm  0.034 lbs/hr and 0.15 tpy (combined total) |

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| **Emission Point No.** | **Pollutant** | **Draft Permit Emission Limits** | **Monitoring Requirements** |
| AA-005 | PM | 0.77 lbs/hr and 3.38 tpy | Daily Baghouse Pressure Drop Monitoring Requirements, Weekly Inspection and Maintenance Requirements, and Biennial Performance Stack Testing |
| AA-006 | PM | 1.90 lbs/hr and 8.33 tpy |
| AA-007 | PM | 1.21 lbs/hr and 2.60 tpy |
| AA-008 | PM | 2.06 lbs/hr and 9.01 tpy |
| AA-009  AA-010 | PM | 7.85 lbs/hr and 34.4 tpy |
| AA-011  AA-012 | PM | 4.84 lbs/hr and 21.2 tpy |
| AA-013 | PM | 16.97 lbs/hr and 74.3 tpy |
| AA-016 | PM | 1.54 lbs/hr and 6.76 tpy |
| AA-017 | PM | 1.29 lbs/hr and 5.63 tpy |
| AA-018 | PM | 0.05 g/dscm  0.25 lbs/hr and 1.07 tpy |
| AA-021 | PM | 0.05 g/dscm  0.07 lbs/hr and 0.30 tpy |
| AA-022 | PM | 0.05 g/dscm  0.57 lbs/hr and 2.48 tpy |
| AA-025  AA-026 | PM | 0.37 lbs/hr and 1.64 tpy |
| AA-027 | PM | 0.032 g/dscm  0.065 lbs/hr and 0.284 tpy |
| AA-028 | PM | 0.032 g/dscm  0.588 lbs/hr and 2.58 tpy |
| AA-004g  AA-004h  AA-018  AA-021  AA-022  AA-027  AA-028 | Opacity | 7% (stack emissions) | Biennial Method 9 Visible Emission Evaluations |
| AA-004g  AA-004h  AA-018  AA-021  AA-022 | Opacity | 10% (fugitive emissions) | Quarterly Method 22 Visible Emission Evaluations and Documentation in a Logbook |
| **Emission Point No.** | **Pollutant** | **Draft Permit Emission Limits** | **Monitoring Requirements** |
| AA-029 | PM | 0.057 g/dscm  2.19 lbs/hr and 9.57 tpy | Daily Baghouse Pressure Drop Monitoring Requirements, Weekly Inspection and Maintenance Requirements, and Biennial Performance Stack Testing |
| Opacity | 10% (fugitive emissions) | Quarterly Method 22 Visible Emission Evaluations |