

# ADEQ

ARKANSAS  
Department of Environmental Quality

January 3, 2013

Gerald Ashford  
Plant Manager  
Porocel Industries, LLC  
10300 Arch Street Pike  
Little Rock, AR 72206


Dear Mr. Ashford:

The enclosed Permit No. 0635-AR-13 is your authority to construct, operate, and maintain the equipment and/or control apparatus as set forth in your application initially received on 9/10/2012.

After considering the facts and requirements of A.C.A. §8-4-101 et seq., and implementing regulations, I have determined that Permit No. 0635-AR-13 for the construction, operation and maintenance of an air pollution control system for Porocel Industries, LLC to be issued and effective on the date specified in the permit, unless a Commission review has been properly requested under Arkansas Department of Pollution Control & Ecology Commission's Administrative Procedures, Regulation 8, within thirty (30) days after service of this decision.

The applicant or permittee and any other person submitting public comments on the record may request an adjudicatory hearing and Commission review of the final permitting decisions as provided under Chapter Six of Regulation No. 8, Administrative Procedures, Arkansas Pollution Control and Ecology Commission. Such a request shall be in the form and manner required by Regulation 8.603, including filing a written Request for Hearing with the APC&E Commission Secretary at 101 E. Capitol Ave., Suite 205, Little Rock, Arkansas 72201. If you have any questions about filing the request, please call the Commission at 501-682-7890.

Sincerely,



Mike Bates  
Chief, Air Division

Enclosure

# ADEQ MINOR SOURCE AIR PERMIT


Permit No. : 0635-AR-13

IS ISSUED TO:

Porocel Industries, LLC  
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

January 3, 2013  
Date

Porocel Industries, LLC  
Permit #: 0635-AR-13  
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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 <sub>x</sub>	Nitrogen Oxide
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter Smaller Than Ten Microns
SO <sub>2</sub>	Sulfur Dioxide
Tpy	Tons Per Year
UTM	Universal Transverse Mercator
VOC	Volatile Organic Compound

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Section I: FACILITY INFORMATION

PERMITTEE: Porocel Industries, LLC

AFIN: 60-00004

PERMIT NUMBER: 0635-AR-13

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: Derrick Brown

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, Pulaski County, Arkansas which processes various nonmetallic minerals and product materials. This modification allows the installation of an additional activator, Activator #4 (SN-44), and additional tub for producing spheres, Tub #5 (SN-B22), rename source A-19 to FCA #5 Tank (from Tub #4 Feed Tanks), and install two additional storage bins (A-45 and A-46) for storing alumina trihydrate. This modification would potentially increase facility emissions by 10.2 tons of PM, 6.8 tons of PM<sub>10</sub>, 0.1 tons of SO<sub>2</sub>, 0.1 tons of VOC, 1.9 tons of CO and 2.2 tons of NO<sub>x</sub>.

### Process Description

Mineral product processing involves a variety of changing complexities during production. The following paragraphs detail each of the existing and proposed processes for Porocel's Little Rock, Arkansas facility.

#### **#1 Kiln Process**

The first emission source to discuss is the ore storage shed (PW-01). The 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 dump hopper (PW-02), processed through a precrusher (PW-03) and then pre-screened before entering into Direct Fired Rotary Kiln #1 (PW-04), which is controlled by a baghouse (B-02). Upon exiting Kiln #1, 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 the product. Kiln #1 is exhausted through a baghouse (PW-04). The drag conveyor, elevator and final screening are all controlled by a dedicated dust collector (PW-06) for the crushing and screening operations. The collected fines from this baghouse will be loaded into bags and sold as product.

#### **#2 Kiln Process**

This process begins by emptying feed bags into the feed hopper. 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 right specification, it is conveyed to an elevator and screen for final product or crush and screen for final product. Kiln #2, along with the feed system, are controlled by a baghouse (B-02). The crushing and screening of product exiting Kiln #2 is controlled by a baghouse (B-02A).

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Porocel wishes to maintain the simplified recordkeeping and emissions tracking by bubbling all loadout locations in the facility under one source number (B-05).

