

Permit No. V-2834  
July 26, 2023

**IMPERIAL COUNTY AIR POLLUTION CONTROL DISTRICT**

150 S. Ninth Street  
El Centro, CA 92243  
(442) 265 1800

**MAJOR FACILITY PERMIT RENEWAL REVIEW**

Company Name: United States Gypsum Company  
Facility Name: Plaster City  
SIC Code: 3275 (Gypsum Products)  
Source Type: Manufacturing of Gypsum Wallboard and Related Products  
Location: 3810 W Evan Hewes Hwy, Plaster City, California.  
Responsible Official: Lonnie Dyck  
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Permit Reviewer: Jesus Ramirez

Permit No. V-2834  
July 18, 2023

## TABLE OF CONTENTS

I.	Introduction	Pg. 3
II.	Facility Description	Pg. 3
III.	Facility Emission	Pg. 3
IV.	Applicable Requirements	Pg. 4
V.	Statements of Basis	Pg. 5
VI.	Insignificant Activities	Pg. 8
VII.	Supplemental Annual Fee	Pg. 8

## **I. Introduction**

Pursuant to Rule 900 of the Imperial County Air Pollution Control District (ICAPCD) Rules and Regulations, the District intends to issue a Renewal Title V Operating Permit to United States Gypsum Company, Plaster City facility. This facility manufactures gypsum wallboard and related products. The facility will operate under Title V Operating Permit number V-2834. The Operating Permit includes conditions to ensure that all Federal requirements are satisfied.

## **II. Facility Description**

U.S. Gypsum (USG) manufactures gypsum wallboard and related products at the Plaster City facility. Raw gypsum is mined at Split Mountain quarry 15 miles northeast of the Plaster City Plant. The Split Mountain quarry and Plaster City facility are connected by USG railroad. Gypsum ore is primary crushed, stored and railed to Plaster City where gypsum wall board and other gypsum products are manufactured. The Split Mountain Quarry also processes bulk agricultural gypsum which is separate from the primary crushing facility. The bulk gypsum facility crushes, grounds, screens, stores and distributes gypsum directly from the quarry. In recent years, the Plaster City and the Split Mountain quarry has undergone nearly a complete equipment modification upgrade. More energy efficient equipment has replaced older less efficient equipment. The equipment modifications were subject to New Source Review (NSR) permitting requirements with increased emissions control requirements and more stringent operating conditions than those previously permitted under the District's applicable prohibitory rules. USG has been operational since the 1940's.

### **Gypsum Processing**

Gypsum, or calcium sulfate dihydrate ( $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ ), is a white, crystalline, naturally occurring mineral. Raw gypsum ore at Plaster City facility is processed into a variety of products including gypsum wallboard, industrial and building plasters, as a Portland cement additive, and soil conditioner. To produce plasters or wallboard, gypsum must first be partially dehydrated (calcined) to produce calcium sulfate hemihydrate ( $\text{CaSO}_4 \cdot \frac{1}{2}\text{H}_2\text{O}$ ), commonly called stucco. Most of gypsum at Plaster City is processed for wall board manufacturing. Natural gas is the primary fuel used at the site.

## **III. Facility Emissions:**

The United States Gypsum Company, Plaster City facility has been determined as a major source of emissions for Nitrogen Oxides ( $\text{NO}_x$ ), Carbon Monoxide (CO), and Particulate Matter (PM-10). The following Table is the most current emissions inventory for the Plaster City and Split Mountain Quarry.

### **US GYSPUM EMISSIONS INVENTORY SUMMARY**

Permit No. V-2834  
 July 18, 2023

USG Plaster City and Split Mountain Quarry  
 Potential to Emit (PTE)

Operating at 8760 hr/yr at Maximum Rated Capacity

Table A

Source	Pollutant (Tons per Year)					
	PM10	NOx	CO	VOC	SOx	HAPs
Plaster City Non-Fugitive	197.4	108.7	204.1	13.8	1.5	3.8
Plaster City Fugitive	10.7	0.0	0.0	6.5	0.0	0.8
Quarry Non-Fugitive	46.9	0.0	0.0	0.3	0.0	0.01
Quarry Fugitive	127.5	15.7	62.6	0.0	1.9	0.02
<b>Facility Total</b>						
Facility Non-Fugitive	244.3	108.7	204.1	14.1	1.5	3.8
Facility Fugitive	138.2	15.7	62.6	6.5	1.9	0.8
<b>Facility Total</b>	<b>382.5</b>	<b>124.4</b>	<b>266.7</b>	<b>20.6</b>	<b>3.3</b>	<b>4.6</b>

**IV. Applicable Requirements:**

Based upon information submitted in USG's Title V application and the District's USG's file, the following is a list of the applicable federal requirements and SIP Rules that apply to the facility's emissions units.

