Title V Air Operation Permit Renewal
Permit No. 0390005-019-AV

APPLICANT

The applicant for this project is BASF Corporation. The applicant's responsible official and mailing address are: Mr. David Simkins, Site Manager, BASF Corporation, Quincy Operations, 1101 North Madison Street, Quincy, Florida 32352.

FACILITY DESCRIPTION

The applicant operates the Quincy Operations, which is located in Gadsden County at 1101 North Madison Street, Quincy, Florida.

The facility processes Attapulgite Clay and Fuller's Earth in two major production lines: Granular Processing and Gel Processing. The crude clay is trucked from the mines to the facility and either stockpiled by quality or fed directly to a primary crusher. Granular processing consists of crushing, drying, sizing and packing operations. Gel processing consists of crushing, extruding with additives (magnesium oxide), drying/milling, classifying and packing operations. Based on production needs and clay quality, it may be blended by mixing various grades using a front end loader. The clay is then stored under the Granular Storage Shed or the Gel Storage Shed, depending on the clay quality.

Attapulgite is a magnesium aluminum phyllosilicate, one of the types of Fuller's earth, which occurs in a type of clay soil common to the Southeastern United States.

Particulate matter (PM) emissions resulting from clay handling and processing are controlled by baghouses. Emissions from the natural gas-fired or propane-fired equipment (Granular Clay and Gel Clay fired equipment) are controlled by baghouses or scrubbers.

Granular Processing

A front-end loader feeds clay from the Granular Crude Shed to the crusher and screening systems to reduce the size to one-half inch. The crude feed may be blended with extrudite material and fed to the Fluid Bed Dryer. The clay is fed directly from the dryer to the No. 1A Mill or stored in a stock bin. A reconstitution system consisting of three extruders is used to handle fines. Water is added to the fines from the Granular Processing Systems and passed through the extruders. The extrudite is added to the crude clay and sent to the Fluid Bed Dryers.

In the No. 1A Mill the clay is passed through primary screens to make a 6/60 mesh cut. The oversized material (overs) is passed through roller mills and sent to secondary screens. The overs from the secondary screens are sent to roller mills. The overs from these mills are sent to screening and the roller mill recirculation circuit. The product from this operation is stored in a bin. The fines are pumped back to the Fluid Bed reconstitution system.

Clay from the product bin is sent to three mesh screens. The product is sent to the No. 2 Kiln and calcined. The No. 2 Kiln product is sent to a rotary cooler and, from the cooler, the product is put into a storage bin for bagging or bulk shipment.

Clay from the 6/60 bin can also be sent to the screen tower. The screen tower consists of 18 sifters and storage bins. The sifters are set up to make various size products. Screen tower products can be shipped as product or calcined. The output of the No. 1 Kiln goes to a rotary cooler. From the No. 1 Cooler the product goes to bins for bagging or bulk shipment. The Granular Shipping area includes a packer, palletizer and stretch wrap machine. The granular product can be shipped in bags, bulk trucks and bulk railcars.

Gel Processing

A front end loader transports clay to a feed system for four extruders. A screw feeder may be used to add magnesium oxide to the extruder feed. The clay then goes to one of three dryer mills to be dried and sized. The clay is recovered from the air stream by a cyclone collector. From the Mills, the clay is pumped pneumatically to the Gel Shipping Area or bulk loaded for shipment. The shipping area includes a palletizer, packers and stretch wrap machines.

Fine Grind

Ultrafine Air Classifying Mills (ACM) are used for size reduction of various products to microfine particle sizes. Some of the clay from the Gel Mills is sent to either Fine Grind for ACM Milling or Ultra Fine Grind for additional processing. In ACM Milling, the clay is sent to a pulverizer mill where the clay is ground. The clay from the mill is sent to the classifier to make the final product cuts. The products can then be loaded in bulk or bagged for shipment. In Ultra Fine Grind, clay is fed to two jet mills where the clay is ground. The clay from the mill is sent to a classifier to make the final product cuts. The products can then be loaded in bulk or bagged for shipment.

The facility includes emissions units subject to NSPS (40 CFR 60 Subpart OOO) as a result of the date of construction of the affected equipment. Emission units subject to NSPS include the Gel Clay Production Equipment and the ACM Milling/Ultra Fine Grind Equipment. These NSPS standards apply to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station. The permit limits are comparable or more stringent then those required by NSPS and include 5% opacity limits.

The clay mining areas are not contiguous with the process plant areas and are not included in this Title V facility permit.

The facility is subject to a facility-wide NOx limit of 124 tons per year, associated with a BACT determination for the construction of the north and south fluid bed dryers (Air construction permits AC20-41424 and AC2041425, issued August 4, 1981).