### **Extrusion Line Process**

Base powder material will come by railcars and super sacks. Material will be offloaded at a rail unloading station (B-18) and conveyed into No. 6 Bin or No. 7 Bin 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. 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 fill the surge bin (B-14) and feed into Calciner #3 (B-15). The material is then calcined to client specifications. Particulate emissions from Calciner #3 are controlled by a Tri-Mer UTF/UltraCat catalytic scrubber and dust collector (B-15). The exhaust emissions from the clean air side of the unit are discharged into a Tri-Mer NOx scrubber or to atmosphere, depending upon the type of material being processed.

The extrudates will discharge out of Calciner #3 into a cooling tube before taking the material to a bucket elevator and screening. Fines from the cooling tube are collected and bagged in super sacks (A-34). The extrudates continue with countercurrent airflow through the cooling tube and Calciner #3. After screening the material, it will be packaged in super sacks.

Alternately, if powdered materials are being processed, the material exits the calciner into a screw conveyor to be either screened directly or conveyed via vacuum line to a product filter/receiver to be screened and packaged.

### **Regrind / Blend Phase I & Regrind / Blend Phase II**

The regrind operations are used for the crushing, grinding and blending of catalyst blends. This operation also handles toll / specialty processing which can involve the handling of HAP containing materials such as nickel compounds and arsenic compounds.

The regrind operations begin with super sacks being emptied into the bulk bag unloader which has an exhaust fan (A-38). From here flow can be diverted to ACM Mill #5 or ACM Mill #6.

ACM Mill #5 is used to mill aluminum trihydrate and toll processing materials. Toll processing materials are conveyed from the unloader into the #5 ACM Mill Feed Bin (Tank #1) with a bin vent (B-20). Material is drawn down to feed ACM Mill #5. The mill, product collector and Phase I Blend Tank #1 (Old 27 Bin) are controlled by a baghouse (B-10). Material can then be drawn down from the Phase I Blend Tank #1 and transferred to the Bag-Out Tank or Phase II Blended Staging Tanks (A, B, C, or D).

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ACM Mill #6 is used to mill aluminum trihydrate and toll processing materials. Toll processing materials are conveyed from the unloader into the #6 ACM Mill Feed Bin (Tank #2) with a bin vent (B-08). Material is drawn down to feed ACM Mill #6. The mill, product collector and Phase I Blend Tank #2 (Old 28 Bin) are controlled by a baghouse (B-07). Material can then be drawn down from the Phase I Blend Tank #2 and transferred to the Bag-Out Tank or Phase II Blended Staging Tanks (A, B, C, or D).

The Phase I Swing Tank, controlled by a bin vent (B-17), receives feed from the Loadout Tank (A-37) or the Phase I Blend Tanks (B-10 or B-07). Material drawn down from this tank can be routed to the Loadout Tank (A-37) or the Phase I Blend Tanks for rework.

As mentioned previously, the Phase I Blend Tanks can forward material to the Phase II Blend Tanks. There are four (4) tanks designated as A, B, C and D. Each of the Phase II Blend Tanks is equipped with a bin vent filter (B-12). The Phase II Blend Tanks feed Master Blend Tank #1 (Old #4 Bin). The Master Blend Tanks is controlled by a bin vent (B-12). Final product is drawn down from this tanks for shipment by truck or railcar.

### **Activated Alumina Plant**

Hydrate enters the A-plant via a pneumatic transfer line at the railcar unloading system (A-29). The transfer line discharges into the unground hydrate storage tanks controlled by bin vents (A-45 and A-46). Hydrate is pneumatically conveyed from these storage tanks to feed tanks for ACM #1, #2, #3 and #4 (UGSB) which are controlled by baghouses (A-01 and A-25).

The hydrate is then fed to the four (4) ACM Mills (A-02, A-03, A-24 and A-42). Each of these mills is controlled by a baghouse. Powder from ACM Mills #2 and #3 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 2 and 3 that are controlled with a bin vent (A-32) or FCA 1 and 4 that are controlled with a bin vent (A-05).

Powder from ACM Mill #1 (A-24) and #4 (A-42) is feed to the Flash Calciner #2 feed tank, equipped with a bin vent filter (A-43). From this feed tank the milled hydrate is metered into Flash Calciner #2. Particulate emissions from the calciner are controlled by a baghouse (A-36). The calciner is used to convert the hydrate to aluminum oxide and is conveyed to storage bin FCA 5 that is also controlled by the calciner baghouse (A-36). Materials may also be sent to another FCA storage tank controlled by bin vent (A-19) for special handling operations, such as bagging, etc.

