Part 70 Operating Permit Amendment

Permit Amendment No.: 3255-261-0047-V-04-1 **Effective Date: October 20, 2004**

Facility Name: **C-E Minerals Plant 2**

Facility Address Highway 195
Andersonville, Georgia 31711 (Sumter County)

Mailing Address: P. O. Box 37
Andersonville, Georgia 31711

Parent/Holding Company: Imerys

Facility AIRS Number: 04-13-261-00047

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued an amendment to the Part 70 Operating Permit for:

> the operation of a kaolin and bauxitic clay processing facility and associated air pollution control equipment.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit Amendment and Permit No. 3255-261-0047-V-04-0. Unless modified or revoked, this Permit Amendment expires simultaneously with Part 70 Permit no. 3255-261-0047-V-04-0.

This Permit Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. TV-15240 dated March 10, 2004, any other applications upon which this Permit Amendment or Permit No. 3255-261-0047-V-04-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached 8 **pages,** which pages are a part of this Permit Amendment, and which hereby become part of Permit No. 3255-261-0047-V-04-0.

Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

Wet raw material, kaolin, bauxitic clays, alumina silicate, and non-metallic minerals are shipped to the processing facility via trucks and/or rail from on or off-site mines. The raw material is mixed in a covered building using front-end loader/tractors. The mixed material is then either fed directly to the pug mill extruder or directly to the cage mill and roller mill then to the pug mill extruder. Within the cage mill and roller mill the material is swept with heated air. Emissions from the roller mills are controlled by baghouses. Emissions from the cage mill are controlled by a baghouse or scrubber.

The wet raw material is formed into pellets upon passing through the pug mill extruder. These pellets are transported via conveyor to the apron pellet dryer, which dries only the surface of the pellets to ensure that the pellets do not stick together within the storage silos, to which they are next transported. Emissions from the apron pellet dryers are emitted unabated to the atmosphere.

Pellets from the storage silos are fed to the rotary kilns where hot air flows counter current to the material's direction of travel. The pellets are discharged from the kilns into kiln coolers. Emissions from the rotary kilns are vented to multi-tube cyclones in series with scrubbers. Emissions from the coolers while processing fully calcined clay materials vented to multi-tube cyclones. Partially calcined clay materials passing through the cooler requires the use of a multi-tube cyclone in series with a baghouse for improved PM control. The material is then conveyed to the product storage building.

The wet raw material may also go directly to the rotary dryer. The wet raw material is placed into the feed hopper, which is uncontrolled. The rotary dryer used to removes moisture is controlled by a baghouse. The dried material may be stored or loaded for shipping. The loaders are controlled by baghouses.

The remaining portion of the process involves a variety of equipment used for crushing, grinding, milling, screening, dedusting, mixing, blending, railcar loading, truck loading, bagging, packaging and shipping. Baghouses are used to control emissions from these processes.

PART 4.0 REQUIREMENTS FOR TESTING

4.2 Specific Testing Requirements

4.2.1 In accordance with the provisions of 40 CFR 60.8, for each new affected facility per Application 13405 that is part of the Direct Kiln Feed (DE), the Permittee shall conduct performance testing within 60 days after achieving the maximum production rate at which the equipment will be operated, but no later than 180 days after initial startup, unless the equipment is specifically exempt from testing per the applicable subpart of 40 CFR Part 60. The tests shall be conducted using the test methods and procedures specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The specific pollutants, sample volumes, run times, and other testing parameters shall be as specified in the applicable subpart of 40 CFR Part 60.
[40 CFR 60.8]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.2 Specific Monitoring Requirements

5.2.1 The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the indicated parameters on the equipment in the following table. Data shall be recorded at the frequencies specified. Where such performance specification(s) exist, each system shall meet the applicable performance specification(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

