

# ADEQ MINOR SOURCE AIR PERMIT

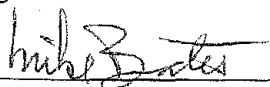
Permit #: 0635-AR-9

IS ISSUED TO:

Porocel Corporation  
10300 Arch Street Pike  
Little Rock, AR 72206  
Pulaski County  
AFIN: 60-00004

THIS PERMIT IS POROCEL CORPORATION'S AUTHORITY TO CONSTRUCT, MODIFY, OPERATE, AND/OR MAINTAIN THE EQUIPMENT AND/OR FACILITY IN THE MANNER AS SET FORTH IN THE DEPARTMENT'S MINOR SOURCE AIR PERMIT AND THE APPLICATION. THIS PERMIT IS ISSUED PURSUANT TO THE PROVISIONS OF THE ARKANSAS WATER AND AIR POLLUTION CONTROL ACT (ARK. CODE ANN. SEC. 8-4-101 ET SEQ.) AND THE REGULATIONS PROMULGATED THEREUNDER, AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

  
\_\_\_\_\_  
Mike Bates  
Chief, Air Division

September 20, 2007  
\_\_\_\_\_  
Date

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**Section I: FACILITY INFORMATION**

PERMITTEE: Porocel Corporation

AFIN: 60-00004

PERMIT NUMBER: 0635-AR-9

FACILITY ADDRESS: 10300 Arch Street Pike  
Little Rock, AR 72206

COUNTY: Pulaski

CONTACT POSITION: Gerald Ashford – Plant Manager

TELEPHONE NUMBER: (501) 888-1357

REVIEWING ENGINEER: Joseph Hurt

UTM North-South (Y) Zone 15 (3834.7 km)

UTM East-West (X): Zone 15 (563.3 km)

## Section II: INTRODUCTION

### Summary

Porocel Corporation (Porocel) owns and operates a facility at 10300 Arch Street Pike, Little Rock, which processes various nonmetallic minerals and product materials (these include bauxite ore and montmorillonite clay - NAICS Codes 333131 and 327992). Porocel has requested permission to begin operation of a new process and submitted information to more accurately reflect the nomenclature of operating equipment and processes in the Process Description. The new calcining process at Porocel, the "E" process, will generate process nitrogen oxide emissions at Calciner #3 (SN-B-15). There is a product mix of four different products that will be produced in Calciner #3, each requiring various times in the calciner. As such, Porocel will implement the use of a scrubber (SN-B-15) for the control of the NO<sub>x</sub> emissions. The total permitted emission decreases include 10.4 tpy of PM, 5.8 tpy of PM<sub>10</sub>, 0.2 tpy of SO<sub>2</sub>, 11.8 tpy of VOC, and 32.1 tpy of CO, with an increase of 4.0 tpy of NO<sub>x</sub>. The decreases in PM/PM<sub>10</sub>, SO<sub>2</sub>, VOC, and CO are due to updated calculations that more accurately estimate the emissions at all existing sources.

### Process Description

Mineral product processing involves a variety of changing complexities during production. Regardless of whether material is processed in the Active Plant (A Plant) or the Bauxite Plant (B Plant), there are some operations and emission sources common to both plants. The following process descriptions will address the common sources, the Bauxite Plant and ancillary operations, and the Active Plant and ancillary operations.

#### Plantwide Sources

The first emission sources to discuss are the various raw material stockpiles (PW-01). The bauxite ore is brought in by truck from barges and stored in the ore shed. From the ore shed coarse bauxite is fed into the inlet hopper (PW-02), processed through a precrusher (PW-03) and then prescreened before entering into Kiln #1 (PW-04), which is controlled by a baghouse. After exiting Kiln #1 (PW-04), the material is processed through the remaining bauxite process.

#### Bauxite Plant (B-Plant)

Upon exiting Kiln #1 (PW-04), bauxite is discharged onto a drag conveyor and pulled to a bucket elevator. The elevator then picks up the calcined ore and feeds it to a screen where the product is screened out and put into a super sack for shipment. The larger screen size discharges to a hammermill for crushing. The material is then discharged back to the bucket elevator and passes over the screen again until it is sized for product. The pre-screen, Kiln #1, drag conveyor, elevator and final screening are all controlled by a complex aspiration system that is exhausted through a baghouse (PW-04). The collected fines from this baghouse (PW-04) are loaded into bags and sold as product.

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Pre-screen fines are taken off the pre-screening stage in a bag and fed up on Elliott Mill #3 (B-09), which discharges into B-1 tank. Milled material can be fed into the Flash Calciner #2 (B-11) process and conveyed into two (2) storage tanks (B-2 and B-3) that are controlled by a baghouse (B-17). Material can also be conveyed to the feed tank for Tub #5 that is equipped with a baghouse and bin vent (B-17). Tub #5 will be used to make bauxite spheres and discharge into super sacks that will be dried in the A-Plant. Load out points (B-05) can occur in multiple locations throughout the B-Plant. Porocel has been granted permission in the past to simplify the recordkeeping and emissions tracking of loading by "bubbling" all shipping for the Bauxite Plant under one source number (B-05).

### Kiln #2

Alumina based materials are fed to the kiln by a VFD belt conveyor and into a bucket elevator that feeds into the kiln. After material has been calcined to the appropriate specifications, it is conveyed to an elevator and screen for final product or crush and screen for final product. Kiln #2, along with the crushing and screening, are controlled by a baghouse (B-02).

### Elliott Mill #2

Elliott Mill #2 is used to mill alumina trihydrate. The alumina hydrate is conveyed from the railcar unloading station (A-29) to Tank #2. Tank #2 is filled and controlled by a baghouse (B-08). Material is then drawn down from the tank and fed to Elliott Mill #2. The mill is controlled by a baghouse (B-07). Material is then conveyed by a screw feeder into Flash Calciner #2 which is controlled by a baghouse (B-11).

The purpose of the calciner is to burn off molecular water in the hydrate, converting it from aluminum trihydrate to aluminum oxide. Flash calcined material can be loaded out at Tank #3 into super sacks and shipped out or material can be conveyed to Tank #4 or Tank #5 (B-12) for storage and bulk shipments. Material can also be conveyed to Tub #5 to make spheres.

### Elliott Mill #1

Elliott Mill #1 is used to mill aluminum trihydrate and toll processing materials. Toll processing materials are conveyed from bags into Tank #1 (B-20) and the material is drawn down to feed Elliott Mill #1. The mill is controlled by a baghouse (B-10). Material is then loaded out into super sacks.