From 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. Tub #1, Tub #2 and Tub #3 are controlled by filter receivers (A-11, A-08 and A-15, respectively). 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



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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 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 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.

The Tub #1 system has another step that takes place after the cure belt discharges the material. Material enters 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.

Emissions from Activator #1 (A-10), Activator #2 (A-17), Activator #3 (A-13) and Activator #4 (A-44) 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 and loading operations are controlled by a baghouse.

One special type of processing that takes place at the facility is impregnation and toll calcining. This process involves the mixing of catalyst carrier materials, typically alumina based, with liquid solutions of varying compositions and concentrations. These compositions depend on customer specifications and may include hazardous air pollutants (HAPs) and are mixed in a mix tank that is vented to a liquid scrubber system. 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, similar in nature to a washing machine. The materials are then caught in a super sack. If necessary, the material could be routed directly into the 60" Indirect Calciner (A-14) where most of the toll processing is done. The 60" Indirect Calciner is also equipped with an afterburner for certain tolling runs that require burn off.

It should be noted that materials in the Munson 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 Feed Blender (A-31) 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 the Tub #4 feed tank (B-21). The feed tank is drawn down to feed Tub #4 (B-21) to make spheres. Final spheres exiting Tub #4 are also bagged.

In addition to these operations, a bulk powdered catalyst packing unit is used to load oversea shipping containers with materials. This process uses pneumatic conveying to load powders into lined containers and is controlled by a dust collector unit (A-30).

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**Specialty Calcination / Toll Processing**

Toll processing, specifically the specialty calcinations process, begins with the feeding of material from super sacks into the volumetric feeder. Material from the feeder and liquid nitrogen are fed into the 60” Indirect Calciner (A-14). Emissions from the feed are controlled by a dust collector (A-22). As mentioned previously, the 60” Indirect Calciner is also equipped with an afterburner for certain tolling runs that require the burn off of volatile organic compounds. In addition, ductwork can be connected to direct any NO<sub>x</sub> containing emissions to the Tri-NO<sub>x</sub> scrubber (B-15). Powdered products exiting the calciner are collected via a vacuum receiver (A-20) and screened prior to packaging in super sacks.

**Extrusion Pilot Plant**

Since Porocel specializes in various catalyst needs, it has been determined that a large scale pilot plant is necessary to perform test runs on larger batch sizes to determine the feasibility of full scale production. The proposed pilot plant would have a feed system that would first feed a natural gas-fired dryer (A-39). The dryer would have an accompanying dust collector (A-39). Material exiting the dryer could be further calcined using an 18” Indirect Calciner (A-40). It is anticipated that some pilot studies could generate nitrogen oxide emissions. For that reason, the exhaust from the 18” Indirect Calciner will be able to be ducted to the Tri-Mer scrubber (B-15). Final product from the pilot plant would be screened/and or bagged in super sacks.

**Plant Housekeeping**

Housekeeping is done throughout the entire facility with the use of a portable vacuum cleaner (B-03) and a vacuum system that is located in the activated alumina plant (B-16). An additional vacuum system is proposed for the Specialty Calcination operation (A-33) and the catalyst impregnation area.

Regulations

The following table contains the regulations applicable to this permit.

Regulations
Arkansas Air Pollution Control Code, Regulation 18, effective June 18, 2010
Regulations of the Arkansas Plan of Implementation for Air Pollution Control, Regulation 19, effective July 9, 2012
40 CFR Part 60 Subpart UUU- <i>Standards of Performance for Calciners and Dryers in Mineral Industries</i>

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### 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	19.3	67.4
PM <sub>10</sub>	15.8	48.1
SO <sub>2</sub>	1.6	1.6
VOC	41.5	16.3
CO	8.5	33.8
NO <sub>x</sub>	51.9	99.0
Ni	0.12	0.3
As	0.09	0.09
Total HAP	10.21	9.89

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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.

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<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.

Air Permit #0635-AR-10 was issued August 28, 2008. This permit action requested permission to perform a trial run at the 60" Calciner #3 (SN-A-14) on a new, nickel based material. No new conditions were added with this revision. The General Conditions were updated. The total potential emissions include an additional 1.5 tpy of NO<sub>x</sub>. However, with this permitting action there are no changes in the total permitted emissions.

