

Facility Name: **C-E MINERALS PLANTS NO. 1, 2, & 6**
City: Andersonville
County: Sumter
AIRS #: 04-13-261-00003

Application #: TV-872593
Date Application Received: October 29, 2024
Permit No: **3255-261-0003-V-05-0**

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Introduction

This narrative is being provided to assist the reader in understanding the content of referenced operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. The permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description**A. Facility Identification**

1. Facility Name:

C-E MINERALS PLANTS NO. 1, 2, & 6.

2. Parent/Holding Company Name

IMERYS.

3. Previous and/or Other Name(s)

Plant 1: Mullite Company.

Plant 2: C-E Minerals / Mulcoa Plant 2.

Plant 6: Treibacher Schleifmittel.

4. Facility Location

1949 Highway 49

Andersonville, Georgia 31711 (Sumter County)

5. Attainment, Non-attainment Area Location, or Contributing Area

The facility is located in an attainment area.

B. Site Determination

C-E Minerals Plant 1, C-E Minerals Plant 2 and C-E Minerals Plant 6 have been determined to be one part 70 site. All three facilities are under common control and on contiguous property. The facilities are all under the control of Imerys and the property containing C-E Minerals Plant 2 and C-E Minerals Plant 6 is separated from C-E Minerals Plant 1 by a roadway.

C-E Minerals Plant 1 and C-E Minerals Plant 2 have historically been treated as one site by EPD for PSD review.

Facility AIRS Numbers:

C-E Minerals - Plant 1: 04-13-261-00003

C-E Minerals - Plant 2: 04-13-261-00047

C-E Minerals - Plant 6: 04-13-261-00070

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
3255-261-0003-V-04-0	January 24, 2020	Title V renewal permit.
3255-261-0003-V-04-1	October 31, 2023	Permit amendment issued for the construction and operation of a ground peanut hull (GPH) feed system and use of GPH in Plant 2 rotary kilns 1, 4, 5, and 6 instead of coal and fuel oil.

D. Process Description

1. SIC Codes(s)

1455, 3255, 3291 and 3295.

The SIC Code(s) identified above were assigned by EPD's Air Protection Branch for purposes pursuant to the Georgia Air Quality Act and related administrative purposes only and are not intended to be used for any other purpose. Assignment of SIC Codes by EPD's Air Protection Branch for these purposes does not prohibit the facility from using these or different SIC Codes for other regulatory and non-regulatory purposes.

Should the reference(s) to SIC Code(s) in any narratives or narrative addendum previously issued for the Title V permit for this facility conflict with the revised language herein, the language herein shall control; provided, however, language in previously issued narratives that does not expressly reference SIC Code(s) shall not be affected.

2. Description of Product(s)

The facility processes kaolin.

3. Overall Facility Process Description

C-E Minerals' Mulcoa® Plant at Andersonville, Georgia, encompasses over 16,000 acres devoted to the mining and processing of the purest kaolin and bauxite ores available anywhere in the world. It is from these special ores that C-E Minerals produces alumina silica calcines marketed under the registered trademarks "Mulcoa®" and "Mulgrain™."

Clay is first dried and ground to homogenize the ore for product conformity and consistency. This homogenized powder is delivered to a pug mill/extruder, where it is mixed with water and extruded under a vacuum to form dense noodle-shaped pellets. The pellets are dried and then conveyed to storage bins for later calcining in a rotary kiln. Products are shipped by truck, rail and vessel.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

C-E MINERALS PLANTS NO. 1, 2, & 6 is presently classified as a major stationary source as defined by the federal *Prevention of Significant Air Quality Deterioration (PSD)* regulation, 40 CFR 52.21. Specifically, it has the potential to emit more than 250 tons per year of each of NO_x, SO₂, PM, PM₁₀, PM_{2.5}. The company submitted, as part of Title V renewal Application No. TV-872593, a spreadsheet with revised emissions calculations. However, said calculations did not affect the Title V major source status for any criteria pollutant.