Emission Unit	Control Device ID	Description of Control Device	Parameter to be monitored	Recording Frequency*
Roller Mill RM3	RMB3	Baghouse	Pressure drop	Weekly
Roller Mill RM2	RMB2	Baghouse	Pressure drop	Weekly
Cage Mill CM2	CMB2	Baghouse	Pressure drop	Weekly
Rotary Dryer BD2	BD3	Baghouse	Pressure drop	Weekly
Loading Chute BD5 & Loading BD8	BD7	Baghouse	Pressure drop	Weekly
Barmac BC13	BH13	Baghouse	Pressure drop	Weekly
Hopper Loadout HL2	BL2	Baghouse	Pressure drop	Weekly
Hopper Loadout HL3	BL3	Baghouse	Pressure drop	Weekly
Railcar Loadout FG21	BH21	Baghouse	Pressure drop	Weekly
Casting System IC43	BH43	Baghouse	Pressure drop	Weekly
Barmac IC40	BH40	Baghouse	Pressure drop	Weekly
Sizing & Bagging I13	B13	Baghouse	Pressure drop	Weekly
Barmac Crusher I12	B12	Baghouse	Pressure drop	Weekly
Jaw Crusher I10	I11	Baghouse	Pressure drop	Weekly
Cooler 1K and 4K	CBH4	Baghouse	Pressure drop	Weekly
Rotary Kiln 1K	1KZ	Scrubber	Scrubbing liquid flow rate	Continuous
			Pressure drop	Continuous
Rotary Kiln 2K	2KZ	Scrubber	Scrubbing liquid flow rate	Continuous
			Pressure drop	Continuous
Rotary Kiln 3K	3KZ	Scrubber	Scrubbing liquid flow rate	Continuous
			Pressure drop	Continuous
Rotary Kiln 4K	4KZ	Scrubber	Scrubbing liquid flow rate	Continuous
			Pressure drop	Continuous
Rotary Kiln 5K	5KZ	Scrubber	Scrubbing liquid flow rate	Continuous
			Pressure drop	Continuous
Cage Mill CM2	CMD2	Scrubber	Scrubbing liquid flow rate	Continuous
			Pressure drop	Continuous

* Weekly means each week or portion of each week of operation of the associated emission unit that is required to utilized baghouse controls.

5.2.3 Within 60 days of the issuance of this permit, the Permittee shall develop and implement a Preventive Maintenance Program for the baghouses specified in condition 5.2.2 to assure that the provisions of condition 8.17.1 are met. The program shall be subject to review and, if necessary to assure compliance, modification by the Division and shall include the pressure drop ranges that indicate proper operation for each baghouse. At a minimum, the following operation and maintenance checks shall be made on at least a weekly basis, and a record of the findings and corrective actions taken shall be kept in a maintenance log:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Record the pressure drop across each baghouse and ensure that it is within the appropriate range.

b. For baghouses equipped with compressed air cleaning systems, check the system for proper operation. This may include checking for low pressure, leaks, proper lubrication, and proper operation of timer and valves.

c. For baghouses equipped with reverse air cleaning systems, check the system for proper operation. This may include checking damper, bypass, and isolation valves for proper operation.

d. For baghouses equipped with shaker cleaning systems, check the system for proper operation. This may include checking shaker mechanism for loose or worn bearings, drive components, mounting; proper operation of outlet/isolation valves; proper lubrication.

e. Check dust collector hoppers and conveying systems for proper operation.

5.2.9 The monitoring, record keeping, and reporting requirements in conditions 5.2.1, 5.2.2, 5.2.3, 5.2.4, 5.2.5, 5.2.6, 5.2.10, and 5.2.11 shall take effect 120 days after the issuance of this permit amendment. All other requirements in Parts 5.0 of this permit shall take effect on the date of issuance of this permit unless otherwise specified.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

6.1.7 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

None required to be reported in accordance with Condition 6.1.4.

b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

i. Any 12-consecutive month period during which fuel oil was fired in the Rotary Dryer (BD2) more than 1,200 hours.
ii. Any 12-consecurive month period during which Rotary Dryer (BD2) was operated more than 5,500 hours.
iii. Any 12-consecutive month period during which Jaw Crusher (I10) was operated more than 3,000 hours.
iv. Any 12-consecutive month period during which the Barmac Crusher Circuit (I12) was operated more than 5,500 hours.
v. Any 12-consecutive month period which the Sizing and Bagging (I13) was operated more than 5,500 hours.
vi. Any 12-consecutive month period which the Barmac (BC13) was operated more than 2,000 hours.
vii. Any 12-consecutive month period which the Casting System (IC40) was operated more than 5,200 hours.
viii. Any 12-consecutive month period which the Barmac (IC43) was operated more than 5,200 hours.
ix. Any 12-consecutive month period which the Loading Chute (BD5) was operated more than 5,500 hours.
x. Any 12-consecutive month period that the Roller Mill (RM3) was operated more than 5,600 hours.
xi. Any time when fuel other than natural gas, propane, or No. 2 fuel is fired in the Rotary Dryer (BD2).
xii. Any time when coal fired in a Rotary Kiln (K1, K2, K3, K4 or K5) contains more than 2.5% sulfur by weight.
xiii. Any time when fuel oil is fired that does not meet the definition of distillate oil as specified in Condition 6.2.4.

xiv. Any time when Baghouse CBH4 is not operated while processing dry kaolin, dry bauxitic, meta kaolin, or meta bauxitic clays in Cooler (K1) or Cooler (K4).

c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

i. Any two consecutive required daily determinations of visible emissions requiring action by Condition 5.2.2 a. or b. from the same source.