Applicable Requirement	Major Equipment affected	Adoption Date
<b>Federal</b>		
NSPS CFR60, Subpart OOO,	Crushers, Mills	
NSPS CFR60, Subpart UUU	Kettles	
<b>Federal, State, Local</b>		
Rule 111- Equipment Breakdown {District Only}	Facility Wide	
Rule 117- Nuisance {District Only}	Facility Wide	
Rule 201-Permits Required	Facility Wide	10/10/2006

Permit No. V-2834  
 July 18, 2023

Rule 202-Exemptions	Facility Wide	02/09/2016
Rule 207-Standards For Permit to Construct	Facility Wide	09/11/2018
Rule 208-Standards For Permit to Operate	Facility Wide	09/14/1999
Rule 400-Fuel Burning Equipment	Facility Wide	09/14/1999
Rule 400.3-Internal Combustion Engines	Facility Wide	10/22/2013
Rule 400.4-Oxides of Nitrogen from Wallboard Kilns	Facility Wide	10/22/2013
Rule 401- Opacity of Emissions	Facility Wide	11/19/1985
Rule 403-Quantity of Emissions	Facility Wide	05/18/2004
Rule 405-Sulfur Compounds	Facility Wide	05/18/2004
Rule 800-General Requirements for Control of PM10	Facility Wide	10/16/2012
Rule 801-Construction and Earthmoving Activities	Facility Wide	11/08/2005
Rule 802-Bulk Materials	Facility Wide	11/08/2005
Rule 803- Carry-Out and Track-Out	Facility Wide	11/08/2005
Rule 805- Paved and Unpaved Roads	Facility Wide	10/16/2005

## V Statements of Basis

The proposed Operating Permit includes conditions to ensure that all federal requirements will be satisfied. Additionally, the permit has been designed to have adequate monitoring, record keeping and reporting requirements to demonstrate continuous compliance with the permit conditions.

The following provides additional clarification regarding certain permit changes and permit conditions.

1. 40 CFR Part 60, Subpart OOO set limits for the operation of nonmetallic mineral processing plants which were constructed or modified after 8/31/1983. Authority to Construct/Permit to Operate #1992D2 (1989), PC-Agri Facility; #2662A (1998), Green Giant Rail Loading; #2735A1 (1998), Mill Upgrade; #2834C (2000), Line No. 3 Addition; #2821A (1998), Train Unloading Shed; #2825 (1998), #1 Ball Mill; #2826 (1998), Surge Bin; #3511A (2008), Mill Modernization, were issued for plant modifications undertaken within the last 27 years at the Plaster City and Split Mountain Quarry facilities. The

equipment covered under these permits is subject to the requirements of 40 CFR Part 60, Subpart OOO.

2. The PM10 emission concentration requirements of 40 CFR Part 60, Subpart OOO will be subsumed under the NSR Permit to Operate #1992D2, #2662A, #2735A1, #2834C, #2821A, #2825, #2826, #2828A and #3511A requirements. The PM10 emission concentration of 0.01 grains/dscf of the Permits to Operate #1992D2, #2662A, #2735A1, #2834C, #2821A, #2825, #2826, #2828A and #3511A are currently more stringent than the 0.022 grains/dscf limit of 40 CFR Part 60, Subpart OOO. This is an appropriate action, due to the fact that the NSR permit requirements for particulate matter concentrations are more stringent than the requirements of 40 CFR Part 60, Subpart OOO. All of these requirements are currently federally enforceable, therefore, by streamlining these conditions we are not creating new federally enforceable requirements.
3. 40 CFR Part 60, Subpart UUU set standard performances for calciners and dryers in mineral industries which were constructed or modified after 4/23/1986. Authority to Construct/Permit to Operate #1130A (1998), #6 Kettle Calciner; 2735A1(1998), Mill Upgrade; #3511A (2008), Integrated Mill; #2834C(2000), Line No. 3 Addition; and #3542 (2009), #3 Board Line Kiln, were issued for plant modifications undertaken within the last 27 years at the Plaster City facility. The equipment covered under these permits is subject to the requirements of 40 CFR Part 60, Subpart UUU.
4. The #6 kettle burner is required to comply with two different opacity limits: a) SIP Rule 401.A.1, Opacity of Emissions, sets a maximum opacity limit of 20 percent, measured over a 3 minutes period during any hour and b) NSR-Permits to Operate for the #6 kettle sets a maximum opacity limit of 10 percent, measured over a 3 minutes period during any hour.

The opacity limits of SIP Rule 401.A.1 will be subsumed under the requirements of the NSR-Permits to Operate. Compliance with these limits is assumed for the kettles due to the worst case limit contained in the NSR-Permits to Operate of 10 percent, measured over a 3 minutes period during any hour. This is an appropriate action, due to the fact that all the NSR-Permits to Operate opacity limits are identical or lower and measured over an identical time period. All of these requirements are currently federally enforceable; therefore, by streamlining these conditions, we are not creating new federally enforceable requirements.