EPA uses carbon dioxide equivalent (CO₂e) as the preferred metric for determining greenhouse gases (GHGs) emissions rates. The facility potential to emit GHGs is more than EPA's major source emissions applicability threshold of 100,000 tons per year of carbon dioxide CO₂e for existing industrial facilities.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	✓	✓		
PM ₁₀	✓	✓		
PM _{2.5}	✓	✓		
SO ₂	✓	✓		
VOC	✓			✓
NO _x	✓	✓		
CO	✓	✓		
TRS	✓	✓		
H ₂ S	✓	✓		
Individual HAP	✓	✓		
Total HAPs	✓	✓		

3. MACT Standards

The facility is a major source for hazardous air pollutants (HAPs) because the emissions of both of hydrogen fluoride (HF) and hydrogen chloride (HCl) exceed the major source threshold for a single HAP (10 tons per year). Also, combined HAPs emissions exceed the major source threshold (25 tons per year). 40 CFR Subpart JJJJ, *Brick and Structural Clay Products Manufacturing*, does not apply to kaolin processing plants and, currently, the facility is not subject to a Maximum Achievable Control Technology (MACT) standard. However, since HF and HCl potential emissions, from coal combustion, exceed the major source threshold under Section 112 of the Clean Air Act (CAA) of 1990. HAP emissions from C-E Minerals Plants 1, 2 and 6 would potentially be subject to a Case-by-Case MACT determination under Section 112(g) of CAA (Conditions 3.2.10 & 3.2.14 were meant to avoid Section 112(g)(2)(B) Case-by-case Determination).

The facility has stationary emergency power generation engines that are subject to 40 CFR 63 Subpart ZZZZ, *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE)*, which applies to stationary reciprocating combustion engines at a major or area source of HAP emissions, excluding those RICE being tested at a test cell/stand.

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	No
Program Code 8 – Part 61 NESHAP	No
Program Code 9 - NSPS	Yes
Program Code M – Part 63 NESHAP	Yes
Program Code V – Title V	Yes

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

None applicable.

B. Applicable Rules and Regulations

Facility-wide air quality applicable rules include the general requirements of 40 CFR 60, *New Source Performance Standards* (NSPS). This is in addition to the general provisions of Georgia Rule 391-3-1-.02(2)(a) which are cited, primarily, in Section VIII of the enclosed permit.

C. Compliance Status

Title V renewal Application No. TV-339695 does not indicate that the facility is operating out of compliance with the rules and regulations.

D. Permit Conditions

No other facility-wide conditions are included in the permit other than the general provisions in Part VIII of the enclosed permit and Rule 391-3-1-.02(2)(a), which apply to all air contaminant sources. Condition 2.2.1 refer to the applicable general provisions of NSPS.

III. Regulated Equipment Requirements

A. Equipment List for the Process

C-E MINERALS PLANTS NO. 1, 2, & 6 stated in Application No. TV-872593 *“Permit Amendment No. 3255-261-0003-V-04-1 was issued on October 31, 2023 authorizing the change in fuel mixtures to replace coal with ground peanut hulls (GPH) in Plant 2 Rotary Kilns 1K, 4K, 5K, and 6K, and the construction and operation of a GPH handling system. Please note that unit GPH-H2 (GPH Handling 2) of the GPH Handling System was not installed. In addition, units BD9 and BC14 have been removed from operation. Other than the above-mentioned changes, the equipment list in Table 3.1 of the current Title V permit remains valid.”*

<<<< COPY & PASTE EQUIPMENT LIST FROM PERMIT HERE >>>>

Will be inserted later to save paper.

B. Equipment & Rule Applicability

Emission and Operating Caps:

Section 3.2 of the enclosed permit establishes limits meant to avoid 40 CFR 52.21, Prevention of Significant Deterioration (PSD) of Air Quality.

Rules and Regulations Assessment:

40 CFR 60 Subpart LL, Standards of Performance for Metallic Mineral Processing Plants, regulates PM emissions from listed types of metallic mineral processing equipment that was constructed (fabricated) or modified after August 31, 1983 at aboveground mines and processing plants. All significant emission units at Plant 6 are affected by Subpart LL and comply through the use of a variety of control equipment and techniques including wet suppression, enclosure, and properly designed and operated baghouses.

The facility has several sources which are subject to the New Source Performance Standards 40 CFR Part 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants, and 40 CFR 60 Subpart UUU, Standards of Performance for Calciners and Dryers in Mineral Industries. This is in addition to Georgia Air Quality Control Rules 391-3-1-.02(2)(p), Particulate Emissions from Kaolin and Fullers Earth Processes, and 391-3-1-.02(2)(b), Visible Emissions. Also, fuel burning

equipment is subject to Georgia Rules 391-3-1-.02(2)(d), Fuel-burning Equipment, 391-3-1-.02(2)(g) and Sulfur Dioxide.

Application No. TV-21931 lists, under the “Insignificant Activates” category, 8 emergency, non-black start, CI (internal combustion), < 500 HP engines which are all subject to 40 CFR 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE).

40 CFR 63 Subpart BBBB, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities and 40 CFR 63 Subpart CCCCC, National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities, limit HAP emissions from gasoline terminals, bulk gasoline plants, and gasoline dispensing operations. The facility's gasoline storage tank could be considered a gasoline dispensing facility; however, these subparts are not applicable to this facility because they only apply to area sources of HAPs.