Aluminum trihydrate can be processed also through this system. The alumina hydrate is conveyed from the railcar unloading station (A-29) to Tank #1. Tank #1 is filled and controlled by a baghouse (B-20). Material is then drawn down from the tank and fed to Elliott Mill #1. The mill is controlled by a baghouse (B-10). Material is then conveyed by a screw feeder into Flash Calciner #2.

### Shaping and Forming

Base powder material will come by railcars and super sacks. Material will be offloaded at a rail unloading station (B-18) and be conveyed into Tank #6 and Tank #7 that are controlled by a bin vent (B-06). The material is drawn down from the tanks and conveyed through the conveying system (B-

19) to a receiver tank (B-01) at the 3<sup>rd</sup> floor in the Shaping and Forming building. This same receiver will also vent the powder mixer that will mix the base powder with liquids for the former on the 2<sup>nd</sup> floor. The material will mix for a set amount of time in the mixer. The mixer will discharge the mix material into a feeder to feed both formers on the 2<sup>nd</sup> floor.

Material is then formed onto a small belt and gravity fed into a feed hopper on the 1<sup>st</sup> floor for heat treatment. Material is then heat treated at a maximum temperature of 250-300 °F. The heat treatment is controlled by a baghouse (A-26). Material will discharge from heat treating into a bucket elevator that will feed into Calciner #3 (B-15). The material is then calcined to client specifications. Particulate emissions from Calciner #3 are controlled by a baghouse (B-15). The Nitrogen oxide emissions from Calciner #3 are controlled by a Tri-Mer scrubber (B-15). The collected fines from this baghouse are loaded into bags and fed to the ACM-30 mill, controlled by a baghouse (A-23). The exhaust emissions from the clean air side of the baghouse are discharged into a Tri-Mer NO<sub>x</sub> scrubber.

The extrudates will discharge out of Calciner #3 into a cooling tube before taking the material to a bucket elevator and screening. There is countercurrent airflow through the cooling tube and Calciner #3. After screening the material, it will be packaged in super sacks.

#### Active Plant (A-Plant)

Hydrate enters the A-plant via a pneumatic transfer line at the railcar unloading system. The transfer line discharges into the unground hydrate feed tanks for ACM #1, #2, and #3 (UGSB) which are controlled by baghouses (A-01 and A-25).

The hydrate is then fed to the three (3) ACM Mills (A-02, A-03, and A-24). Each of these mills is controlled by a baghouse. Powder is next transferred to the Flash Calciner #1 Feed Tank (A-06). This tank is equipped with a bin vent filter. From this tank, material is metered into Flash Calciner #1 (A-07). Particulate emissions from the calciner are controlled by a baghouse. The calciner is used to convert the hydrate to aluminum oxide and to storage bins FCA 1, 2, and 3 that are controlled with a bin vent (A-32). FCA 4 has a blending cone installed on the bottom of it and is controlled by a baghouse (A-05).

For the storage bins, the calcined powder is conveyed to a feeder that empties into a tub powder feed stream and then on to the Tub #1, Tub #2, and Tub #3. This is controlled by bagfilters (A-08 and A-15). The tub feed stream enters the tub from a screw conveyor. There is a baghouse for dust control at the tubs (A-09) where powder enters and is combined with water or promoter solution. The tub forms the powder into spheres of varying sizes. These spheres then discharge from the tub via a discharge chute which allows them to fall onto the curing belt.

The Tub #1 system has another step that takes place after the cure belt discharges the material. Material will enter the cure drum (A-28), which is a rotary kiln heated to 180-200 °F to maintain a warm, moist atmosphere for rolling the spheres. The material then discharges into a super sack.

The curing bet is a covered, slow-moving belt that maintains an atmosphere of warm, moist air at approximately 180 °F. The curing belt discharges the spheres into super sacks. After the material

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has sat in super sacks, it is then fed to the activators. The activators generate temperatures up to 1000 °F, but typically will run no higher than 850 °F to remove any moisture gained in the tub.

Emissions Activator #1 (A-10), Activator #2 (A-17), and Activator #3 (A-13) are controlled by a baghouse. The spheres are then sent to an elevator and screen located on each activator for final screening of product desired. Spherical materials of the proper size and type are loaded into super sacks or drums as product. The screening, crushing, and loading operations are controlled by baghouses – Activator #1 (A-11), Activator #2 (A-18), and Activator #3 (A-18). An additional crushing and screening operation in the A-plant is controlled by a baghouse (A-27). The crushed material is crushed or screened and put into bags.

One special type of processing that takes place in the A-plant is impregnation and toll calcining. This process involves the mixing of catalyst carrier materials, typically alumina based, with liquid solutions of varying composition and concentrations. These compositions depend on customer specifications and may include hazardous air pollutants (HAPs). Feed material may enter in the form of powders, granules, spheres, or extrudates. Essentially, feed is introduced into the Munson mixer (A-12) and sprayed with the catalyst of choice. This is performed in a closed system, where the spheres of the Munson mixer absorb a significant volume of liquid and exit the system with a high enough moisture content so as to not be a dust source. The primary emission from this source is steam. The spheres are then caught in a super sack. If necessary, the spheres could be routed directly into the 60" Calciner (A-14) where most of the toll processing is done. The Calciner is also equipped with an after burner for certain tolling runs that require burn off.

The two (2) Calciner #4 Feed Tanks (A-20) are controlled by a common bin vent. The calciner is natural gas fired and processes a variety of materials. However, the majority are alumina-based materials. Product exiting this calciner is stored in the Calciner #4 Product Tanks (A-19). These tanks are controlled by bin vents and a bagfilter. Some materials that are ran through Calciner #4 need to be loaded into trucks or containers which is done at the truck and container loading station (A-30).

A small ACM mill 30 is used for milling some toll processing materials at the discharge end of Calciner #4. The mill is controlled by a baghouse (A-22) to catch the product in bags.

Housekeeping is done throughout both A-plant and B-plant with the use of a portable vacuum cleaner (B-03) and a vacuum system that is located in A-plant (B-16).

Lastly, there is a Feed Blender (A-31). This is simply a stainless steel tub. The vessel is opened, powders and other materials are poured in, the lid closed, and then the dry mixture is blended. Emissions are expected from this source only when the tub/blender is filled. The blended material is then fed to Tub #4 (B-21) to make spheres.

### **Regulations**

The following table contains the regulations applicable to this permit.

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Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective February 15, 1999
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective May 28, 2006
40 CFR Part 60 Subpart UUU - <i>Standards of Performance for Calciners and Dryers in Mineral Industries</i>

NSPS Subpart OOO - *Standards of Performance for Nonmetallic Mineral Processing Plants*, does not apply to this facility as the cumulative rate of all crushers is less than 25 tons per hour. NSPS Subpart LL - *Standards of Performance for Metallic Mineral Processing Plants*, does not apply to this facility as Porocel does not produce metallic mineral products or metallic concentrates.

