TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

UNITED STATES GYPSUM COMPANY
6825 Evergreen Ave.
Jacksonville, Florida
Jacksonville Facility
Facility ID No. 0310072

PROJECT

Project No. 0310072-022-AC
Application for Minor Source Air Construction Permit
Wallboard Coating Booth
MBR Kettle Burners No. 1 and 4

COUNTY

Duval, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Section
Northeast District Office
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

September 13, 2013

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

United States Gypsum Co. is an existing Gypsum Wallboard Manufacturer, which is categorized under Standard Industrial Classification Code No. 3275. The facility is located in Duval County at Evergreen Ave., in Jacksonville, Florida. The UTM coordinates of the existing facility are Zone 17, 438.9 km East and 3361.2 km North; Latitude: 30° 22′ 52″ North and Longitude: 81° 38′ 07″ West. 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 not** 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

(EU108) Wallboard Line 1 will no longer produce wallboard. This project will modify (EU108) Wallboard Production Line No.1, by installing a wallboard coating booth that will be used to apply a coating to finished wallboard produced in the other Wallboard Production Lines Nos. 2 an 3. The Dryer Burners/Kiln associated with Wallboard Production Line 1 and the use of the existing End Saws at EU077 will continue to be used in the Wallboard Coating Booth process. This project also will increase the firing rates of the burners (EU092) for the production of heat at the calcining kettles associated with MBR Kettle Nos. 1 and 4 from 15 MMBtu/hr to 20 MMBtu/hr.

Processing Schedule

August 12, 2013- Received the application for a minor 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.

United States Gypsum Co. is currently minor for Prevention of Significant Deterioration (PSD) regulations by the previous establishment of a facility-wide emission limit for PM and VOC of less than 250 tons per year each. The facility has previously established a facility-wide emission limit for hazardous air pollutants (HAP) of less than 10 tons per year for any single HAP and less than 25 tons per year for total HAPs classifying it as a Synthetic Minor Source of HAPs.

3. APPLICATION REVIEW

Discussion of Emissions

The existing End Saws (EU077) and dryer burners/kiln associated with (EU108) Wallboard Production Line 1 will continue to be used in the Wallboard Coating Booth process.

Total emissions from the Wallboard Coating Booth processes (dryer/kiln, fuel usage, end saws (EU077) and coating) are estimated to be PM 10.70 TPY, VOC 18.28 TPY, Formaldehyde 1.17 TPY, NOx 10.95 TPY, CO 18.40 TPY and SO_2 0.14.

After the implementation of this project, the Total facility-wide emissions are estimated to be PM 217.85 TPY; VOC 169.71 TPY, Formaldehyde 9.30 TPY, NOx 179.06 TPY, CO 216.85 TPY and SO_2 1.71 TPY.

EU092- Kettle Burners

Maximum Heat Input Kettles No.1 and No. 4. This project increases the maximum heat input from 15 MMbtu/hr to 20 MMbtu/hr only for kettles No.1 and No. 4.
[Rule 62-210.300(PTE), F.A.C., Rule 62-296.700(4), FAC, and Rule 2.1101, JEPB]

EU108- Wallboard Coating Booth at Wallboard Production Line No. 1

The facility will modify Wallboard Production Line No. 1 by adding a Wallboard Coating Booth to apply coatings to finished wallboard produced by the other wallboard lines Nos. 2 and 3. Wallboard line 1 will no longer produce wallboard. The design capacity of the Coating Booth is 240 gallons per hour and 62,500 gallons per year.

The facility will add a new coating booth stack and panel filters will control PM emissions. The Wallboard Coating Booth does not appear to be subject to any of the State RACT Rules (Rules 62-296.500- 62-296.712, F.A.C.).

State Requirements

EU092: Rule 62-296.700, FAC, Rule 2.1101, JEPB, and Rule 2.1401, JEPB.

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. Leslie Maybin 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 the Northeast District Office's mailing address 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256.