C. Permit Conditions

The enclosed renewal permit carries over the conditions of the current Title V permit and adds the Conditions of Permit Amendment No. 3255-261-0003-V-04-1. Moreover, in Application No. TV-872593, the company requested making the following changes:

Imerys requests that the following conditions be revised as follows:

- Table 3.1: Update to remove Units BD9 and BC14 and add the GPH handling system. Note that unit GPH-H2 (GPH Handling 2) of the GPH Handling System was not installed.
- Incorporate permit conditions from the 502(b)(10) permit issued October 31, 2023 into the renewal.
- 5.2.7: Remove the requirements for weekly SO₂ monitoring for Plant 2 kilns 1K, 4K, 5K, and 6K. Because the project to replace coal with GPH has been completed, these kilns no longer burn coal or fuel oil. As such, SO₂ PTE from these units has been drastically reduced.
- 5.2.15: Remove Plant 2 kilns 1K, 4K, 5K, and 6K from the requirement to conduct weekly SO₂ monitoring as part of the CAM requirements.
- 6.1.7b.vii: Remove Plant 2 Kilns 1k, 4K, 5K, and 6K from the exceedance condition regarding coal sulfur content – these units no longer burn coal.
- 6.1.7c.xii: Remove this SO₂ monitoring excursion requirement; this requirement is a duplicate to the exceedance requirement in Condition 6.1.7b.viii.
- As part of the incorporation of the 502(b)(10) conditions, and because the Plant 2 kiln 6K now only burns natural gas and GPH, replace existing Conditions 6.2.11, 6.12, and 6.2.14 with the like-kind conditions 6.2.18 and 6.2.19 of the 502(b)(10) permit (essentially modifying the existing conditions to replace “coal” with “GPH”).

To assist EPD in their review, a markup permit document is attached.

The changes requested by C-E MINERALS PLANTS NO. 1, 2, & 6 have been granted (using markup permit document submitted by the company). However, to conform to Georgia's Title V permit format, some Conditions have been renumbered in the enclosed consolidated permit.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

B. Specific Testing Requirements

Required initial performance tests have been completed. Notwithstanding, the enclosed permit allows certain changes to be made to the facility without permit revision. These changes may include installing new equipment and replacing existing equipment and Condition 4.2.1 is meant to require initial performance test be performed in accordance with 40 CFR 60.8 and the applicable NSPS Subpart. Condition 4.2.2 addresses 40 CFR 60 Subpart OOO requirements mandating repeating performance tests, within 5 years, for fugitive emissions from affected facilities without water sprays (This applies only to equipment that commence construction, modification, or reconstruction on or after April 22, 2008).

V. Monitoring Requirements

A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

Please refer to the permit files for discussion for conditions dealing with monitoring related to the 40 CFR 52.21 avoidance limits in Section 3.2, 40 CFR 60 Subparts LL, OOO & UUU and Georgia Air Quality Rules.

C. Compliance Assurance Monitoring (CAM)

Under 40 CFR 64, the Compliance Assurance Monitoring Regulations (CAM), facilities are required to prepare and submit monitoring plans for certain emission units with the Title V application. Each emission unit controlled by a control device that *"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," as defined by 40 CFR §64.2(a)(3) is subject to CAM.

C-E MINERALS PLANTS NO. 1, 2, & 6 stated the following about its Compliance Assurance Monitoring (CAM) plan: *"Upon revisiting the potential emissions for Plant 2 Kilns 1K, 4K, 5K, and 6K, Imerys has determined that post-control SO₂ emissions from these four kilns are both below 100 tpy each and should now be classified as PSEUs (Not Large PSEUs). The only change requested to the current CAM conditions is the removal of the weekly SO₂ monitoring for these units because post-control SO₂ emissions from each kiln have been reduced by approximately 40 lb/hr. The new GPH handling system does not have pre-control emissions exceeding the major source threshold and therefore is not subject to CAM."*

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semiannual basis.

B. Specific Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a semiannual basis.

VII. Specific Requirements

A. Operational Flexibility

Condition 7.1.1 contains general operational flexibility provisions.

B. Alternative Requirements

None applicable.

C. Insignificant Activities

See Permit Application on GEOS website.

See Attachment B of the permit

D. Temporary Sources

None applicable.

E. Short-Term Activities

None applicable.

F. Compliance Schedule/Progress Reports

None applicable.

G. Emissions Trading

None applicable.

H. Acid Rain Requirements

None applicable.

I. Stratospheric Ozone Protection Requirements

None applicable.

J. Pollution Prevention

None applicable.

K. Specific Conditions

None applicable.

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//