

Facility Name: **CE Minerals Plant 2**

City: Andersonville

County: Sumter

AIRS #: 04-13-261-00047

Application #: 16066

Date Application Received: February 23, 2005

Permit No: 3255-261-0047-V-04-5

<b>Program</b>	<b>Review Engineers</b>	<b>Review Managers</b>
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### **Introduction**

This narrative is being provided to assist the reader in understanding the content of the referenced SIP permit to construct and operate and Section 502(b)(10) change to the Part 70 source. Complex issues and unusual items are explained in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Sections 391-3-1-.03(1), 391-3-1-.03(2), and 391-3-1-.03(10). of the Georgia Rules for Air Quality Control, (2) Part 70 of Chapter I of Title 40 of the Code of Federal Regulations, and (3) Title V of the Clean Air Act Amendments of 1990. The following narrative is designed to accompany the permit and is presented in the same general order as the permit amendment. This narrative is intended only as an adjunct for the reviewer and has no legal standing.

**I. Facility Description**

**A. Existing Permits**

Table 1 below lists the current Title V permit, all administrative amendments and minor and significant modifications to that permit, and any 502(b)(10) changes. Comments are listed in Table 2 below.

**Table 1: Current Title V Permit and Amendments**

Permit/Amendment Number	Date of Issuance	Comments	
		Yes	No
3255-261-0047-V-04-0	December 19, 2002	✓	
3255-261-0047-V-04-1	October 20, 2004	✓	
3255-261-0047-V-04-2	March 9, 2005	✓	
3255-261-0047-V-04-3	January 19, 2005	✓	
3255-261-0047-V-04-4	May 16, 2005	✓	

**Table 2: Comments on Specific Permits**

Permit Number	Comments
3255-261-0047-V-04-0	Initial Title V Operating permit
3255-261-0047-V-04-1	Permit Amendment to resolve appeal of initial Title V operating permit
3255-261-0047-V-04-2	Retro-active PSD permit amendment for relaxation of PSD avoidance limits on Emission unit ID Nos. BC13, IC40, and IC43.
3255-261-0047-V-04-3	Section 502(b)(10) change for additional process equipment and the use of silane solution
3255-261-0047-V-04-4	Removal of hours of operation limitation for the IC Plant Jaw Crusher (I10), Barmac Crushing Circuit (I12), and Sizing and Bagging Operation (I13), the Rotary Dryer (BD2), Loading Chute (BD5) and increase of PM emissions for Barmac Crushing Circuit (I12) from 0.40 lbs/hr to 1.0 lbs/hr. Condition No. 3.2.2 is amended to delete applicability of limitations on the hours of operation for Emission Unit ID No. I10, I12, I13, BD2 and BD5 and authorize PM emissions increase. Condition Nos. 6.1.7 and 6.2.3 are amended accordingly. Condition 4.2.2 is added to require PM emission testing.

**B. Regulatory Status**

**PSD/NSR/RACT**

Plant 1, Plant 2 and Plant 6 are considered to be part of the same site, which is a major source under PSD because its potential emissions of PM, PM<sub>10</sub>, NO<sub>x</sub>, and SO<sub>2</sub> are greater than 250 tpy (it is not one of the 28 named source categories under PSD).

2. Title V Major Source Status by Pollutant

**Table 3: 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	Yes	✓		
PM <sub>10</sub>	Yes	✓		
SO <sub>2</sub>	Yes	✓		
VOC	Yes			✓
NO <sub>x</sub>	Yes			✓
CO	Yes			✓
TRS	No			
H <sub>2</sub> S	No			
Individual HAP	Yes	✓		
Total HAPs	Yes	✓		

The facility has requested that the HAP emissions from equipment associated with the silane project (the Rotary Dryer BD09, the Rollo-Mixer B2, the Crusher BC14, and the Lancaster Mixer A1M) be limited to below 10 tpy for any individual HAP and below 25 tpy for combined HAP. This emission limitation will ensure that the silane project will not trigger a Section 112(g)(2)(B) case-by-case MACT review. The facility cannot accept a facility-wide HAP limitation since it is considered a major source of HAPs. A HAP emissions inventory was completed and submitted as part of Application No. 16066. This inventory specified that the greatest individual HAP is HCl (due to the combustion of coal) with potential emissions of 88.30 tpy. The combined HAP emissions from the facility are 100.27 tpy.