Air permit #0635-AR-11 was issued June 6, 2012. This modification updated the nomenclature of operating equipment and processes, emission estimates and throughputs for Activators #1, #2

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and #3. This action also permitted the construction and operation of a Pilot Plant and removal of sources SN-B09, SN-A04 and SN-A27. The pH range was also set for SN-B15.

Air Permit #0635-AR-12 was issued November 8, 2012. This permit action allowed the installation of a dry scrubber to replace a fabric filter for additional control at SN-B15 Calciner #3. The scrubber is 90% efficient for NO<sub>x</sub> and 99% efficient for PM<sub>10</sub>.

Section IV: EMISSION UNIT INFORMATION

Specific Conditions

1. 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 <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>	0.1	0.1
PW-04	Kiln #1 (6.0 MMBtu/hr)	PM <sub>10</sub>	0.3	1.0
		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
PW-06	#1 Kiln Crusher Dust Collector	PM <sub>10</sub>	0.1	0.1
B-01	Receiver Tank	PM <sub>10</sub>	0.1	0.2
B-02	Calciner # 2 (6.0 MMBtu/hr)	PM <sub>10</sub>	0.3	1.0
		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-02A	Crusher Dust Collector	PM <sub>10</sub>	0.1	0.1
B-03	Portable Vacuum	PM <sub>10</sub>	0.1	0.1
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>	0.3	0.6
B-07	Elliott Mill # 2 / E-2 Tank	PM <sub>10</sub>	0.1	0.3
B-08	# 2 Tank	PM <sub>10</sub>	0.1	0.1
B-09	Elliott Mill # 3	Deleted		
B-10	Elliott Mill # 4 / E-1 Tank	PM <sub>10</sub>	0.1	0.3

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SN	Description	Pollutant	lb/hr	tpy
B-11	Flash Calciner # 2 (10.0 MMBtu/hr)	PM <sub>10</sub>	0.4	1.5
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.3
		CO	0.9	3.7
		NO <sub>x</sub>	1.0	*
B-12	#4 and #5 Tanks	PM <sub>10</sub>	0.1	0.1
B-13	Pellet Forming	Deleted		
B-14	Kiln # 3 Feed Hopper	PM <sub>10</sub>	0.1	0.1
B-15	Calciner # 3 with Tri-Mer Dry and Wet Scrubber (6.0 MMBtu/hr)	PM <sub>10</sub>	0.3	0.9
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.2
		CO	0.6	2.5
		NO <sub>x</sub>	44.0	64.8
B-16	Plant Vacuum System	PM <sub>10</sub>	0.1	0.1
B-17	Tub # 5 (Baghouse and Bin Vent)	PM <sub>10</sub>	0.1	0.1
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	0.1
B-20	# 1 Tank	PM <sub>10</sub>	0.1	0.1
B-21	Tub # 4	PM <sub>10</sub>	0.1	0.1
B-22	Tub No. 5 System	PM <sub>10</sub>	0.1	0.1
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>	0.1	0.2
A-03	ACM Mill # 3	PM <sub>10</sub>	0.1	0.2
A-04	Mill Tanks	Deleted		
A-05	FCA # 4 (Bin Vent)	PM <sub>10</sub>	0.1	0.3
A-06	Flash Calciner # 1 Feed Tank	PM <sub>10</sub>	0.3	0.3
A-07	Flash Calciner # 1 (10.0 MMBtu/hr)	PM <sub>10</sub>	0.7	3.1
		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 #2 Receiver	PM <sub>10</sub>	0.1	0.3



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SN	Description	Pollutant	lb/hr	tpy
A-09	Tub #1 Dust Collector	PM <sub>10</sub>	0.1	0.2
A-10	Activator # 1 (4.0 MMBtu/hr)	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	1.3 0.1 0.1 0.4 0.4	5.5 0.1 0.1 1.5 *
A-11	Tub #1 Receiver	PM <sub>10</sub>	0.1	0.3
A-12	Munson Mixer	PM <sub>10</sub>	0.1	0.1
A-13	Activator # 3 (4.5 MMBtu/hr)	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	1.3 0.1 0.1 0.4 0.5	5.5 0.1 0.1 1.7 *
A-14	Calciner # 3 60", (15.0 MMBtu/hr)	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.4 0.1 40.0 <sup>1</sup> 1.3 1.5	1.1 0.1 13.8 <sup>1</sup> 5.6 *
A-15	Tub #3 Receiver	PM <sub>10</sub>	0.1	0.3
A-16	Reserved			
A-17	Activator # 2 (4.0 MMBtu/hr)	PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	1.3 0.1 0.1 0.4 0.4	5.5 0.1 0.1 1.5 *
A-18	Activator Screening and Product Tanks	PM <sub>10</sub>	0.1	0.1
A-19	Tub #4 Feed Tanks	PM <sub>10</sub>	0.1	0.1
A-20	Calciner # 4 Feed Tanks	PM <sub>10</sub>	0.1	0.1
A-21	Feed Blender	Closed System		
A-22	ACM Mill 30 60" Calciner	PM <sub>10</sub>	0.2	0.8
A-23	ACM Mill 30 Forming	PM <sub>10</sub>	0.1	0.1
A-24	ACM # 1 Mill & Baghouse	PM <sub>10</sub>	0.1	0.2
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> SO <sub>2</sub>	0.1 0.1	0.2 0.1

