

**TECHNICAL EVALUATION**  
**AND**  
**PRELIMINARY DETERMINATION**

**I. GENERAL INFORMATION**

**A. APPLICANT**

United States Gypsum Company  
6825 Evergreen Ave.  
Jacksonville, Fl. 32208-4996

Permit No: 0310072-015-AC  
County: Duval

**B. PROJECT**

The applicant, United States Gypsum Company, applied on March 20, 2008 (additional information submitted April 30, 2008) to the Department for a permit to modify the wallboard production facility as follows:

1. Allow continuous operation at all emission units (i.e., 8760 hours per year).
2. Establish a consistent particulate matter emission standard of 0.015 grains per dry standard cubic foot on all EUs controlled by baghouses.
3. Modify wallboard no. 2 by formalizing the use of additives (resulting in emissions of PM, volatile organic compounds[VOC], and hazardous air pollutants[HAP] of which the primary HAP is formaldehyde.
4. Remove wallboard dryer burners from EU 092 and add to each wallboard dryer EU.
5. Increase flow rate on EU 101 and 102 to 1050 dscfm.
6. Establish a facility wide emission limit for PM and VOC of less than 250 tons per year each and a facility wide emission limit for HAPs of less than 10 tons per year for single HAP and less than 25 tons per year for total HAPs.

**II. RULE APPLICABILITY**

The facility is located in an area unclassifiable for the air pollutant particulate matter (PM) less than or equal to ten (10) micrometers, in the area of influence of an air quality maintenance area for PM, and in an air quality maintenance area for ozone pursuant to Chapter 62-204, Florida Administrative Code (FAC), and Jacksonville Environmental Protection Board (JEPB), Rule 2.201.

The facility is a major source of air pollution because the potential emissions of regulated air pollutants are greater than 100 tons per year pursuant to Chapter 62-210, FAC, and JEPB Rule 2.301.

The project is subject to the provisions of New Source Performance Standards (NSPS), 40 CFR 60, Subpart OOO, Standards of Performance for Non-Metallic Mineral Processing Plants, 40 CFR 60, Subpart OOO, Standards of Performance for Calciners and Dryers in the Mineral Industries, and 40 CFR 60, Subpart A, General Conditions., The project is subject to Reasonably Available Control Technology (RACT) requirements including **Specific RACT Emission Limiting Standards for Stationary Emission Units** [Rule 62-296.700(3), FAC, and Rule 2.1001, JEPB]; **Maximum Allowable Emission Rates** [Rule 62-296.700(4), FAC, and Rule 2.1001, JEPB]; **Circumvention** [Rule 62-296.700(5), FAC, and Rule 2.1001, JEPB], and **Operation and Maintenance Plan** [Rule 62-296.700(6), FAC, and Rule 2.1001, JEPB]. The facility is currently minor for purposes of Prevention of Significant Deterioration (PSD) [i.e., potential to emit is below 250 tons per year]. After the modification the facility potential to emit (post modification) will still be below 250 tons per year, which will maintain the classification of the facility as minor for PSD purposes.

### III. TECHNICAL EVALUATION

All EUs shall be allowed to operate 8760 hours per year. PM limits of 0.015 gr/dscf have been established for all EUs which are controlled with a baghouse(s). Various additives are being used in Wallboard Production line no. 2. Emission rates of PM, VOC, and HAP have been quantified for purposes of facility wide emissions. Each wallboard line has been established as an EU as follows: EU No. 108 -- Wallboard Line No. 1, EU No. 109 -- Wallboard Line No. 2, EU No. 110 -- Wallboard Line No. 3. The lines each include the dryer burners previously permitted under EU No. 092. The nominal airflow for EU Nos. 101 and 102 has been corrected to 1050 dscfm each. A facility wide emission limit for PM and VOC of less than 250 tons per year each and a facility wide emission limit for HAPs of less than 10 tons per year for single HAP and less than 25 tons per year for total HAPs has been established to determine that the facility is minor for purposes of PSD. Overall PM allowable emission limits have been reduced by the implementation of these changes.

