TECHNICAL EVALUATION
and
PRELIMINARY DETERMINATION

APPLICANT

BASF Corporation
1101 North Madison Street
Quincy, Florida 32352-9646

Quincy Operations
Facility ID No. 0390005

PROJECT

Project No. 0390005-020-AC
Application for Title V Air Construction Permit
Project Name: Revise Operating Rates and Hours

COUNTY

Gadsden, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Waste Management/Air Resources Program
Northwest District Office
160 W Government Street, Suite 308
Pensacola, Florida 32502-5740

June 27, 2014

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

Facility Description and Location

BASF Corporation is an existing Attapulgite Clay and Fullers Earth processing facility, which is categorized under Standard Industrial Classification Code No. 3295. The facility is located in Gadsden County at 1101 North Madison Street in Quincy, Florida. The UTM coordinates of the existing facility are Zone 16, 732.6 km East and 3387.5 km North. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Project Description

The proposed project revises the operating rates and hours for certain emission units as shown below. This air construction permit is being processed concurrently with the Title V air operation permit renewal project 0390005-019-AV, which renews the existing Title V air operation permit 0390005-014-AV.

<u>Operational changes requested by the Applicant are as follows</u>:

1) EU 002 - No. 4A Mill Scrubber: Request that the renewed permit indicate that the process rate is in dry tons.
2) EU 008 - No. 4 Mill Scrubber: Request that the renewed permit indicate that the process rate is in dry tons.
3) EU 019 - No. 4B Mill Scrubber: Request that the renewed permit indicate that the process rate is in dry tons.
4) EU 015 - No. 2 Kiln Scrubber, CAM Plan: Request to revise the scrubbing liquid flow rate from 200 - 400 gpm to 300 - 500 gpm.
5) EU 013 - NFG Fugitive Dust Collector: Request that the operation rate be revised from 12 TPH and 105,120 TPY to 20 TPH and 175,200 TPY.

6) EU 022 - East Bin CGS Bin Vent: Request that the operation rate be revised from 25 TPH and 219,000 TPY to 30 TPH and 262,800 TPY.
7) EU 023: West Bin CGS Bin Vent: Request that the operation rate be revised from 25 TPH and 219,000 TPY to 30 TPH and 262,800 TPY.
8) EU 025 - NFG ACM Mill Product Dust Collector: Request that the operation rate be revised from 8 TPH and 70,080 TPY to 20 TPH and 175,200 TPY.
9) EU 028 - NFG Bagger Dust Collector: Request that the operation rate be revised from 12 TPH and 105,120 TPY to 20 TPH and 175,200 TPY.
10) EU 039, EP 48 - Receiver Bin 200 Vent: Request that the operation rate be 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: Request that the operation rate be revised from 4.2 TPH and 16,800 to 20 TPH and 80,000 TPY
12) EU-038, EP 41d - Product Bin 600: Request to revise the hours of operation to 4,000 hours per year.

Processing Schedule

June 16, 2014 Received the application for a Title V source air pollution construction permit.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM_{10}); volatile organic compounds (VOC); lead (Pb); fluorides (Fl); sulfuric acid mist (SAM); hydrogen sulfide (H_2S); total reduced sulfur (TRS), including H_2S; reduced sulfur compounds, including H_2S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO_2 and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major

stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 $\mu g/m^3$, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

The operational changes proposed by this project are not expected to cause an increase in the potential to emit, and emissions limits remain unchanged.

As provided in the application, the following table summarizes potential emissions and PSD applicability for the project.

Table A. Potential Emissions (Tons/Year) and PSD Applicability

Pollutant (TPY)	Pre-Project Potential Emissions	Post Project Potential Emissions	Total Emissions Change	Significant Emissions Rate	Subject to PSD
CO	53.9	53.9	0	100	NO
NO_X	124*	124*	0	40	NO
PM/PM_{10}	297**	297**	0	25/15	NO
SO_2	4.91	4.91	0	40	NO
VOC	N/A	N/A	0	40	NO

**Facility wide NOx limit of 124 tons/yr*
***PM Emission limits remain unchanged*

Since BASF has a potential-to-emit of greater than 250 tons per year of PM, the facility is a major source under PSD (Prevention of Significant Deterioration) and any future modifications and/or construction must be evaluated with respect to the preconstruction review requirements of Chapter 62-212, F.A.C. Based on a comparison of past and future potential emissions, the emissions changes associated with this project do not equal or exceed the significant emission rates for the affected pollutants, and this project is not subject to New Source or PSD review.

3. APPLICATION REVIEW

Application Fee

Exempt; Title V.

Discussion of Emissions

There are no physical changes associated with this project, and emissions limits and potential to emit remain unchanged. Emissions of particulate matter 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.

State Requirements

Compliance with emission point PM limits is demonstrated by compliance with the alternative visible emissions standard of 5 percent opacity. Compliance with building enclosure PM limits is demonstrated by compliance of each emission point enclosed within the building with the emission point PM limits. Compliance with the NO_x limit is demonstrated by tracking fuel usage by emissions unit and facility overall. For the emission units subject

to CAM, the Permittee shall monitor and operate the control equipment (baghouses and scrubbers) as specified by the approved CAM Plan.

Federal NSPS Provisions

40 CFR 60 Subpart OOO, NSPS for Nonmetallic Mineral Processing Plants

Federal NESHAP Provisions

N/A

Other Draft Permit Requirements

N/A

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Howard Ard is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at 850.595.0622 or howard.ard@dep.state.fl.us.