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SN	Description	Pollutant	lb/hr	tpy
		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	Never Installed		
A-28	Cure Drum 0.3 MMBtu/hr	PM <sub>10</sub>	0.2	0.2
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.1
		NO <sub>x</sub>	0.1	*
A-29	Railcar Unloading Station	PM <sub>10</sub>	0.2	0.6
A-30	Container & Truck Unloading Station	PM <sub>10</sub>	0.1	0.1
A-31	Mixer & Screening Operation	PM <sub>10</sub>	0.1	0.1
A-32	FCA Tanks 1-3	PM <sub>10</sub>	0.1	0.3
A-33	60" Indirect Calciner Portable Vacuum	PM <sub>10</sub>	0.1	0.1
A-34	Calciner #3 Bulk Fines	PM <sub>10</sub>	0.1	0.1
A-35	Calciner #3 Nuisance Dust Collector	PM <sub>10</sub>	0.1	0.1
A-36	Flash Calciner #2	PM <sub>10</sub>	0.4	1.8
		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-37	Regrind Loadout Tank	PM <sub>10</sub>	0.1	0.1
A-38	Regrind Bulk Bag Unloader	PM <sub>10</sub>	0.1	0.1
A-39	Pilot Plant Dryer & Dust Collector	PM <sub>10</sub>	0.3	0.7
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.1	0.4
		NO <sub>x</sub>	0.1	*
A-40	18" Indirect Calciner	PM <sub>10</sub>	0.1	0.1
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1
		CO	0.3	1.0
		NO <sub>x</sub>	0.3	*
A-41	Bed Support Dryer & Dust Collector	PM <sub>10</sub>	0.3	0.7
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.1

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SN	Description	Pollutant	lb/hr	tpy
		CO	0.1	0.4
		NO <sub>x</sub>	0.1	*
A-42	ACM #4 Mill & Baghouse	PM <sub>10</sub>	0.1	0.2
A-43	Flash Calciner #2 Feed Tank	PM <sub>10</sub>	0.1	0.2
A-44	Activator #4	PM <sub>10</sub>	1.3	5.5
		SO <sub>2</sub>	0.1	0.1
		VOC	0.1	0.2
		CO	0.5	1.9
		NO <sub>x</sub>	0.5	*
A-45	Bin #5	PM <sub>10</sub>	0.2	0.6
A-46	Master Hydrate Storage Tank	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>.

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	0.1	0.2
PW-04	Kiln #1 (6.0 MMBtu/hr)	PM	0.4	1.5
PW-06	#1 Kiln Crusher Dust Collector	PM	0.1	0.1
B-01	Receiver Tank	PM	0.1	0.2
B-02	Calciner # 2 (6.0 MMBtu/hr)	PM	0.4	1.5
B-02A	Crusher Dust Collector	PM	0.1	0.1
B-03	Portable Vacuum	PM	0.1	0.1
B-04	Fine Piles	Deleted		
B-05	Shipping/Loading	PM	0.8	2.8
B-06	# 6 and # 7 Tanks	PM	0.3	0.6