ii. Any visible emissions or mechanical failure or malfunction discovered by the walk through described in condition 5.2.6 that are not eliminated or corrected within 24 hours of first discovering the visible emissions or mechanical failure or malfunction.

iii. Each occurrence when the temperature at the inlet of any baghouse specified in condition 5.2.4 exceeds the filter bag design temperature or the equivalent filter bag design temperature recorded in accordance with condition 5.2.4.

iv. Any average SO2 concentration, measured in accordance with Condition 5.2.7, which is greater than 310 ppm.

v. Any pH measurement below 5.0, measured in accordance with Condition 5.2.8.

vi. Any two-hour average of the wet scrubber pressure loss required by Condition 5.2.1 that is less than 10.8 inches of water column for each scrubber (1KZ, 2KZ, 3KZ, 4KZ, and 5KZ).

vii. Any two-hour average of the wet scrubber liquid flow rate required by Condition 5.2.1 that is less than 344 gallons per minute or greater than 516 gallons per minute for each scrubber (1KZ, 2KZ, 3KZ, 4KZ, and 5KZ).

viii. For scrubber CMD2, any two-hour block average of the wet scrubber pressure loss that is less than 90 percent of the value established in condition 5.2.10. For the purposes of this permit, a two-hour block average shall be defined as any one of the twelve consecutive two-hour time periods between 12:00 midnight and the following midnight.

ix. For scrubber CMD2, any two-hour block average of the wet scrubber liquid flow rate that is less than 80 percent or more than 120 percent of the value established in condition 5.2.11. For the purposes of this permit, a two-hour block average shall be defined as any one of the twelve consecutive two-hour time periods between 12:00 midnight and the following midnight.

d. In addition to the excess emissions, exceedances and excursions specified above, the following should also be included with the report required in Condition 6.1.4:

i. A report, prepared from the records required by Condition 6.2.3, for the Jaw Crusher (ID No. I10), Barmac Crushing Circuit (ID No. I12), Sizing and Bagging (ID No. I13), Barmac (ID No. BC 13), Barmac (ID No. IC

40), Casting System (ID No. IC43), Rotary Dryer (ID No. BD2), loading Chute (ID No. BD5), and Roller Mill (ID No. RM3). The report, for each emission unit, shall consist of six-12-consecutive month totals (a total for each month in the semiannual reporting period) of the hours of operation. A 12-consecutive month total shall be defined as the sum of the hours of operation for a month plus the total hours of operation for the previous 11 consecutive months.

ii. The report shall contain fuel supplier certifications and a certified statement from a Responsible Official that the records of fuel supplier certifications submitted represent all of the fuel oil combusted during the semiannual period. If no fuel oil was combusted during the semiannual period, the report should so state.

iii. The report shall contain coal supplier records and a certified statement from a Responsible Official that the records of fuel supplier analyses submitted represent all of the coal combusted during the semiannual period. If no coal was combusted during the semiannual period, the report should so state.

iv. The report shall contain a certified statement from a Responsible Official showing all fuels that were fired in the Rotary Dryer (BD2) during the reporting period.

v. A report, prepared from the records required by Condition 6.2.7, of start and end times for the operation of Baghouse CBH4 and operations of Coolers K1 and K4, which represent each day or portion of each day dry kaolin, dry bauxitic, meta kaolin, or meta bauxitic clay is processed.

vi. A report, prepared from the records required by Condition 6.2.8 for Rotary Dryer (ID No. BD2). The report shall consist of six 12-consecutive month totals (a total for each month in the semiannual reporting period) of the hours of operation of the dryer on No. 2 fuel oil. A 12-consecutive month total shall be defined as the sum of the hours of operation for a month plus the total hours of operation for the previous 11 consecutive months.

6.2 Specific Record Keeping and Reporting Requirements

6.2.8 The Permittee shall, each calendar month, record and maintain records of the hours of operation of Rotary Dryer (ID No. BD2) while fuel oil is burned in the dryer. Using these records, the Permittee shall determine and record, for each calendar month, a 12-consecutive month total of hours of operation on fuel oil. A 12-consectuive month total shall be defined as the sum of the hours of operation on fuel oil. A 12-consecutive month total shall be defined as the sum of the hours of operation for a month plus the total hours of operation for the previous 11 consecutive months.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

PART 7.0 OTHER SPECIFIC REQUIREMENTS

7.12 Revocation of Existing Permits and Amendments

The following Air Quality Permits and Amendments are subsumed by this permit and are hereby revoked:

Air Quality Permit Number(s)	Dates of Original Permit Issuance or Amendment
3295-261-0047-E-03-1	May 29, 2003