The following table is a summary of the facility's total emissions.

**Table 1 - Total Allowable Emissions**

Total Allowable Emissions		
Pollutant	Emissions Rates	
	lb/hr	tpy
PM	38.2	121.3
PM <sub>10</sub>	26.1	81.2
SO <sub>2</sub>	1.1	1.2
VOC	41.0	15.1
CO	6.6	26.2
NO <sub>x</sub>	50.4	99.0
Total HAPs	10.0	9.5



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### Section III: PERMIT HISTORY

Porocel was issued its first air permit on September 11, 1970. This was permit number 0006-A. It allowed for 39.4 lb/hr of PM emissions.

Air permit #635-A was issued on November 21, 1980. It was a SIP that allowed for a reduction to 30 lb/hr of PM emissions.

Air permit #635-AR-1 was issued on November 20, 1981. It also was a SIP that allowed for 9 lb/hr of PM emissions.

Air permit #0635-AR-2 was issued on October 17, 1990. It was a SIP that allowed for 14 lb/hr of PM emissions.

Air permit #635-AR-3 was issued on September 7, 1993. It was a modification which allowed for the addition of emissions from natural gas combustion and installation of a pneumatic unloading/transfer system (SN-29 to SN-32). Emission limits set in this permit were 16.78 tpy NO<sub>x</sub>, 4.44 tpy CO, and 79.83 tpy PM.

Air permit #635-AR-4 was issued on August 15, 1994. It added a pneumatic conveyor for the product mill feed, increased the permitted hours for some of the facility's equipment and corrected errors in the emission rate calculations.

Air permit #635-AOP-R0 was issued on November 16, 1998, and was the first permit for this facility under Regulation #26. PM/PM<sub>10</sub> emissions were allowed at 100.6 tpy. HAPs were reported at 1.57 tpy. NO<sub>x</sub> emissions, primarily from the calciners and auxiliary equipment, were limited to 209.5 tpy.

Air permit #635-AOP-R1 was issued on February 4, 2002. It was issued as a result of inconsistency with the regulatory applicability of an NSPS subpart that was eventually found inapplicable, variations in operating conditions and unpermitted emission sources. A small thermal oxidizer for scavenging trace amounts of phenol and formaldehyde was added as an insignificant source of emissions.

Air Permit #635-AR-5 was issued on November 5, 2003. Four new sources were added: a New Mill designated as A-24; an auxiliary Feed Tank (A-25), an additional Calciner 18" (A-26) that increased capacity in the Toll Processing area and a 2.5 MMBtu/hr natural gas-fired hot water heater (A-27). One source (Pellet Forming) was removed from service. A second Baghouse associated with the afterburner at source A-14 was relocated to the existing Utility Activator (A-13). The facility was re-classified as a minor source under Regulation 19.

Air Permit #635-AR-6 was issued on April 6, 2005. The facility's air permit was modified to allow for the following changes:

- The addition of a bin vent to the Munson Mixer (Source A-12);

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- The addition of a cure drum (A-28) which consists of a 290,000 btu/hr natural gas fired burner and material handling equipment;
- The addition of railcar unloading station (A-29) which consists of conveying equipment ;
- The addition of a 1.5 MMbtu/hr burner to Activator No. 3 (A-13) ;
- The addition of a 1.0 MMbtu/hr burner to Tub No. 5 (B-17);
- The addition of a new tub forming system (B-21) to provide feed to Activator No. 3. This new system will include a feed tank and bin vent filter; and
- The replacement of the current Raymond Mill (B-09) with like-kind equipment entitled Elliot Mill #6.

The changes resulted in an increase of Particulate Matter of 2.1 tons/yr. The addition of burners at Activator No. 3 (A-13) and Tub No. 5 (B-17) required these sources to be subject to NSPS Subpart UUU-Standards of Performance for Calciners and Dryers in Mineral Industries.

Air Permit #0635-AR-7 was issued on November 15, 2005. Permit modified to allow for the addition of three previously unpermitted sources: Container Unloading Station (A-30), Mixer & Screening Operations (A-31), and Material Handling (A-32); and the deletion of a source, the Fines Piles (B-04). Plantwide nitrogen oxide (NO<sub>x</sub>) emissions were limited to 95 tons/year. The NO<sub>x</sub> emissions result from the combustion of natural gas and the use of a new activated hydrate at source A-14, resulting in an increase of 1.7 tons/year of particulate matter and 25.6 tons/yr for NO<sub>x</sub>.

Air Permit #0635-AR-8 was issued on June 1, 2006. With the permit modification, Porocel received permission to process a non-HAP material, Monoethanolamine (MEA), through Calciner #3 (A-14), which increased their VOC emission rates by 13.4 tpy.

**Section IV: EMISSION UNIT INFORMATION**

**Specific Conditions**

1. The permittee will not exceed the emission rates set forth in the following table. [§19.501 et seq. of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control, effective May 28, 2006 (Regulation 19) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**Table 2 - Criteria Pollutants**

SN	Description	Pollutant	lb/hr	Tpy
PW-01	Ore Piles	PM <sub>10</sub>	0.1	0.1
PW-02	Inlet Hopper	PM <sub>10</sub>	0.1	0.1
PW-03	Precrusher	PM <sub>10</sub>	0.2	0.5
PW-04	Kiln #1 (6.0 MMBtu/hr)	PM <sub>10</sub>	1.9	6.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.2
		CO	0.6	2.3
		NO <sub>x</sub>	0.6	*
PW-05	Plantwide Combustion NO <sub>x</sub> Emissions for Natural Gas Fired Gas Combustion	NO <sub>x</sub>	**	34.0
B-01	Receiver Tank	PM <sub>10</sub>	0.2	0.6
B-02	Calciner # 2 (6.0 MMBtu/hr)	PM <sub>10</sub>	1.9	6.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.2
		CO	0.6	2.3
		NO <sub>x</sub>	0.6	*
B-03	Portable Vacuum	PM <sub>10</sub>	0.2	0.6
B-04	Source Deleted			
B-05	Shipping/Loading	PM <sub>10</sub>	0.8	2.8
B-06	# 6 and # 7 Tanks	PM <sub>10</sub>	0.2	0.6
B-07	Elliott Mill # 2 / E-2 Tank	PM <sub>10</sub>	0.4	1.2
B-08	# 2 Tank	PM <sub>10</sub>	0.2	0.6
B-09	Elliott Mill # 3	PM <sub>10</sub>	0.2	0.6
B-10	Elliott Mill # 4 / E-1 Tank	PM <sub>10</sub>	0.4	0.6
B-11	Flash Calciner # 2 (10.0 MMBtu/hr)	PM <sub>10</sub>	1.9	6.4
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7