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SN	Description	Pollutant	lb/hr	tpy
B-07	Elliott Mill # 2 / E-2 Tank	PM	0.1	0.3
		Ni	0.01	0.02
		As	0.01	0.01
B-08	# 2 Tank	PM	0.1	0.1
		Ni	0.01	0.01
		As	0.01	0.01
B-09	Elliott Mill # 3	Deleted		
B-10	Elliott Mill # 4 / E-1 Tank	PM	0.1	0.3
		Ni	0.01	0.02
		As	0.01	0.01
B-11	Flash Calciner # 2 (10.0 MMBtu/hr)	PM	0.5	2.2
		Ni	0.04	0.2
		As	0.01	0.01
B-12	#4 and #5 Tanks	PM	0.1	0.1
		Ni	0.01	0.01
		As	0.01	0.01
B-13	Pellet Forming	Deleted		
B-14	Kiln # 3 Feed Hopper	PM	0.1	0.1
B-15	Calciner # 3 with Tri-Mer Dry Scrubber and Wet Scrubber (6.0 MMBtu/hr)	PM	0.3	1.2
B-16	Plant Vacuum System	PM	0.1	0.1
B-17	Tub # 5 (Baghouse and Bin Vent)	PM	0.1	0.1
		Ni	0.01	0.01
		As	0.01	0.01
B-18	Rail Unloading for Powder	PM	0.1	0.1
B-19	Powder Conveying System	PM	0.1	0.2
B-20	# 1 Tank	PM	0.1	0.1
		Ni	0.01	0.01
		As	0.01	0.01
B-21	Tub # 4	PM	0.1	0.1
B-22	Tub No. 5 System	PM	0.1	0.1
A-01	ACM Feed Tanks (# 2 and # 3 Baghouse)	PM	0.2	0.6
A-02	ACM Mill # 2	PM	0.1	0.2
A-03	ACM Mill # 3	PM	0.1	0.2

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SN	Description	Pollutant	lb/hr	tpy
A-04	Mill Tanks	Deleted		
A-05	FCA # 4 (Bin Vent)	PM	0.1	0.3
A-06	Flash Calciner # 1 Feed Tank	PM	0.1	0.3
A-07	Flash Calciner # 1 (10.0 MMBtu/hr)	PM	1.1	4.8
A-08	Tub #2 Receiver	PM	0.1	0.3
A-09	Tub #1 Dust Collector	PM	0.1	0.5
A-10	Activator # 1 (4.0 MMBtu/hr)	PM	2.1	8.9
A-11	Tub #1 Receiver	PM	0.1	0.3
A-12	Munson Mixer	PM	0.1	0.1
A-13	Activator # 3 (4.5 MMBtu/hr)	PM	2.1	8.9
A-14	Calciner # 3 60", (15.0 MMBtu/hr)	PM HAP	0.4 10.0*	1.4 9.5*
A-15	Tub #3 Receiver	PM	0.1	0.3
A-16	Reserved			
A-17	Activator # 2 (4.0 MMBtu/hr)	PM	2.1	8.9
A-18	Activator Screening and Product Tanks	PM	0.1	0.5
A-19	Tub #4 Feed Tanks	PM	0.1	0.1
A-20	Calciner # 4 Feed Tanks	PM	0.1	0.1
A-21	Feed Blender	Closed System		
A-22	ACM Mill 30 60" Calciner	PM	0.3	1.3
A-23	ACM Mill 30 Forming	PM	0.1	0.1
A-24	ACM # 1 Mill & Baghouse	PM	0.1	0.2
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	Never Installed		

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SN	Description	Pollutant	lb/hr	tpy
A-28	Cure Drum 0.3 MMBtu/hr	PM	0.2	0.4
A-29	Railcar Unloading Station	PM	0.2	0.6
A-30	Container & Truck Unloading Station	PM	0.1	0.1
A-31	Mixer & Screening Operation	PM	0.1	0.1
A-32	FCA Tanks 1-3	PM	0.1	0.3
A-33	60" Indirect Calciner Portable Vacuum	PM	0.1	0.1
A-34	Calciner #3 Bulk Fines	PM	0.1	0.1
A-35	Calciner #3 Nuisance Dust Collector	PM	0.1	0.1
A-36	Flash Calciner #2	PM	0.6	2.6
A-37	Regrind Loadout Tank	PM Ni Com.* Arsenic Com.*	0.1 0.01* 0.01*	0.1 0.01* 0.01*
A-38	Regrind Bulk Bag Unloader	PM Ni Com.* Arsenic Com.*	0.1 0.01* 0.01*	0.1 0.01* 0.01*
A-39	Pilot Plant Dryer & Dust Collector	PM	0.3	1.0
A-40	18" Indirect Calciner	PM	0.1	0.1
A-41	Bed Support Dryer & Dust Collector	PM	0.3	1.0
A-42	ACM #4 Mill & Baghouse	PM	0.1	0.2
A-43	Flash Calciner #2 Feed Tank	PM	0.1	0.2
A-44	Activator #4	PM	2.1	8.9
A-45	Bin #5	PM	0.2	0.6
A-46	Master Hydrate Storage Tank	PM	0.2	0.6

