

ADEQ MINOR SOURCE AIR PERMIT


Permit No. : 0635-AR-10

IS ISSUED TO:

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

THIS PERMIT IS THE ABOVE REFERENCED PERMITTEE'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

August 28, 2008
Date

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List of Acronyms and Abbreviations

A.C.A.	Arkansas Code Annotated
AFIN	ADEQ Facility Identification Number
CFR	Code of Federal Regulations
CO	Carbon Monoxide
HAP	Hazardous Air Pollutant
lb/hr	Pound Per Hour
No.	Number
NO _x	Nitrogen Oxide
PM	Particulate Matter
PM ₁₀	Particulate Matter Smaller Than Ten Microns
SO ₂	Sulfur Dioxide
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

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Section I: FACILITY INFORMATION

PERMITTEE: Porocel Corporation
AFIN: 60-00004
PERMIT NUMBER: 0635-AR-10
FACILITY ADDRESS: 10300 Arch Street Pike
Little Rock, AR 72206
MAILING ADDRESS: 10300 Arch Street Pike
Little Rock, AR 72206
COUNTY: Pulaski County
CONTACT NAME: Gerald Ashford
CONTACT POSITION: Plant Manager
TELEPHONE NUMBER: 501-888-1357
REVIEWING ENGINEER: Joseph Hurt
UTM North South (Y): Zone 15: 3835044.77 m
UTM East West (X): Zone 15: 563555.34 m

Section II: INTRODUCTION

Summary of Permit Activity

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 requested permission to perform a trial run at the 60" Calciner # 3 (SN-A-14) on a new, nickel based material. The trial run was approved with the De Minimis letter sent to the facility, and no new specific conditions were added to this permit in regards to the trial run. Additionally, the General Conditions were updated. The total potential emissions include an additional 1.5 tpy of NO_x. However, with this permitting action there are no changes in the total permitted emissions.

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.

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

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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 3rd floor in the Shaping and Forming building.

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This same receiver will also vent the powder mixer that will mix the base powder with liquids for the former on the 2nd 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 2nd floor. Material is then formed onto a small belt and gravity fed into a feed hopper on the 1st 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_x 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 belt 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

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material 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.

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Regulations

The following table contains the regulations applicable to this permit.

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 October 15, 2007
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.

Total Allowable Emissions

The following table is a summary of emissions from the facility. This table, in itself, is not an enforceable condition of the permit.

TOTAL ALLOWABLE EMISSIONS		
Pollutant	Emission Rates	
	lb/hr	tpy
PM	38.2	121.3
PM ₁₀	26.1	81.2
SO ₂	1.1	1.2
VOC	41.0	15.1
CO	6.6	26.2
NO _x	60.4	99.0
Total HAP	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_x , 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_{10} emissions were allowed at 100.6 tpy. HAPs were reported at 1.57 tpy. NO_x 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_x) emissions were limited to 95 tons/year. The NO_x 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_x.

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.

Air Permit # 0635-AR-9 was issued on September 20, 2007. With the permit modification, Porocel began 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, generates process nitrogen oxide emissions at Calciner #3 (SN-B-15). There is a product mix of four different products that are produced in Calciner #3, each requiring various times in the calciner. As such, Porocel implemented the use of a scrubber (SN-B-15) for the control of the NO_x emissions. The total permitted emission decreases include 10.4 tpy of PM, 5.8 tpy of PM₁₀, 0.2 tpy of SO₂, 11.8 tpy of VOC, and 32.1 tpy of CO, with an increase of 4.0 tpy of NO_x. The decreases in PM/PM₁₀, SO₂, VOC, and CO are due to updated calculations that more accurately estimate the emissions at all existing sources.

Section IV: EMISSION UNIT INFORMATION

Specific Conditions

- The permittee shall not exceed the emission rates set forth in the following table.
 [Regulation 19, §19.501 et seq., and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