Since BASF has a potential-to-emit more than 250 tons of PM per year (297 tons/yr), the facility is a major source under Prevention of Significant Deterioration (PSD) and any future modifications and/or construction must be evaluated with respect to the preconstruction review requirements of Chapter 62-212, F.A.C. This facility is not a major source of hazardous air pollutants (HAP).

Also included in this permit are miscellaneous unregulated/insignificant emissions units and/or activities.

PROJECT DESCRIPTION

The purpose of this permitting project is to renew the existing Title V permit for the above referenced facility, and to incorporate the terms and conditions of Permit No. 0390005-020-AC, which is being processed concurrently with this renewal.

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Renewed Title V Air Operation Permit issued January 26, 2010
Title V Air Operation Permit Revisions issued October 10, 2011 and October 24, 2013
Application for a Title V Air Operation Permit Renewal received June 16, 2014
Notice of Intent to Issue Air Permit issued June 27, 2014
Revised Notice of Intent to Issue Air Permit issued July 22, 2014
Public Notice Published **[Month day, year]**

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is not identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major stationary source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility does not operate units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAIR: The facility is not subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) applies to Emissions Units 002, 008 and 019 are subject to CAM and associated monitoring requirements. These include monitoring the scrubber pressure differentials and liquid water flows.

Emission units 014 and 015 are subject to CAM and associated monitoring requirements. These include monitoring the scrubber pressure differentials and liquid water flows.

Emission unit 030 is subject to CAM and associated monitoring requirements. These include monitoring the baghouse pressure differentials and conducting visible emissions monitoring if the pressure differentials fall outside the specified range.

PROJECT REVIEW

This project renews Title V air operation permit No. 0390005-014-AV, effective January 26, 2010, and incorporates the terms and conditions of permit No. 0390005-020-AC, which is being processed concurrently with this renewal. Changes made as part of this renewal include use of the new Title V permit template, use of combined appendices, and reformatting and streamlining of EU sections by moving common conditions to the new appendices. Changes as a result of the construction permit are fully described

Changes to the Current Title V Air Operation Permit due to Concurrent Permit No. 0390005-020-AC

Permit No. 0390005-020-AC authorizes the following changes to the current Title V air operation permit. There are no physical changes associated with this project and emission limits remain unchanged.

1) EU 002 - No. 4A Mill Scrubber: Indicate that the process rate is in dry tons.
2) EU 008 - No. 4 Mill Scrubber: Indicate that the process rate is in dry tons.
3) EU 019 - No. 4B Mill Scrubber: Indicate that the process rate is in dry tons.
4) EU 015 - No. 2 Kiln Scrubber, CAM Plan: Revise the scrubbing liquid flow rate from 200 - 400 gpm to 300 - 500 gpm.
5) EU 013 - NFG Fugitive Dust Collector: The operation rate is revised from 12 TPH and 105,120 TPY to 20 TPH and 175,200 TPY.
6) EU 022 - East Bin CGS Bin Vent: The operation rate is revised from 25 TPH and 219,000 TPY to 30 TPH and 262,800 TPY.
7) EU 023: West Bin CGS Bin Vent: The operation rate is revised from 25 TPH and 219,000 TPY to 30 TPH and 262,800 TPY.
8) EU 025 - NFG ACM Mill Product Dust Collector: The operation rate is revised from 8 TPH and 70,080 TPY to 20 TPH and 175,200 TPY.
9) EU 028 - NFG Bagger Dust Collector: The operation rate is revised from 12 TPH and 105,120 TPY to 20 TPH and 175,200 TPY.
10) EU 039, EP 48 - Receiver Bin 200 Vent: The operation rate is revised from 4.2 TPH and 33,600 to 30 TPH and 240,000 TPY.
11) EU 039, EP 53 - No. 2 Classifier 300 Bin Vent: The operation rate is revised from 4.2 TPH and 16,800 to 20 TPH and 80,000 TPY.

12) EU-038, EP 41d - Product Bin 600: The hours of operation is revised from 3,500 to 4,000 hours per year.

Per the Application received June 16, 2014, the original permitted production rates were based on manufacture specification sheets which guaranteed the minimum process rates that the equipment could process. However, depending on the type of material being processed, the equipment has the potential to process more than the stated

minimum value. Therefore, BASF is requesting an increase in the process throughput rate for the emissions units listed above. There have been no changes to the equipment or operations.

CONCLUSION

This project renews Title V Air Operation Permit No. 0390005-014-AV, which was issued on January 26, 2010, and incorporates the terms and conditions of Permit No. 0390005-020-AC. Title V Permit No. 0390005-014-AV was previously revised on October 10, 2011 and October 24, 2013 by Permit Nos. 0390005-016-AV and 0390005-017-AV, respectively. This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.