SN	Description	Pollutant	lb/hr	Tpy
		NO <sub>x</sub>	1.0	*
B-12	#4 and #5 Tanks	PM <sub>10</sub>	0.2	0.6
B-13	Source Deleted			
B-14	Kiln # 3 Feed Hopper	PM <sub>10</sub>	0.1	0.2
B-15	Calciner # 3 with Tri-Mer Scrubber (6.0 MMBtu/hr)	PM <sub>10</sub>	1.9	6.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.2
		CO	0.6	2.3
		NO <sub>x</sub>	43.9	65.0
B-16	Plant Vacuum System	PM <sub>10</sub>	0.2	0.6
B-17	Tub # 5 (Baghouse and Bin Vent)	PM <sub>10</sub>	0.2	0.6
B-18	Rail Unloading for Powder	PM <sub>10</sub>	0.1	0.1
B-19	Powder Conveying System	PM <sub>10</sub>	0.1	0.2
B-20	# 1 Tank	PM <sub>10</sub>	0.2	0.6
B-21	Tub # 4	PM <sub>10</sub>	0.2	0.6
A-01	ACM Feed Tanks (# 2 and # 3 Baghouse)	PM <sub>10</sub>	0.2	0.6
A-02	ACM Mill # 2	PM <sub>10</sub>	0.2	0.6
A-03	ACM Mill # 3	PM <sub>10</sub>	0.2	0.6
A-04	Mill Tanks	PM <sub>10</sub>	0.2	0.6
A-05	FCA # 4 (Bin Vent)	PM <sub>10</sub>	0.2	0.6
A-06	Flash Calciner # 1 Feed Tank	PM <sub>10</sub>	0.2	0.6
A-07	Flash Calciner # 1 (10.0 MMBtu/hr)	PM <sub>10</sub>	1.9	6.4
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7
		NO <sub>x</sub>	1.0	*
A-08	Tub # 1, Tub # 2 and Tub # 3	PM <sub>10</sub>	0.2	0.6
A-09	Tub Stand	PM <sub>10</sub>	0.1	0.2
A-10	Activator # 1 (4.0 MMBtu/hr)	PM <sub>10</sub>	1.9	6.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.4	1.5
		NO <sub>x</sub>	0.4	*
A-11	Activator # 1 Screening & Product Tanks	PM <sub>10</sub>	0.1	0.2
A-12	Munson Mixer	PM <sub>10</sub>	0.1	0.2

SN	Description	Pollutant	lb/hr	Tpy
A-13	Activator # 3 (4.5 MMBtu/hr)	PM <sub>10</sub>	1.9	6.2
		SO <sub>2</sub>	0.1	0.2
		VOC	0.1	0.1
		CO	0.4	1.7
		NO <sub>x</sub>	0.5	*
A-14	Calciner # 3 60", (15.0 MMBtu/hr)	PM <sub>10</sub>	2.0	6.5
		SO <sub>2</sub>	0.1	0.1
		VOC	40.0 <sup>1</sup>	13.4 <sup>1</sup>
		CO	1.3	5.6
		NO <sub>x</sub>	1.5	*
A-15	Tub # 3	PM <sub>10</sub>	0.2	0.6
A-16	Reserved			
A-17	Activator # 2 (4.0 MMBtu/hr)	PM <sub>10</sub>	1.9	6.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.4	1.5
		NO <sub>x</sub>	0.4	*
A-18	Activator # 2 Screening, Crushing, and Product Tanks	PM <sub>10</sub>	0.1	0.2
A-19	Calciner # 4 Product Tanks	PM <sub>10</sub>	0.2	0.6
A-20	Calciner # 4 Feed Tanks	PM <sub>10</sub>	0.2	0.6
A-22	ACM Mill 30 60" Calciner	PM <sub>10</sub>	0.2	0.6
A-23	ACM Mill 30 Forming	PM <sub>10</sub>	0.2	0.6
A-24	ACM # 1 Mill & Baghouse	PM <sub>10</sub>	0.2	0.6
A-25	ACM # 1 Mill Feed Tank	PM <sub>10</sub>	0.2	0.6
A-26	Belt Dryer (4.0 MMBtu/hr)	PM <sub>10</sub>	0.1	0.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1 <sup>1</sup>	0.1 <sup>1</sup>
		CO	0.4	1.5
		NO <sub>x</sub>	0.4	*
A-27	Crusher and Screener # 2	PM <sub>10</sub>	0.4	1.2
A-28	Cure Drum 0.3 MMBtu/hr	PM <sub>10</sub>	0.2	0.3
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.1
		NO <sub>x</sub>	0.1	*

SN	Description	Pollutant	lb/hr	Tpy
A-29	Railcar Unloading Station	PM <sub>10</sub>	0.2	0.6
A-30	Container & Truck Unloading Station	PM <sub>10</sub>	0.2	0.6
A-31	Mixer & Screening Operation	PM <sub>10</sub>	0.1	0.2
A-32	FCA Tanks 1-3	PM <sub>10</sub>	0.2	0.6

\*Subject to a plantwide limit of 34 tons/year for NO<sub>x</sub> as specified at PW-05.

\*\*See individual source listings for lb/hr limits for NO<sub>x</sub>.

<sup>1</sup> Subject to a Plantwide VOC limit due to HAP emissions of 10.0 lb/hr and 9.5 ton/yr.

2. The permittee will not exceed the emission rates set forth in the following table. [§18.801 of the Arkansas Air Pollution Control Code, effective February 15, 1999 (Regulation 18) and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**Table 3 - Non-Criteria Pollutants**

SN	Description	Pollutant	lb/hr	Tpy
PW-01	Ore Piles	PM	0.1	0.2
PW-02	Inlet Hopper	PM	0.1	0.1
PW-03	Precrusher	PM	0.3	1.0
PW-04	Kiln #1 (6.0 MMBtu/hr)	PM	3.1	10.1
B-01	Receiver Tank	PM	0.2	0.6
B-02	Calciner # 2 (6.0 MMBtu/hr)	PM	3.1	10.1
B-03	Portable Vacuum	PM	0.2	0.6
B-04	Source Deleted			
B-05	Shipping/Loading	PM	0.8	2.8
B-06	# 6 and # 7 Tanks	PM	0.2	0.6
B-07	Elliott Mill # 2 / E-2 Tank	PM	0.4	1.2
B-08	# 2 Tank	PM	0.2	0.6
B-09	Elliott Mill # 3	PM	0.2	0.6
B-10	Elliott Mill # 4 / E-1 Tank	PM	0.4	1.2
B-11	Flash Calciner # 2 (10.0 MMBtu/hr)	PM	3.1	10.3
B-12	#4 and #5 Tanks	PM	0.2	0.6
B-13	Source Deleted			
B-14	Kiln # 3 Feed Hopper	PM	0.2	0.5
B-15	Calciner # 3	PM	3.1	10.1