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

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

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SN	Description	Pollutant	lb/hr	tpy
		NO _x	1.0	*
A-08	Tub # 1, Tub # 2 and Tub # 3	PM ₁₀	0.2	0.6
A-09	Tub Stand	PM ₁₀	0.1	0.2
A-10	Activator # 1 (4.0 MMBtu/hr)	PM ₁₀	1.9	6.2
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.4	1.5
		NO _x	0.4	*
A-11	Activator # 1 Screening & Product Tanks	PM ₁₀	0.1	0.2
A-12	Munson Mixer	PM ₁₀	0.1	0.2
A-13	Activator # 3 (4.5 MMBtu/hr)	PM ₁₀	1.9	6.2
		SO ₂	0.1	0.2
		VOC	0.1	0.1
		CO	0.4	1.7
		NO _x	0.5	*
A-14	Calciner # 3 60", (15.0 MMBtu/hr)	PM ₁₀	2.0	6.5
		SO ₂	0.1	0.1
		VOC	40.0 ¹	13.4 ¹
		CO	1.3	5.6
		NO _x	1.5	*
A-15	Tub # 3	PM ₁₀	0.2	0.6
A-16	Reserved			
A-17	Activator # 2 (4.0 MMBtu/hr)	PM ₁₀	1.9	6.2
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.4	1.5
		NO _x	0.4	*
A-18	Activator # 2 Screening, Crushing, and Product Tanks	PM ₁₀	0.1	0.2
A-19	Calciner # 4 Product Tanks	PM ₁₀	0.2	0.6
A-20	Calciner # 4 Feed Tanks	PM ₁₀	0.2	0.6
A-22	ACM Mill 30 60" Calciner	PM ₁₀	0.2	0.6

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SN	Description	Pollutant	lb/hr	tpy
A-23	ACM Mill 30 Forming	PM ₁₀	0.2	0.6
A-24	ACM # 1 Mill & Baghouse	PM ₁₀	0.2	0.6
A-25	ACM # 1 Mill Feed Tank	PM ₁₀	0.2	0.6
A-26	Belt Dryer (4.0 MMBtu/hr)	PM ₁₀	0.1	0.2
		SO ₂	0.1	0.1
		VOC	0.1 ¹	0.1 ¹
		CO	0.4	1.5
		NO _x	0.4	*
A-27	Crusher and Screener # 2	PM ₁₀	0.4	1.2
A-28	Cure Drum 0.3 MMBtu/hr	PM ₁₀	0.2	0.3
		SO ₂	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.1
		NO _x	0.1	*
A-29	Railcar Unloading Station	PM ₁₀	0.2	0.6
A-30	Container & Truck Unloading Station	PM ₁₀	0.2	0.6
A-31	Mixer & Screening Operation	PM ₁₀	0.1	0.2
A-32	FCA Tanks 1-3	PM ₁₀	0.2	0.6

* - Subject to a plantwide limit of 34 tons/year for NO_x as specified at PW-05.

** - See individual source listings for lb/hr limits for NO_x.

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

2. The permittee shall not exceed the emission rates set forth in the following table. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

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	PM	3.1	10.1

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SN	Description	Pollutant	lb/hr	tpy
	(6.0 MMBtu/hr)			
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 with Tri-Mer Scrubber (6.0 MMBtu/hr)	PM	3.1	10.1
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

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SN	Description	Pollutant	lb/hr	tpy
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 Tanks	PM	0.2	0.6
A-20	Calciner # 4 Feed Tanks	PM	0.2	0.6

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SN	Description	Pollutant	lb/hr	tpy
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 may 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 A.C.A. §8-4-304 and §8-4-311]

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 shall 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. [Regulation 18, §18.801 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

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5. The permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants to become airborne. [Regulation 18, §18.901 and A.C.A. §8-4-203 as referenced by A.C.A. §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_x at the facility per consecutive 12-month period. NO_x emissions from the facility will be limited to the combustion of natural gas plant-wide (PW-05) and process NO_x 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_x generated emissions. Natural gas combustion NO_x emissions will be calculated using an emissions factor of 100 lb NO_x per 10⁶ 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_x emissions from the combustion of natural gas and the process generated NO_x 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_x 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_x have not been exceeded. [A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

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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 $0.11 \times \text{TLV}$ in $\text{mg/m}^3 \times 24 \text{ hrs.}$ [§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]

SN-B-15 Conditions

18. The permittee shall conduct initial performance testing for NO_x 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]
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.

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 shall 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. [Regulation 19, §19.704 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. [Regulation 19, §19.410(B) and/or Regulation 18, §18.309(B) 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. [Regulation 19, §19.705 and/or Regulation 18, §18.1004 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. [Regulation 19, §19.705 and/or Regulation 18, §18.1004 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]

Arkansas Department of Environmental Quality
Air Division
ATTN: Compliance Inspector Supervisor

Porocel Corporation
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5301 Northshore Drive
North Little Rock, AR 72118-5317