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

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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
B-22, A-33, A-34, A-35, A-36, A-37, A-38, A-39, A-40, A-41, A-44, A-45 and A-46	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]
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 shall not process more than 100,000 tons of product at the facility per consecutive 12-month period. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by A.C.A. §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]

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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 most recent NO<sub>x</sub> test results for Calciner #3 (B-15) emissions 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 1 million 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<sup>3</sup> \*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 tons 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 Condition 12 and monthly records which demonstrate compliance with Specific Condition 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]



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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 a one-time stack test for NO<sub>x</sub> on Calciner #3 (A-14) when performing N<sub>2</sub> injection using EPA Reference 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 operate the wet scrubber (B-15) within the conditions outlined in the following table to ensure proper scrubber operation and efficiency. [§18.1104 of Regulation #18 and A.C.A. §8-4-203 as referenced by §8-4-304]

Parameter	Range
Recirculation rate Pump 1	20-40 gpm
Recirculation rate Pumps 2 & 3	180-350 gpm
Caustic column pH range 99	6-12
Caustic column pH range 89	6-12
Caustic column pH range 43	6-12

19. The permittee shall maintain daily records of the recirculation rate and pH which demonstrates compliance with Specific Condition 18. 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]
20. The permittee shall install, maintain, and operate a NO<sub>x</sub> Continuous Emissions Monitoring system (CEMS) at the inlet of Dry Scrubber to ensure proper loading of urea for control. [Regulation 18, §18.1003 & A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
21. The permittee shall maintain records of when the Wet Scrubber is by-passed and Calciner #3 vents to the Dry Scrubber and then to the atmosphere. The permittee shall not by-pass the Wet Scrubber unless the CEM for the Dry Scrubber has read no more than 440 pounds per hour of NO<sub>x</sub> for SN-B15. [§19.705 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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22. The permittee shall conduct stack testing at the Dry Scrubber at the Dry Scrubber outlet after installation and every 5 years thereafter to ensure compliance with the 90% destruction efficiency for NO<sub>x</sub>. The test shall be conducted using EPA Reference Method 7E as published in 40 CFR Part 60 Appendix A. [§19.702 of Regulation 19 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

#### NSPS Requirements

23. 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-01, A-07, A-10, A-13, A-14, A-17, A-26 and A-44. 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)]
24. The permittee shall not process (calcine/dry) more than 8,760 tons per year through the pilot plant. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
25. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 24. The permittee shall 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. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311]
26. The permittee shall maintain all control equipment associated with the pilot plant in accordance with manufacturer's specifications. A copy of the manufacturer's specifications shall be maintained onsite and shall be made available to Department personnel upon request. [Regulation 19, §19.303 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
27. The permittee shall not process more than 17,520 tons per year of material through Activator Source A-44 per consecutive twelve month period. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]
28. The permittee shall maintain monthly records which demonstrate compliance with Specific Condition 27. The permittee will keep the records onsite and make the records available to Department personnel upon request. [Regulation 19, §19.705 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311]

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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 February 28, 2011.

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

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## 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 §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 §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 §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 §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 §8-4-304 and §8-4-311]

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

Porocel Industries, LLC  
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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) business days in advance of such test. The permittee must submit compliance test results to the Department within thirty (30) calendar 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 §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 §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 §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 §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

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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 §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 §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 §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 §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 §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 §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)]
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 §18.314(A), Regulation 19 §19.416(A), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 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 §18.314(B), Regulation 19 §19.416(B), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 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 §18.314(C), Regulation 19 §19.416(C), A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, and 40 CFR Part 52, Subpart E]



**CERTIFICATE OF SERVICE**

I, Pam Owen, hereby certify that a copy of this permit has been mailed by first class mail to  
Porocel Industries, LLC, 10300 Arch Street Pike, Little Rock, AR, 72206, on this

3<sup>rd</sup> day of January 2013.

Pam Owen

Pam Owen, AAIL, Air Division