SN	Description	Pollutant	lb/hr	Tpy
	with Tri-Mer Scrubber (6.0 MMBtu/hr)			
B-16	Plant Vacuum System	PM	0.2	0.6
B-17	Tub # 5 (Baghouse and Bin Vent)	PM	0.2	0.6
B-18	Rail Unloading for Powder	PM	0.1	0.1
B-19	Powder Conveying System	PM	0.2	0.5
B-20	# 1 Tank	PM	0.2	0.6
B-21	Tub # 4	PM	0.2	0.6
A-01	ACM Feed Tanks (# 2 and # 3 Baghouse)	PM	0.2	0.6
A-02	ACM Mill # 2	PM	0.2	0.6
A-03	ACM Mill # 3	PM	0.2	0.6
A-04	Mill Tanks	PM	0.2	0.6
A-05	FCA # 4 (Bin Vent)	PM	0.2	0.6
A-06	Flash Calciner # 1 Feed Tank	PM	0.2	0.6
A-07	Flash Calciner # 1 (10.0 MMBtu/hr)	PM	3.1	10.3
A-08	Tub # 1, Tub # 2 and Tub # 3	PM	0.2	0.6
A-09	Tub Stand	PM	0.2	0.5
A-10	Activator # 1 (4.0 MMBtu/hr)	PM	3.1	10.1
A-11	Activator # 1 Screening & Product Tanks	PM	0.4	1.2
A-12	Munson Mixer	PM	0.2	0.5
A-13	Activator # 3 (4.5 MMBtu/hr)	PM	3.1	10.1
A-14	Calciner # 3 60", (15.0 MMBtu/hr)	PM HAP	3.2 10.0*	10.4 9.5*
A-15	Tub # 3	PM	0.2	0.6
A-16	Reserved			
A-17	Activator # 2 (4.0 MMBtu/hr)	PM	3.1	10.1
A-18	Activator # 2 Screening, Crushing, and Product Tanks	PM	0.4	1.2
A-19	Calciner # 4 Product	PM	0.2	0.6

SN	Description	Pollutant	lb/hr	Tpy
	Tanks			
A-20	Calciner # 4 Feed Tanks	PM	0.2	0.6
A-22	ACM Mill 30 60" Calciner	PM	0.2	0.6
A-23	ACM Mill 30 Forming	PM	0.2	0.6
A-24	ACM # 1 Mill & Baghouse	PM	0.2	0.6
A-25	ACM # 1 Mill Feed Tank	PM	0.2	0.6
A-26	Belt Dryer (4.0 MMBtu/hr)	PM HAP	0.1 10.0*	0.2 9.5*
A-27	Crusher and Screener # 2	PM	0.4	1.2
A-28	Cure Drum 0.3 MMBtu/hr	PM	0.3	0.6
A-29	Railcar Unloading Station	PM	0.2	0.6
A-30	Container & Truck Unloading Station	PM	0.2	0.6
A-31	Mixer & Screening Operation	PM	0.2	0.5
A-32	FCA Tanks 1-3	PM	0.2	0.6

\*HAPs are solvents and additives used in manufacturing specialty toll products.

3. Visible emissions will not exceed the limits specified in the following table of this permit as measured by EPA Reference Method 9. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

**Table 4 - Visible Emissions**

SN	Limit	Regulatory Citation
PW-02 and PW-03 Inlet Hopper and Precrusher	10%	§18.501
All sources except PW-02 and PW-03	5%	§18.501

4. The permittee will not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303. [§18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-31]



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5. The permittee will not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants to become airborne. [§18.901 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

#### Facility-Wide Conditions

6. The permittee will not process more than 100,000 tons of product at the facility per consecutive 12-month period. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
7. The permittee will use only pipeline quality natural gas as fuel. Natural gas usage will not exceed 680 MMSCF of natural gas at the facility per consecutive 12-month period. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
8. The permittee will maintain monthly records which demonstrate compliance with Specific Conditions #6 and #7. The permittee will update the records by the fifteenth day of the month following the month to which the records pertain. The permittee will keep the records onsite, and make the records available to Department personnel upon request. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
9. The permittee shall be limited to 99.0 tons of NO<sub>x</sub> at the facility per consecutive 12-month period. NO<sub>x</sub> emissions from the facility will be limited to the combustion of natural gas plant-wide (PW-05) and process NO<sub>x</sub> generated at source B-15. A mass balance using the test results required by Specific Condition # 17 will be used to calculate the process NO<sub>x</sub> generated emissions. Natural gas combustion NO<sub>x</sub> emissions will be calculated using an emissions factor of 100 lb NO<sub>x</sub> per 10<sup>6</sup> standard cubic feet of natural gas. [Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and CFR Part 52, Subpart E]
10. The permittee will maintain monthly records of NO<sub>x</sub> emissions from the combustion of natural gas and the process generated NO<sub>x</sub> which demonstrates compliance with Specific Condition # 9. The permittee will update the records by the fifteenth day of the month following the month to which the records pertain. The permittee will keep the records onsite, and make the records available to Department personnel upon request. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
11. If the calculated actual emissions of NO<sub>x</sub> exceed 95.0 tpy, the permittee shall demonstrate the degree of accuracy of the calculations used to determine the emissions is sufficient to prove that the major source thresholds for NO<sub>x</sub> have not been exceeded. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

### SN-A-14 Conditions

12. The permittee shall not use solvents and additives containing HAPs or other air contaminants in the Belt Dryer (A-26) and Calciner # 3 60" (A-14), unless the daily usage in pounds is below  $0.11 * TLV$  in  $mg/m^3 * 24$  hrs. [§18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
13. The permittee shall not exceed the total HAPs emission limit from Toll Processing of 9.5 tpy per 12 consecutive months. [§18.801 Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
14. The permittee will maintain daily records which demonstrate compliance with Specific Conditions #12 and #13. The permittee will update the records by the fifteenth day of the month following the month to which the records pertain. The permittee will keep the records onsite, and make the records available to Department personnel upon request. [§18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
15. The permittee shall be limited to 300 tons of Monoethanolamine (MEA) through the 60" Calciner (A-14) per consecutive 12-month period. [Regulation No. 19 §19.705, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and CFR Part 52, Subpart E]
16. The permittee will maintain monthly records of Monoethanolamine (MEA) usage through the 60" Calciner (A-14) which demonstrates compliance with Specific Condition #15. The permittee will update the records by the fifteenth day of the month following the month to which the records pertain. The permittee will keep the records onsite, and make the records available to Department personnel upon request. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
17. The permittee shall conduct stack emissions testing for  $NO_x$  on Calciner # 3 (A-14) using US EPA Reference Test Method 7E as published in 40 CFR Part 60 Appendix A. [§19.702 of Regulation 19 and 40 CFR Part 52 Subpart E]

The facility shall perform this testing every 5 years from the date of the last successful test. If at any time the facility fails one of the 5-year tests, or the facility conducts additional modifications to the calciner, then the facility must conduct two successive annual tests. If both of these annual tests are successful, then the facility may return to the five-year testing schedule.

