# TECHNICAL EVALUATION
# &
# PRELIMINARY DETERMINATION

## APPLICANT

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

Quincy Operations
Facility ID No. 0390005

## PROJECT

Project No. 0390005-015-AC
Application for Title V Air Construction Permit
Project Name: Installation of Pneumatic Transporters

## COUNTY

Gadsden, Florida

## PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Section
Northwest District Office
160 W. Government Street, Suite 308
Pensacola, Florida 32502-5740

June 13, 2011

## 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 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 facility proposes to install a Con 100, a Con 500 and a Cyclonaire Pneumatic Transporter to replace the Horizon Transporter. The plant proposes to recycle waste tailings back to the final product through Emissions Unit 024 and will install a larger rotary valve at the bin discharge. This will result in an operation increase from 0.2 ton per hour to 10 tons per hour.

These pneumatic transporters and the rotary valve have no specific requirements under 40 CFR 60 subpart OOO and their installation will not result in an overall emissions increase. Emissions are controlled by dust collectors. Emission limits include 5% opacity (original BACT) and 0.017 gpdscf (applicant's request, used as supporting information in original construction permit applications).

The permittee requested the VE testing frequency be reduced from annually to prior to permit renewal. Previous VE test results from 2000 – 2010 revealed opacity readings of 0.0 % for the emission units not subject to 40 CFR

60 subpart OOO, except in 2004 emissions unit EU 022 had an opacity reading of 3.0 %. Emissions units that are not subject to 40 CFR 60 subpart OOO and have consistently demonstrated low opacity readings will be modified to a VE test frequency from annually to prior to permit renewal.

### Processing Schedule

March 18, 2011 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**

Since BASF has a potential-to-emit of greater than 250 tons per year of PM (297 tons/yr), 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 actual and future potential emissions, the additional construction associated with this project does not approach the significant emission rates for the affected pollutants, and this project is not subject to New Source or PSD review.

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 | none | 100 | NO |
| $NO_X$ | 124* | 124* | none | 40 | NO |
| $PM/PM_{10}$ | 297 | Permitted emission limits remain unchanged | | 25/15 | NO |
| $SO_2$ | 4.91 | 4.91 | none | 40 | NO |
| VOC | N/A | N/A | none | 40 | NO |

**Facility wide NOx limit of 124 tons/yr*

Emissions are controlled by dust collectors. Emission limits remain unchanged from the permitted PM limit of 0.017 gpdscf (applicant's request, used as supporting information in original construction permit applications).

As shown in the above table, the total project emissions increase will not exceed the PSD significant emissions rates and therefore, the project is not subject to PSD preconstruction review.

## 3. APPLICATION REVIEW

### Application Fee

Exempt; Title V.

### Discussion of Emissions

The installation of the pneumatic transporters and the rotary valve will not result in an overall emissions increase. Emissions are controlled by dust collectors. Total combined particulate matter emissions from Emissions Units 022, 023 and 024 are 2.7 tons per year of PM (as previously permitted).

40 CFR 60 subpart OOO applies to the crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, enclosed truck or railcar loading operation prior to the first storage bin or silo. Belt conveyors are subject but this operation is a pneumatic transporter system [§60.670(a)(1)]

### State Requirements

Compliance with PM limits for emission units controlled by baghouses will require an initial PM test.

### Federal NSPS Provisions

40 CFR 60 subpart OOO

**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. Angelia Jackson 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 850/595-0598 or angelia.jackson@dep.state.fl.us.