**II. Proposed Modification**

A. Description of Modification

Permit Amendment No. 3255-261-0047-V-04-3 was issued for the use of silane solution in the Lancaster mixer (Emission Unit ID No. A1M) and the new Rollo-Mixer (Emission Unit ID No. B2). Application No. TV-15414 (for Permit Amendment No. 3255-261-0047-V-04-3) requested a HAP limitation for Emission Unit ID Nos. A1M and B2 of 10 tpy for any individual HAP and 25 tpy for combined HAP in order to avoid a case-by-case MACT review per Section 112(g)(2)(B) of the CAA as implemented by 40 CFR 63.40 through 63.44. Condition No. 3.2.8 of Permit Amendment No. 3255-261-0047-V-04-3, issued on January 19, 2005, limits facility-wide HAP emissions from the entire Part 70 source (including Plants 1, 2, and 6) to below 10 tpy of any individual HAP and 25 tpy of combined HAP. Condition No. 6.1.8.b.i and ii specifies the exceedance thresholds for this facility-wide HAP limitation. The facility is currently emitting greater than 10 tpy of an individual HAP, therefore, this limit needs to be removed. The facility has submitted an application (No. 16066) to modify Condition No. 3.2.8 from a facility-wide HAP limitation to a HAP limitation on Emission Units associated with the silane project.

Condition No. 7.14.2 specifies that the Division has the right to amend Permit No. 3255-261-0047-V-04-3 based upon comments received prior to February 11, 2005. This condition is no longer needed and will be deleted.

These permit modification can be processed as a Section 502(b)(10) change because no permit conditions contained in the initial TV permit or subsequent amendment is being modified but only permit conditions contained in 502(b)(10) Permit No. 3255-261-0047-V-04-3 are being changed. The Section 502(b)(10) permits are authorized according to the Clean Air Act. These changes must meet certain criteria. The 502(b)(10) does not require public participation (i.e. Public Notice). However, the 502(b)(10) does not qualify for a permit shield.

**B. Emissions Change**

This update to the 502(b)(10) will not change the emissions as stated in application No. 15972.

**C. Title I Modification**

The silane project (Emission Unit ID Nos. BD09, B2, BC14, and A1M) does not trigger PSD permitting since the project (Emission Unit ID Nos. BD09, B2, BC14, and A1M) is limited to 39 tpy VOC per Condition No. 3.2.7 of Permit amendment No. 3255-261-0047-V-04-3.

The permit modification will not trigger a Part 60 NSPS modification since the equipment associated with this modification are either constructed after any applicable trigger date or was constructed before the trigger date and not being modified.

The equipment associated with this change is not subject to any Part 61 NESHAPs, so the addition of these new operations to the facility could never trigger a modification under Part 61.

The installation of the New Rollo-Mixer (Emission Unit ID No. B2), a propane fired rotary dryer (Emission Unit ID No. BD09), a crusher (Emission Unit ID No. BC14), and the use of the silane solutions in Emission Units A1M and B2 will not trigger a case-by-case MACT review per 40 CFR Part 63, Subpart B (implementing Section 112(g)(2)(B) of the CAA) because the modification (Emission Unit ID Nos. BD09, B2, BC14, and A1M) will have enforceable emissions limitations of 10/25 tpy HAP.

**III. Facility Wide Requirements**

**A. Emission and Operating Caps**

No facility-wide emission caps are being modified or added due to this permit change.

**B. Applicable Rules and Regulations**

No new facility wide regulations are triggered or modified due to this permit change.

**C. Compliance Status**

The facility is in compliance per a review of the Division’s files.

**D. Operational Flexibility**

Operational flexibility has not been requested by the facility.

**E. Permit Conditions**

No facility wide permit conditions are being added due to this Section 502(b)(10) change.

**IV. Regulated Equipment Requirements**

**A. Brief Process Description**

Application No. 15414 allowed the facility to use a silane solution in Emission Units B2 (Rollo-Mixer) and A1M (Lancaster Mixer) and the construction and operation of Mixer B2, Rotary Dryer BD09, and Crusher BC14 as specified in Section IV.A of the narrative for Application No. 15414. A facility-wide HAP limitation was imposed on the facility by Condition No. 3.2.8, of Permit Amendment No. 3255-261-0047-V-04-3. The facility cannot attain compliance with this permit limit because the HAP emissions already exceed the major source level. The company has requested that this limit be modified to a HAP limit of 10 tpy of any individual HAP and 25 tpy of combined HAP for Emission Unit ID Nos. BD09, B2, BC14, and A1M. The facility will be able to maintain compliance with this new HAP emissions limitation.

Application No. 16066 requests condition 3.2.8 be modified by removing the facility-wide HAP limitation imposed by permit amendment No. 3255-261-0047-V-04-3. In its place a HAP limitation is imposed for only the equipment associated with the Section 502(b)(10) change.