All tests shall be conducted with the calciner (A-14) operating at 90% or greater of capacity. Failure to test at or above this level shall limit the permittee to operating within 10% above the tested rate. The ADEQ Air Division Compliance Inspector Supervisor shall be notified at least 15 days prior to the testing. Results of the testing will be submitted in accordance with General Condition #6 of this permit.

**SN-B-15 Conditions**

18. The permittee shall conduct initial performance testing for NO<sub>x</sub> at Calciner # 3 (SN-B-15), while running the "E" process. The permittee shall use US EPA Reference Test Method 7E as published in 40 CFR Part 60 Appendix A. The results of these tests shall be submitted to the Department at the address listed in General Provision #6. [§19.702 of Regulation 19 and 40 CFR Part 52 Subpart E]

All tests shall be conducted with the calciner (B-15) operating at 90% or greater of capacity. Failure to test at or above this level shall limit the permittee to operating within 10% above the tested rate. The ADEQ Air Division Compliance Inspector Supervisor shall be notified at least 15 days prior to the testing. The permittee shall test B-15 in accordance with General Condition #7. Results of the testing will be submitted in accordance with General Condition #6 of this permit.

19. The permittee shall operate the scrubber (B-15) within the conditions outlined in the following table to ensure proper scrubber operation and efficiency. The acceptable parametric ranges shall be determined and verified during the initial performance test. [§18.1104 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304]

Parameter	Range
Scrubber operating pressure	8.0" to 11.0" w.g.
Scrubber recirculation rate	180 to 220 gpm
Scrubber's caustic column pH	To be determined

20. The permittee shall maintain daily records of the scrubber operating pressure, recirculation rate, and pH which demonstrates compliance with Specific Condition #19. The permittee will update the records by the fifteenth day of the month following the month to which the records pertain. The permittee will keep the records onsite, and make the records available to Department personnel upon request. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

### NSPS Requirements

21. The permittee shall conduct an initial performance test for Activator # 1 (A-10), Activator # 2 (A-17), and Activator # 3 (A-13) in accordance with 40 CFR 60.736. Emissions from the dryers shall not contain particulate matter in excess of 0.057 grams per dry standard cubic foot (g/dscm). Compliance with the particulate matter standard shall be determined by using EPA Reference Method 5. The sampling time and volume for each test run shall be at least 2 hours and 1.70 dscm. EPA Reference Method 9 shall be used to determine the opacity from stack emissions. The performance testing may be waived with written permission from the EPA. [§19.304 of Regulation 19 and 40 CFR Part 60 Subpart UUU – *Standards of Performance for Calciners and Dryers in Mineral Industries*]
  
22. The permittee will operate the following kilns and dryers with dry control equipment at all times: PW-04, B-02, B-11, B-15, B-17, A-07, A-10, A-13, A-14, A-17, and A-26. The discharged gas from the associated baghouses shall not contain particulates in excess of 0.057 grams per dry standard cubic meter (g/dscm). Compliance with NSPS Subpart UUU shall be demonstrated by the initial performance test §60.732 or has been demonstrated by reports dated July 19, 1999 and September 7, 2000. [§19.0303 of Regulation 19, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, 40 CFR 60 Subpart UUU – *Standards of performance for Calciners and Dryers in Mineral Industries*, §60.732(a) and §60.734(c)]

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### Section V: INSIGNIFICANT ACTIVITIES

The Department deems the following types of activities or emissions as insignificant on the basis of size, emission rate, production rate, or activity in accordance with Group A of the Insignificant Activities list found in Regulation 18 and 19 Appendix A. Insignificant activity emission determinations rely upon the information submitted by the permittee in an application dated May 25, 2005.

**Table 5 - Insignificant Activities**

Description	Category
Bench-Scale Research & Development includes a small burner (less than 0.5 MMBtu/hr) and an Activator	A-5
INCINI-Cone Afterburner (3.6 MMBtu/hr)	A-1
Feed Blender	A-13

## Section VI: GENERAL CONDITIONS

1. Any terms or conditions included in this permit that specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the sole origin of and authority for the terms or conditions are not required under the Clean Air Act or any of its applicable requirements, and are not federally enforceable under the Clean Air Act. Arkansas Pollution Control & Ecology Commission Regulation 18 was adopted pursuant to the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*). Any terms or conditions included in this permit that specify and reference Arkansas Pollution Control & Ecology Commission Regulation 18 or the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) as the origin of and authority for the terms or conditions are enforceable under this Arkansas statute.
2. This permit does not relieve the owner or operator of the equipment and/or the facility from compliance with all applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated under the Act. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
3. The permittee will notify the Department in writing within thirty (30) days after commencement of construction, completion of construction, first operation of equipment and/or facility, and first attainment of the equipment and/or facility target production rate. [§19.704 of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control (Regulation 19) and/or A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
4. Construction or modification must commence within eighteen (18) months from the date of permit issuance. [§19.410(B) of Regulation 19 and/or §18.309(B) of the Arkansas Air Pollution Control Code (Regulation 18) and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
5. The permittee must keep records for five years to enable the Department to determine compliance with the terms of this permit--such as hours of operation, throughput, upset conditions, and continuous monitoring data. The Department may use the records, at the discretion of the Department, to determine compliance with the conditions of the permit. [§19.705 of Regulation 19 and/or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
6. A responsible official must certify any reports required by any condition contained in this permit and submit any reports to the Department at the address below. [§19.705 of Regulation 19 and/or §18.1004 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

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Arkansas Department of Environmental Quality  
Air Division  
ATTN: Compliance Inspector Supervisor  
Post Office Box 8913  
Little Rock, AR 72219