5. 40 CFR Part 60.730(b) includes a provision to exempt from the requirements of this subpart to each tunnel kilns, tunnel dryers, apron dryers, and grinding equipment that also dries the process material used in any of the 17 mineral industries. Gypsum is included in the list of 17 mineral industries. Therefore, the PST system burner, William mill burner, CP Mill burner, #1 Kiln burner dryer and #3 kiln dryer are exempted from

the requirements of Subpart UUU.

6. Compliance with requirements of 40 CFR Part 64. The requirements of the Compliance Assurance Monitoring Rule apply to a pollutant-specific emission unit at a major source that is required to obtain a part 70 (Title V Operating Permit) or part 71 (Acid Rain Permit) if the unit satisfies all of the following criteria: a) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant; b) the unit uses a control device to achieve compliance with any such emission limitation or standard; and c) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source.

The source operates a gypsum crushing building (emission unit) for which potential pre-control device emissions are above the 100 tons per year of PM10 which is threshold limit for a major source classification. PM10 emissions from the gypsum crushing building are controlled by a baghouse system. The gypsum crushing building area is subject to comply with the requirements of 40 CFR Part 60, Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants. The baghouse stack is limited to comply with a 7% @ 6min opacity limit and 0.01 gr/dscf mass rate of PM10. The gypsum crushing building area is subject to comply with the requirements of 40 CFR Part 64.

USG submitted an application for a Title V Operating Permit application on May 31, 1996. According to 40 CFR Part 64.5, since the application was submitted and determined complete before April 20, 1998, the source will be required to submit information to comply with the requirements of 40 CFR Part 64.3, Monitoring Design Criteria, as part of the application for renewal of the Title V permit or as part of an application for a significant permit revision.

USG does not operate any other emission unit which potential pre-control device emissions are equal to or greater than 100 tons per year.

7. CCR Section 93115, Airborne Toxic Control Measure for Stationary Compression Ignition (CI) Engines, reduces the amount of operating hours for testing and maintenance purposes to fifty (50) hours per year. This new operating standard will be applicable to the emergency fire pump listed on PTO 3061A1.
8. The permittee operates several emission units and activities that are not included in the Title V permit due to air emissions from these units or activities are considered insignificant. These emissions units and activities are still required to comply with all federal requirements, as applicable.

## **VI Insignificant Activities**

The following types of activities and emission units will not be included in the Title V permit:

1. Motor vehicles and plant mobile equipment. Combustion emissions from propulsion of mobile sources will be exempted based on the guidelines on Title V Operating Permit Program Submittal, Attachment "C," List of Trivial Activities. The following is a list of vehicles and mobile equipment that are operated at the facility:

29	Fork Lifts
3	Loaders
1	Backhoe
1	Lawn Tractor
4	Sweepers
1	Tie Tamper
1	Water Truck
1	Track Truck
1	Vacuum Truck
1	Crane
3	Sport Utility Vehicles
4	Pick Up Trucks
1	Diesel Man-lift
1	Electric Man-lift
1	Rail-road Trackmobile
1	Skidsteer
1	Haul Truck
1	Compactor
1	Railroad Speeder
1	Gasoline Golf Cart
2	110 Ton Locomotives

## **VII Supplemental Annual Fee**

The supplemental annual fee for the facilities will be determined according to the guidelines of Rule 900.G. The supplemental annual fee will be calculated according to the following equation:

$$s = [ \$ 58.55 \text{ per ton (CPI adjusted)} \times e ] - f$$

where:

s =supplemental annual fee in dollars

Permit No. V-2834  
 July 18, 2023

e = fee-based emissions in tons per year

2021 Actual emission inventory for which fee-based emission schedule applies:

Nitrogen Oxides = 187.48  
 Sulfur Dioxide = 0.11  
 Particulate Matter (PM-10) = 241.70  
 Volatile Organic Compounds = 10.23

Total = 439.52

f = sum (in dollars) of annual fees under Regulation III:

Equipment Permit # Fee Paid

Permit No.	Fee Paid
1130A	6,648.00
1992D-2	4,135.50
2456A	520.50
2662A	3,070.50
2663A-1	1,536.50
2702B	541.50
2735A-1	4,092.50
2836A	213.00
2828A	1,022.00
2826	1,022.00
2825	1,845.50
2821A	1,536.50
2811A-3	6,648.00
3061A-1	213.00
2834C	38,983.00
3186	309.00
3109	3,070.50
3511A	16,683.50

Permit No. V-2834  
July 18, 2023

3542	6,648.00
4083A	1,536.50
<b>TOTAL</b>	100,275.50

Total Emissions of Fee Pollutants:	439.52 tons/yr
Emissions of Fee Pollutants x \$ <b>58.55</b> /ton:	\$ 25,733.89
Annual Fees under Reg.III	\$ 100,275.50
Estimated supplemental Title V Program Fee:	(25,733.89 - 100,275.50) = \$ 00.00

These calculations indicate that the annual fee paid by the facilities under Regulation III exceeds the emission fee pollutant schedule under Rule 900 therefore no supplemental fee is required.