**B. Equipment Associated with this 502(b)(10) change:**

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	Corresponding Permit Conditions	ID No.	Description
BD09	Rotary Dryer	391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 391-3-1-.02(2)(p)	3.2.8, 3.4.1, 3.4.2, 3.4.3, 6.1.8, 6.2.9	BD3	Baghouse
B2	Rollo-Mixer	391-3-1-.02(2)(b) 391-3-1-.02(2)(p) 40 CFR 63 Subpart OOO	3.2.7, 3.2.8, 3.3.1, 3.4.1, 3.4.2, 5.2.12, 5.2.13, 5.2.14, 5.3.2, 6.1.8, 6.2.10, 6.2.11, 6.2.12, 6.2.13, 6.2.14, 6.2.15	DCB2	Dust Collector
BC14	Crusher	391-3-1-.02(2)(b) 391-3-1-.02(2)(p) 40 CFR 63 Subpart OOO	3.2.8, 3.3.1, 3.4.1, 3.4.2, 6.1.8	B6	Baghouse (vents inside building)
A1M	Lancaster Mixer	391-3-1-.02(2)(b) 391-3-1-.02(2)(p)	3.2.7, 3.2.8, 3.4.1, 3.4.2, 6.1.8, 6.2.10, 6.2.11, 6.2.12, 6.2.13, 6.2.14, 6.2.15	A9	Baghouse (vents inside of building)

C. Equipment & Rule Applicability

• **Emission and Operating Caps:**

The equipment associated with the silane project (Emission Unit ID Nos. BD09, B2, BC14, and A1M) will have an emissions limitation of below 10 tpy for any individual HAP and below 25 tpy for combined HAP. These emission limitations will ensure that the use of the silane solution associated with this modification does not trigger a case-by-case MACT review per 40 CFR Part 63, Subpart B since the potential emissions increase from the use of the silane solution will be limited to below the major source threshold. As specified in Amendment No. 3 of Application No. 15414, the potential combined HAP emissions without enforceable permit limitations is 327 tpy. Therefore, the silane projects needs enforceable permit limitations to limit the HAP emissions from this project to below the major source thresholds in order to avoid triggering a Section 112(g)(2)(B) review. The facility will keep track of the amount of silane solution used and the HAP content of the solution in order to calculate emissions on a monthly basis to determine the 12-month rolling total.

• **Applicable Rules and Regulations:**

Rules and Regulations Assessment:

State Rules and Standards [Georgia Rules 391-3-1-.02(2)]

There will be no changes to the State Rule applicability.

D. Compliance Status

The facility is in compliance per a review of the Division's files.

E. Operational Flexibility

Operational flexibility has not been requested by the facility.

F. Permit Conditions

1. Permit Condition No. 3.2.8 limits the HAP emissions from the Lancaster mixer, the Roll-mixer, the Rotary Dryer, and the Crusher (Emission Unit ID No. A1M, B2, BD09, and BC14) to below 10 tpy of any individual HAP and below 25 tpy for combined HAP. This emission limit will ensure that the use of silane solution will not trigger a Section 112(g)(2)(B) Review.

**V. Testing Requirements** (with Associated Record Keeping and Reporting)

No additional testing will be necessary.

**VI. Monitoring Requirements** (with Associated Record Keeping and Reporting)

No monitoring requirements are being modified or added due to this permit change.

## **VII. Other Record Keeping and Reporting Requirements**

Condition No. 6.1.8 specifies the exceedances and excursions for the new equipment. Condition No. 6.1.8.b.i and ii specifies the exceedance thresholds for HAPs. This 502(b)(10) permit modifies the exceedance threshold so that an exceedance is defined as any individual HAP emissions greater than 10 tpy and combined HAP greater than 25 tpy from Emission Unit ID Nos. BD09, B2, BC14, and A1M (silane project).

## **VIII. Specific Requirements**

### **A. Operational Flexibility**

Not applicable.

### **B. Alternative Requirements**

Not Applicable

### **C. Insignificant Activities**

No insignificant activities are being added as a result of this 502(b)(10) change.

### **D. Temporary Sources**

No temporary sources are being added as a result of this Section 502(b)(10) change.

### **E. Short-Term Activities**

No short-term activities are being added as a result of this Section 502(b)(10) change.

### **F. Compliance Schedule/Progress Reports**

The facility is in compliance per a review of the Division's files.

### **G. Emissions Trading**

Not applicable.

### **H. Acid Rain Requirements**

This modification does not change the facility's applicability with respect to Title IV of the CAA.

### **I. Prevention of Accidental Releases**

This modification does not change the facility's applicability with respect to Section 112(r) of the CAA.

J. Stratospheric Ozone Protection Requirements

This modification does not change the facility's applicability with respect to Title VI of the CAA.

K. Pollution Prevention

Not applicable.

L. Specific Conditions

Not applicable.