7. The permittee will test any equipment scheduled for testing, unless stated in the Specific Conditions of this permit or by any federally regulated requirements, within the following time frames: (1) newly constructed or modified equipment within sixty (60) days of achieving the maximum production rate, but no later than 180 days after initial start-up of the permitted source or (2) existing equipment already operating according to the time frames set forth by the Department. The permittee must notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. The permittee must submit compliance test results to the Department within thirty (30) days after the completion of testing. [§19.702 of Regulation 19 and/or §18.1002 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
8. The permittee will provide: [§19.702 of Regulation 19 and/or §18.1002 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
  - a. Sampling ports adequate for applicable test methods
  - b. Safe sampling platforms
  - c. Safe access to sampling platforms
  - d. Utilities for sampling and testing equipment
9. The permittee will operate equipment, control apparatus and emission monitoring equipment within their design limitations. The permittee will maintain in good condition at all times equipment, control apparatus and emission monitoring equipment. [§19.303 of Regulation 19 and/or §18.1104 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
10. If the permittee exceeds an emission limit established by this permit, the permittee will be deemed in violation of said permit and will be subject to enforcement action. The Department may forego enforcement action for emissions exceeding any limits established by this permit provided the following requirements are met: [§19.601 of Regulation 19 and/or §18.1101 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
  - a. The permittee demonstrates to the satisfaction of the Department that the emissions resulted from an equipment malfunction or upset and are not the result of negligence or improper maintenance, and the permittee took all reasonable measures to immediately minimize or eliminate the excess emissions.
  - b. The permittee reports the occurrence or upset or breakdown of equipment (by telephone,

facsimile, or overnight delivery) to the Department by the end of the next business day after the occurrence or the discovery of the occurrence.

- c. The permittee must submit to the Department, within five business days after the occurrence or the discovery of the occurrence, a full, written report of such occurrence, including a statement of all known causes and of the scheduling and nature of the actions to be taken to minimize or eliminate future occurrences, including, but not limited to, action to reduce the frequency of occurrence of such conditions, to minimize the amount by which said limits are exceeded, and to reduce the length of time for which said limits are exceeded. If the information is included in the initial report, the information need not be submitted again.
11. The permittee shall allow representatives of the Department upon the presentation of credentials: [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
    - a. To enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of this permit
    - b. To have access to and copy any records required to be kept under the terms and conditions of this permit, or the Act
    - c. To inspect any monitoring equipment or monitoring method required in this permit
    - d. To sample any emission of pollutants
    - e. To perform an operation and maintenance inspection of the permitted source
  12. The Department issued this permit in reliance upon the statements and presentations made in the permit application. The Department has no responsibility for the adequacy or proper functioning of the equipment or control apparatus. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
  13. The Department may revoke or modify this permit when, in the judgment of the Department, such revocation or modification is necessary to comply with the applicable provisions of the Arkansas Water and Air Pollution Control Act and the regulations promulgated the Arkansas Water and Air Pollution Control Act. [§19.410(A) of Regulation 19 and/or §18.309(A) of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
  14. This permit may be transferred. An applicant for a transfer must submit a written request for transfer of the permit on a form provided by the Department and submit the disclosure statement required by Arkansas Code Annotated §8-1-106 at least thirty (30) days in advance of the proposed transfer date. The permit will be automatically transferred to the new permittee unless the Department denies the request to transfer within thirty (30) days of the receipt of the disclosure statement. The Department may deny a transfer on the basis of the information revealed in the disclosure statement or other investigation or, deliberate falsification or omission of relevant information. [§19.407(B) of Regulation 19 and/or §18.307(B) of Regulation 18 and



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A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

15. This permit shall be available for inspection on the premises where the control apparatus is located. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
16. This permit authorizes only those pollutant emitting activities addressed herein. [A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
17. This permit supersedes and voids all previously issued air permits for this facility. [Regulation 18 and 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
18. The permittee must pay all permit fees in accordance with the procedures established in Regulation No. 9. [A.C.A §8-1-105(c)]

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1-month period. Statements of compliance shall be submitted on a semi-annual basis.

(c) These reports shall be postmarked not later than 10 days after the end of the periods specified in § 60.724(b)(1) and § 60.724(b)(2).

(d) Each owner or operator subject to the provisions of this subpart shall maintain at the source, for a period of at least 2 years, records of all data and calculations used to determine monthly VOC emissions from each coating operation for each affected facility as specified in 40 CFR 60.7(d).

(e) Reporting and recordkeeping requirements for facilities using add-on controls will be determined by the Administrator on a case-by-case basis.

[53 FR 2676, Jan. 29, 1988, as amended at 55 FR 61778, Oct. 17, 2000]

**§ 60.725 Test methods and procedures.**

(a) The reference methods in appendix A to this part except as provided under § 60.8(b) shall be used to determine compliance with § 60.722 as follows:

(1) Method 24 for determination of VOC content of each coating as received.

(2) For Method 24, the sample must be at least a 1-liter sample in a 1-liter container.

(b) Other methods may be used to determine the VOC content of each coating if approved by the Administrator before testing.

**§ 60.728 Delegation of authority.**

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to the States:

Section 60.723(b)(1)  
Section 60.723(b)(2)(i)(C)  
Section 60.723(b)(2)(iv)  
Section 60.724(e)  
Section 60.725(b)

[53 FR 2676, Jan. 29, 1988, as amended at 53 FR 19300, May 27, 1988]

**Subpart UUU—Standards of Performance for Calciners and Dryers in Mineral Industries**

SOURCE: 57 FR 44503, Sept. 28, 1992, unless otherwise noted.

**§ 60.730 Applicability and designation of affected facility.**

(a) The affected facility to which the provisions of this subpart apply is each calciner and dryer at a mineral processing plant. Feed and product conveyors are not considered part of the affected facility. For the brick and related clay products industry, only the calcining and drying of raw materials prior to firing of the brick are covered.

(b) An affected facility that is subject to the provisions of subpart LL, Metallic Mineral Processing Plants, is not subject to the provisions of this subpart. Also, the following processes and process units used at mineral processing plants are not subject to the provisions of this subpart: vertical shaft kilns in the magnesium compounds industry; the chlorination-oxidation process in the titanium dioxide industry; coating kilns, mixers, and aerators in the roofing granules industry; and tunnel kilns, tunnel dryers, apron dryers, and grinding equipment that also dries the process material used in any of the 17 mineral industries (as defined in § 60.731, "Mineral processing plant").

(c) The owner or operator of any facility under paragraph (a) of this section that commences construction, modification, or reconstruction after April 23, 1986, is subject to the requirements of this subpart.

**§ 60.731 Definitions.**

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act and in subpart A of this part.

*Calciner* means the equipment used to remove combined (chemically bound) water and/or gases from mineral material through direct or indirect heating. This definition includes expansion furnaces and multiple hearth furnaces.

*Control device* means the air pollution control equipment used to reduce particulate matter emissions released to

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the atmosphere from one or more affected facilities.

*Dryer* means the equipment used to remove uncombined (free) water from mineral material through direct or indirect heating.

*Installed in series* means a calciner and dryer installed such that the exhaust gases from one flow through the other and then the combined exhaust gases are discharged to the atmosphere.