#### Testing Requirements

The following EUs shall be tested, as indicated, within 180 days of the issuance date of this permit. If PM and VE testing is required for a particular EU then the testing shall be performed concurrently. Testing duration and methods shall be as specified in the specific conditions for each EU. If testing duration and/or method is not specified for a particular EU then the test method shall be EPA RM 5 for PM and EPA RM 9 for VE as adopted by Rule 62-297, FAC and Rule 2.1101, JEPB. The minimum VE testing time shall be one hour if not otherwise specified for a particular EU.

[Rule 62-212.400(12), FAC, Rule 62-4.070, FAC, Rule 2.1301, JEPB, and Rule 2.401, JEPB]

<u>EU ID No.</u>	<u>Brief Description</u>	<u>Pollutant</u>
005	Textures Bulk Calcium Carbonate Unloading and Supply System	VE
006	No. 3 Stucco Storage Bin	VE
007	No. 4 Stucco Storage Bin	VE
037	No. 2 Raymond Mill	VE
039	No. 5 & 6 Calcining Kettles	VE
040	No. 2 Stucco Storage Bin	VE & PM
042	No. 2 Board Plant End Saws	VE
043	No. 3 Raymond Mill and No. 7 Kettle Landplaster Elevator	VE & PM
048	Rotary Rock Dryer	VE & PM
054	Waste Board Reclaim System	VE
057	No. 7 Calcining Kettle	VE & PM
058	Storage Bin No. 1	VE
060	No. 5 Raymond Mill	VE
061	No. 3 Board Plant Stucco Elevator, Screen, and Additive Screw	VE & PM
062	No. 3 Board Plant Starch Stucco Bin	VE
063	No. 3 Board Plant End Saws	VE & PM

064	No. 3 Board Plant Stucco Feed Bin	VE & PM
065	No. 3 Board Plant Vermiculite/Starch Storage Bin	VE
066	No. 6 Raymond Mill and Rock Screw	VE & PM
070	Joint Treatment Calcium Carbonate Storage Bin	VE
072	Joint Treatment Talc Storage Bin	VE
077	No. 1 Board Plant End Saws	VE
088	Dunnage Machine Sawing Operation	VE
089	No. 4 Raymond Mill	VE
090	No. 3 Board Plant Ball Mill	VE
092	Kettle Burners and Wallboard Dryers	None Required
093	Synthetic Gypsum Feed System	None Required
094	Gypsum Rock Unloading, Conveying, and Storage System	None Required
095	No. 1 MBR Calcining Kettle	VE
096	No. 4 MBR Calcining Kettle	VE & PM
097	Nos. 2 & 3 Calcining Kettles	VE
098	Hurst Boiler No. 1	None Required
099	Hurst Boiler No. 2	None Required
100	Hurst Boiler No. 3	None Required
101	Joint Treatment No. 1 Carbonate Silo	VE
102	Joint Treatment No. 2 Carbonate Silo	VE
103	Joint Treatment Mica Silo	VE
104	Joint Treatment Clay Silo	VE
105	Joint Treatment Talc Silo	VE & PM
106	Joint Treatment (Wet and Dry) Premixer System	VE
107	Joint Treatment Bag Dumpstation	VE
108	Wallboard Production Line No. 1	VE
109	Wallboard Production Line No. 2	VE
110	Wallboard Production Line No. 3	VE

#### IV. CONCLUSION

Based upon information provided by the United States Gypsum Company the Department has reasonable assurance that the proposed modification of the United States Gypsum Company, Gypsum Wallboard Manufacturing Plant, as described in this evaluation and subject to the conditions proposed herein, will not cause, or contribute to a violation of any ambient air quality standard or other technical provision of Chapters 62-296 and 62-297, FAC, JEPB Rules 2.1001 and 2.1101.