7. The permittee shall 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. [Regulation 19, §19.702 and/or Regulation 18, §18.1002 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
8. The permittee shall provide: [Regulation 19, §19.702 and/or Regulation 18, §18.1002 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; and
 - d. Utilities for sampling and testing equipment
9. The permittee shall operate equipment, control apparatus and emission monitoring equipment within their design limitations. The permittee shall maintain in good condition at all times equipment, control apparatus and emission monitoring equipment. [Regulation 19, §19.303 and/or Regulation 18, §18.1104 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: [Regulation 19, §19.601 and/or Regulation 18, §18.1101 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; and
 - 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. [Regulation 19, §19.410(A) and/or Regulation 18, §18.309(A) 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. [Regulation 19, §19.407(B) and/or Regulation 18, §18.307(B) and 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]

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16. This permit authorizes only those pollutant emitting activities addressed herein. [A.C.A. §8-4-203 as referenced by A.C.A. §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 A.C.A. §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)]
19. The permittee may request in writing and at least 15 days in advance of the deadline, an extension to any testing, compliance or other dates in this permit. No such extensions are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion in the following circumstances:
 - a. Such an extension does not violate a federal requirement;
 - b. The permittee demonstrates the need for the extension; and
 - c. The permittee documents that all reasonable measures have been taken to meet the current deadline and documents reasons it cannot be met.

[Regulation 18, §18.102(C-D), Regulation 19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and CFR Part 52, Subpart E]

20. The permittee may request in writing and at least 30 days in advance, temporary emissions and/or testing that would otherwise exceed an emission rate, throughput requirement, or other limit in this permit. No such activities are authorized until the permittee receives written Department approval. Any such emissions shall be included in the facilities total emissions and reported as such. The Department may grant such a request, at its discretion under the following conditions:
 - a. Such a request does not violate a federal requirement;
 - b. Such a request is temporary in nature;
 - c. Such a request will not result in a condition of air pollution;
 - d. The request contains such information necessary for the Department to evaluate the request, including but not limited to, quantification of such emissions and the date/time such emission will occur;
 - e. Such a request will result in increased emissions less than five tons of any individual criteria pollutant, one ton of any single HAP and 2.5 tons of total HAPs; and
 - f. The permittee maintains records of the dates and results of such temporary emissions/testing.

[Regulation 18, §18.102(C-D), Regulation 19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and CFR Part 52, Subpart E]

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21. The permittee may request in writing and at least 30 days in advance, an alternative to the specified monitoring in this permit. No such alternatives are authorized until the permittee receives written Department approval. The Department may grant such a request, at its discretion under the following conditions:
 - a. The request does not violate a federal requirement;
 - b. The request provides an equivalent or greater degree of actual monitoring to the current requirements; and
 - c. Any such request, if approved, is incorporated in the next permit modification application by the permittee.

[Regulation 18, §18.102(C-D), Regulation 19, §19.103(D), A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and CFR Part 52, Subpart E]

APPENDIX A

40 CFR Part 60 Subpart UUU

Standards of Performance for Calciners and Dryers in Mineral Industries

§ 60.725

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 65 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.

§ 60.726 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]

40 CFR Ch. I (7-1-07 Edition)

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

Environmental Protection Agency

§ 60.734

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

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.

(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.

Subpart VVV—Standards of Performance for Polymeric Coating of Supporting Substrates Facilities

SOURCE: 54 FR 37551, Sept. 11, 1989, unless otherwise noted.

§ 60.740 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each coating operation and any onsite coating mix preparation equipment used to prepare coatings for the polymeric coating of supporting substrates.

(b) Any affected facility for which the amount of VOC used is less than 95 Mg per 12-month period is subject only to the requirements of §§ 60.744(b), 60.747(b), and 60.747(c). If the amount of VOC used is 95 Mg or greater per 12-month period, the facility is subject to all the requirements of this subpart. Once a facility has become subject to the requirements of this subpart, it will remain subject to those requirements regardless of changes in annual VOC use.

(c) This subpart applies to any affected facility for which construction, modification, or reconstruction begins after April 30, 1987, except for the facilities specified in paragraph (d) of this section.

(d) This subpart does not apply to the following:

(1) Coating mix preparation equipment used to manufacture coatings at one plant for shipment to another plant for use in an affected facility (coating operation) or for sale to another company for use in an affected facility (coating operation);

(2) Coating mix preparation equipment or coating operations during those times they are used to prepare or apply waterborne coatings so long as the VOC content of the coating does not exceed 9 percent by weight of the volatile fraction;

(3) Web coating operations that print an image on the surface of the substrate or any coating applied on the same printing line that applies the image.

§ 60.741 Definitions, symbols, and cross-reference tables.

(a) All terms used in this subpart not defined below have the meaning given to them in the Act and in subpart A of this part.