*Mineral processing plant* means any facility that processes or produces any of the following minerals, their concentrates or any mixture of which the majority (>50 percent) is any of the following minerals or a combination of these minerals: alumina, ball clay, bentonite, diatomite, feldspar, fire clay, fuller's earth, gypsum, industrial sand, kaolin, lightweight aggregate, magnesium compounds, perlite, roofing granules, talc, titanium dioxide, and vermiculite.

### § 60.732 Standards for particulate matter.

Each owner or operator of any affected facility that is subject to the requirements of this subpart shall comply with the emission limitations set forth in this section on and after the date on which the initial performance test required by § 60.8 is completed, but not later than 180 days after the initial startup, whichever date comes first. No emissions shall be discharged into the atmosphere from any affected facility that:

(a) Contains particulate matter in excess of 0.092 gram per dry standard cubic meter (g/dscm) [0.040 grain per dry standard cubic foot (gr/dscf)] for calciners and for calciners and dryers installed in series and in excess of 0.057 g/dscm (0.025 gr/dscf) for dryers; and

(b) Exhibits greater than 10 percent opacity, unless the emissions are discharged from an affected facility using a wet scrubbing control device.

[57 FR 44503, Sept. 28, 1992, as amended at 65 FR 61778, Oct. 17, 2000]

### § 60.733 Reconstruction.

The cost of replacement of equipment subject to high temperatures and abrasion on processing equipment shall not be considered in calculating either

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the "fixed capital cost of the new components" or the "fixed capital cost that would be required to construct a comparable new facility" under § 60.15. Calciner and dryer equipment subject to high temperatures and abrasion are: end seals, flights, and refractory lining.

### § 60.734 Monitoring of emissions and operations.

(a) With the exception of the process units described in paragraphs (b), (c), and (d) of this section, the owner or operator of an affected facility subject to the provisions of this subpart who uses a dry control device to comply with the mass emission standard shall install, calibrate, maintain, and operate a continuous monitoring system to measure and record the opacity of emissions discharged into the atmosphere from the control device.

(b) In lieu of a continuous opacity monitoring system, the owner or operator of a ball clay vibrating grate dryer, a bentonite rotary dryer, a diatomite flash dryer, a diatomite rotary calciner, a feldspar rotary dryer, a fire clay rotary dryer, an industrial sand fluid bed dryer, a kaolin rotary calciner, a perlite rotary dryer, a roofing granules fluid bed dryer, a roofing granules rotary dryer, a talc rotary calciner, a titanium dioxide spray dryer, a titanium dioxide fluid bed dryer, a vermiculite fluid bed dryer, or a vermiculite rotary dryer who uses a dry control device may have a certified visible emissions observer measure and record three 6-minute averages of the opacity of visible emissions to the atmosphere each day of operation in accordance with Method 9 of appendix A of part 60.

(c) The owner or operator of a ball clay rotary dryer, a diatomite rotary dryer, a feldspar fluid bed dryer, a fuller's earth rotary dryer, a gypsum rotary dryer, a gypsum flash calciner, gypsum kettle calciner, an industrial sand rotary dryer, a kaolin rotary dryer, a kaolin multiple hearth furnace, a perlite expansion furnace, a talc flash dryer, a talc rotary dryer, a titanium dioxide direct or indirect rotary dryer or a vermiculite expansion furnace who uses a dry control device is exempt from the monitoring requirements of this section.

**APPENDIX A**

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(d) The owner or operator of an affected facility subject to the provisions of this subpart who uses a wet scrubber to comply with the mass emission standard for any affected facility shall install, calibrate, maintain, and operate monitoring devices that continuously measure and record the pressure loss of the gas stream through the scrubber and the scrubbing liquid flow rate to the scrubber. The pressure loss monitoring device must be certified by the manufacturer to be accurate within 5 percent of water column gauge pressure at the level of operation. The liquid flow rate monitoring device must be certified by the manufacturer to be accurate within 5 percent of design scrubbing liquid flow rate.

**§ 60.735 Recordkeeping and reporting requirements.**

(a) Records of the measurements required in § 60.734 of this subpart shall be retained for at least 2 years.

(b) Each owner or operator who uses a wet scrubber to comply with § 60.732 shall determine and record once each day, from the recordings of the monitoring devices in § 60.734(d), an arithmetic average over a 2-hour period of both the change in pressure of the gas stream across the scrubber and the flowrate of the scrubbing liquid.

(c) Each owner or operator shall submit written reports semiannually of exceedances of control device operating parameters required to be monitored by § 60.734 of this subpart. For the purpose of these reports, exceedances are defined as follows:

(1) All 6-minute periods during which the average opacity from dry control devices is greater than 10 percent; or

(2) Any daily 2-hour average of the wet scrubber pressure drop determined as described in § 60.735(b) that is less than 90 percent of the average value recorded according to § 60.736(c) during the most recent performance test that demonstrated compliance with the particulate matter standard; or

(3) Each daily wet scrubber liquid flow rate recorded as described in § 60.735(b) that is less than 80 percent or greater than 120 percent of the average value recorded according to § 60.736(c) during the most recent performance

test that demonstrated compliance with the particulate matter standard.

(d) The requirements of this section remain in force until and unless the Agency, in delegating enforcement authority to a State under section 111(c) of the Clean Air Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected facilities within the State will be relieved of the obligation to comply with this section provided that they comply with the requirements established by the State.

[57 FR 44503, Sept. 28, 1992, as amended at 58 FR 40591, July 29, 1993]

**§ 60.736 Test methods and procedures.**

(a) In conducting the performance tests required in § 60.8, the owner or operator shall use the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(b) The owner or operator shall determine compliance with the particulate matter standards in § 60.732 as follows:

(1) Method 5 shall be used to determine the particulate matter concentration. The sampling time and volume for each test run shall be at least 2 hours and 1.70 dscm.

(2) Method 9 and the procedures in § 60.11 shall be used to determine opacity from stack emissions.

(c) During the initial performance test of a wet scrubber, the owner or operator shall use the monitoring devices of § 60.734(d) to determine the average change in pressure of the gas stream across the scrubber and the average flowrate of the scrubber liquid during each of the particulate matter runs. The arithmetic averages of the three runs shall be used as the baseline average values for the purposes of § 60.735(c).

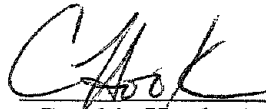
**§ 60.737 Delegation of authority.**

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: No restrictions.

CERTIFICATE OF SERVICE

I, Cynthia Hook, hereby certify that a copy of this permit has been mailed by first class mail to Porocel Corporation, 10300 Arch Street Pike, Little Rock, AR, 72206, on this 20<sup>th</sup> day of September, 2007.



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Cynthia Hook, AAIL, Air Division