Coating applicator means any apparatus used to apply a coating to a continuous substrate.

Coating mix preparation equipment means all mixing vessels in which solvent and other materials are blended to prepare polymeric coatings.

Coating operation means any coating applicator(s), flashoff area(s), and drying oven(s) located between a substrate unwind station and a rewind station that coats a continuous web to produce a substrate with a polymeric coating. Should the coating process not employ a rewind station, the end of the coating operation is after the last drying oven in the process.

Common emission control device means a device controlling emissions from an affected coating operation as well as from any other emission source.

Concurrent means the period of time in which construction of an emission control device serving an affected facility is commenced or completed, beginning 6 months prior to the date that construction of the affected facility commences and ending 2 years after the date that construction of the affected facility is completed.

Control device means any apparatus that reduces the quantity of a pollutant emitted to the air.

Cover means, with respect to coating mix preparation equipment, a device that fits over the equipment opening to prevent emissions of volatile organic compounds (VOC) from escaping.

Drying oven means a chamber within which heat is used to dry a surface coating; drying may be the only process or one of multiple processes performed in the chamber.

Equivalent diameter means four times the area of an opening divided by its perimeter.

Flashoff area means the portion of a coating operation between the coating applicator and the drying oven where VOC begins to evaporate from the coated substrate.

Natural draft opening means any opening in a room, building, or total

CERTIFICATE OF SERVICE

I, Pam Owen, 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

28th day of August 2008.

Pam Owen

Pam Owen, AAIL, Air Division

STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0635-AR-10 AFIN: 60-00004

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, Arkansas 72118-5317

2. APPLICANT:

Porocel Corporation
10300 Arch Street Pike
Little Rock, Arkansas 72206

3. PERMIT WRITER:

Joseph Hurt

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Clay and Alumina Ore Processing
NAICS Code: 333131, 327992

5. SUBMITTALS:

7/1/2008

6. REVIEWER'S NOTES:

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 requested permission to perform a trial run at the 60" Calciner # 3 (SN-A-14) on a new, nickel based material. The total potential emissions include an additional 1.5 tpy of NO_x. However, with this permitting action there are no changes in the total permitted emissions.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

There are currently no enforcement issues or actions against the facility at this time. However, the facility has yet to complete the initial performance test for the scrubber SN-B-15, as required by Specific Conditions 18 and 19 in Permit # 0635-AR-9 that was issued on September 20, 2007.

8. PSD APPLICABILITY:

a. Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

b. Is the facility categorized as a major source for PSD? N
Single pollutant ≥ 100 tpy and on the list of 28 or single pollutant ≥ 250 tpy and not on list?

If yes, explain why this permit modification not PSD?

9. SOURCE AND POLLUTANT SPECIFIC REGULATORY APPLICABILITY:

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
PW-04, B-02, B-11, B-15, A-07, A-10, A-13, A-14, A-17 and A-26	PM	NSPS Subpart UUU

10. EMISSION CHANGES AND FEE CALCULATION:

See emission change and fee calculation spreadsheet in Appendix A.

11. MODELING:

Criteria Pollutants

Examination of the source type, location, plot plan, land use, emission parameters, and other available information indicate that modeling is not warranted at this time.

Non-Criteria Pollutants:

No specific HAPS are reported in the application. Stack test report submitted on 2-29-00 had less than 0.002 lb/hr of nickel (as metal) as the maximum rate. Specific Condition #9 limits total HAP hourly emission rates based on the TLV of the solvent/additive. HAPs will vary with custom products manufactured.

12. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
PW-01, B-04	AP-42 13.2.4	0.003/0.002 lb/ton	None		PM/PM ₁₀
PW-02, B-18	AP-42 11.19.2	1.6E-05 lb/ton	None		PM/PM ₁₀
PW-03	AP-42 11.24-1,2	0.02/0.009 lb/ton	None		PM/PM ₁₀
PW-04	AP-42 11.24-1, 2	19.7/12.0 lb/ton	Baghouse	99%	PM/PM ₁₀
B-01, A-11, A-18	AP-42 11.24-2	2.4/0.31 lb/ton	Baghouse	99%	PM/PM ₁₀
B-02, B-11, B-15, A-07, A-10, A-14, A-17, A-26	AP-42 11.24-2	19.7/12.0 lb/ton	Baghouse	99%	PM/PM ₁₀
B-03, B-06, B-08, B-10, B-12, B-17, B-20, B-21, A-01, A-06, A-08, A-09, A-15, A-19, A-20, A-22, A-23, A-25, A-26, A-28, A-29, A-30, and A-32	AP-42 11.24-1,2	1.1 lb/ton	Baghouse or Cartridge collector	99%	PM=PM ₁₀
B-19, A-09, A-12, and A-31	AP-42 13.2.4	0.009/0.004 lb/ton	Fugitive		PM/PM ₁₀
B-05	AP-42 11.24-1,2	0.55 lb/ton	Enclosure	90%	PM=PM ₁₀
B-09, A-02, A-03, A-04, A-05, B-07, A-24	AP-42 11.24-1,2	1.2 lb/ton	Baghouse	99%	PM=PM ₁₀
B-02, B-11, B-15, A-07, A-10, A-13, A-14, A-17, A-26, A-28 and PW-04	AP-42 Tables 1.4-1/2	lbs/MMSCF: 100 lb NO _x 84 lb CO 5.5 lb VOC 7.6 lb PM ₁₀	Tri-Mer Scrubber	98.7%	NO _x emissions only controlled at B-15
B-14, B-16	AP-42 11.24-1,2	0.01/0.04 lb/ton	Baghouse		PM/PM ₁₀
A-11, A-18	AP-42 11.24-2	2.4/0.31 lb/ton	Baghouse		PM/PM ₁₀

13. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
A-13	PM	5	Initial	40 CFR 60 Subpart UUU – 60.736
A-10	PM	5	Initial	40 CFR 60 Subpart UUU – 60.736
A-14	NO _x	7E	Every 5 Years	§19.702 and 40 CFR Part 52, Subpart E
A-17	PM	5	Initial	40 CFR 60 Subpart UUU – 60.736
B-15	NO _x	7E	Initial	§19.702 and 40 CFR Part 52, Subpart E

14. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
N/A				

15. RECORDKEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
All sources	Weekly throughputs of products and 12 month cumulative total.	100,000 tons/year of nonmetallic minerals	Monthly	No
	Monthly natural gas usage and 12 month cumulative total.	680 MMSCF/year of natural gas	Monthly	No
A-14	HAP containing materials used in specified processes and the percentages of	lbs/hour ◀ PAIL 9.5 tpy	Daily	No

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
	those HAPs in substances used for production. Monthly HAP-free material (MEA) usage and 12 month cumulative total.	300 tons/year of HAP-free material (MEA)	Monthly	No
B-15	Scrubber Operating Pressure Scrubber Recirculation Rate Scrubber's caustic column pH	8 – 11" w.g. 180 – 220 gpm To be determined	Daily	No
All sources	NOx emissions from combustion from natural gas and the use of activated hydrate.	99.0 tons/year	Monthly	No

16. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
All Sources except for PW-02 and PW-03	5%	Bag filters should not have visible emissions. Other sources are estimated to have very low emission rates.	Inspection
PW-02 and PW-03	10%	Opacity limit based on previously allowed opacity limit	Inspection

17. DELETED CONDITIONS:

Former SC	Justification for removal
	N/A

18. GROUP A INSIGNIFICANT ACTIVITIES

Source Name	Group A Category	Emissions (tpy)						
		PM/PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
R&D burner & Activator	A-5	No new insignificant activities were added with this permit modification. Total emissions will be evaluated the next time the Insignificant Activities List is updated.						
INCINI-Cone Afterburner	A-1							
Feed Blender	A-13							

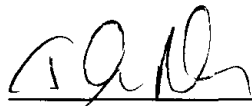
19. VOIDED, SUPERSEDED, OR SUBSUMED PERMITS:

List all active permits voided/superseded/subsumed by the issuance of this permit.

Permit #
0635-AR-9

20. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.



 Thomas Rheume, P.E.

APPENDIX A – EMISSION CHANGES AND FEE CALCULATION

Fee Calculation for Minor Source

Facility Name: Porocel Corporation
 Permit Number: 0635-AR-10
 AFIN: 60-00004

\$/ton factor 20.96
 Minimum Fee \$ 400
 Minimum Initial Fee \$ 500

Check if Administrative Amendment

Permit Predominant Air Contaminant
 Net Chargeable Emission Increase
 Permit Modification Fee \$
 Initial Permit Fee \$
 Annual TPY Chargeable Emissions

Old Permit	New Permit
400	
0	
121.3	

Pollutant (tpy)	Old Permit	New Permit	Change
PM	121.3	121.3	0
PM ₁₀	81.2	81.2	0
SO ₂	1.2	1.2	0
VOC	15.1	15.1	0
CO	23.2	23.2	0
NO _x	99	99	0
Total HAP	9.5	9.5	0