# OPERATING AIR PERMIT

Pursuant to the Regulations of the Arkansas Operating Air Permit Program, Regulation #26:

Permit #: 635-AOP-R0

IS ISSUED TO:

Porocel Corporation 10300 Arch Street Pike Little Rock, AR 72206 Pulaski County CSN: 60-0004

THIS PERMIT AUTHORIZES THE ABOVE REFERENCED PERMITTEE TO INSTALL, OPERATE, AND MAINTAIN THE EQUIPMENT AND EMISSION UNITS DESCRIBED IN THE PERMIT APPLICATION AND ON THE FOLLOWING PAGES. THIS PERMIT IS VALID BETWEEN:

and

AND IS SUBJECT TO ALL LIMITS AND CONDITIONS CONTAINED HEREIN.

Signed:

Keith A. Michaels

Date

# SECTION I: FACILITY INFORMATION

PERMITTEE: CSN:	Porocel Corporation 60-0004
PERMIT NUMBER:	635-AOP-R0
FACILITY ADDRESS:	10300 Arch Street Pike, Little Rock, AR 72206
COUNTY:	Pulaski
CONTACT NAME:	Mark Wakeling
IELEPHONE NUMBER:	(501) 888-8690
REVIEWING ENGINEER:	Wesley Crouch
UTM North-South (Y):	3834
UTM East-West (X):	563

# SECTION II: INTRODUCTION

Porocel Corporation owns and operates a facility at 10300 Arch Street Pike, Little Rock, Arkansas, which processes various metallic and nonmetallic minerals and product materials (these include bauxite ore and montmorillonile clay). This facility has recently begun construction to expand operations to include alumina tri-hydrates, activated alumina, bentonite, Fuller's earth, etc. Because it has the potential to emit 209.5 tons per year of  $NO_x$  with these additions, Porocel is considered a major source. This permit incorporates these additions, limits HAP emissions for the first time, and satisfies the requirement that this facility obtain an operating permit under the Title V program.

This facility manufacturers a variety of mineral products using a wide range of equipment (SN-01 through SN-55). At the time of this permitting action, this facility currently has a total of 19 different material manipulating processes, however, new process may be added provided that the requirements set forth in this permit are met. The processes that are currently being used are listed and described below.

# **Process 1: Calcined Granular Materials**

Coarse bauxite or limestone feed material with a moisture content of approximately 45% by weight is taken from an outdoor stockpile (SN-15) and hauled by truck to the inlet hopper (SN-07). This material travels by gravity down a chute to a drag conveyor and on to a precrusher (SN-16) which crushes the material to a maximum diameter of 4 inches. Next, this material enters a rotary dryer kiln (SN-01) which is exhausted to a baghouse (SN-17). All dust collected at SN-17 is conveyed to bins 24 and 25. The material is dried to a moisture content between 20 and 30% by weight and then moved by the dry ore elevator which empties onto the Hot Rock Belt or the dust screw conveyor. This conveyor takes the material to a series of separation devices called "Hummers". This equipment screens out particles that are either too small or too large. The larger particles are sent to either hammermills or roller mills (SN-02) where they are reduced in size and sent back to be screened by the hummers again. Roller mill discharge goes to the Mill Rotex Screens (SN-02) where it is separated and sent to different bins according to size. From the product bins, the material goes to elevators that feed either Calcining Kiln #1 (SN-04) or #2 (SN-03). These kilns reduce the moisture content to between 3% and 10%. The material tends to break down somewhat while traveling through the kilns and some dust is formed. This dust is picked up by the SN-03 and SN-04 baghouses and is exhausted to the Calcined Materials Receiver (SN-18). This collected dust is transferred from the receiver to bin 18. The dust is unloaded from this bin for bulk shipment or intermediate storage in supersacks or outdoor stockpile. Stockpiled dust may be rotary dried before loading. Kilns #1 and #2 discharge into a drag conveyor which feeds the elevator that takes the material to the Cooling Tube . After the material is cooled it is sent to the Product Rotex Screens. These

screens separate the material into product grades and 60 mesh calcined fines. Any oversized material is sent to an internal hammermill for size reduction and returned by elevator to the Rotex for sizing. Properly sized product travels to various final product storage bins. From these storage bins, the material is loaded (SN-03) into bags, drums, supersacks, trucks, or railcars.

# **Process 2: Non-Calcined Milled Materials**

# Option A

Coarse bauxite feed material with a moisture content of approximately 45% by weight is taken from an outdoor stockpile (SN-15) and hauled by truck to the inlet hopper (SN-07). This material travels by gravity down a chute to a drag conveyor and on to a pre-crusher (SN-16) which brings the material to a maximum diameter of 4 inches. Next this material enters a rotary dryer kiln (SN-01) which has collections exhausted to (SN-17). Dust collected to the exhauster (SN-17) is conveyed by screw to bins 24 and 25. These are storage bins for the non-calcined product from this process. The material is discharged from the dryer to the dry ore elevator which takes the material to the Hot Rock Belt or a dust screw conveyor. The screw conveyor takes the material to Hummer #1 (SN-01) which removes the material that is finer than 60 mesh. The coarser material is returned to the Hot Rock Belt and taken to Hot Rock Bins 1 and 2. These bins discharge to B elevator which takes the material to the top of the mill building. This material is then separated by size using Hummer #2 and/or #3. The separated material is sent to the roller mills (SN-02) for size reduction. The roller mills discharge to the Rotex screens (SN-02) for separation by size. The material that is less than 60 mesh size is conveyed to storage bins 9, 24, or 25, loaded into supersacks for storage, or loaded into bulk trucks or railcars for shipment.

# **Option B**

Fine-sized, previously milled material with a moisture content of up to 45% is taken from either an outdoor stock pile or intermediate storage (SN-15) to the inlet hopper (SN-07). Gravity takes the material down the chute to a drag conveyor which passes the material through a pre-crusher. From the pre-crusher the material is moved by conveyor to the rotary dryer kiln (SN-01). After drying, this material is discharged to the dry ore elevator, then to the hot rock belt. It passes from the hot rock belt through Hummer #1 to a screw conveyor. This conveyor takes the material to a bulk loading station equipped with a dust hood for loading into supersacks, trucks or railcars. During this option none of the grinding or separating equipment is operated because the material is a fine powder.

# **Process 3: Spherical Materials**

# Option A: Raymond Milling from Stockpile

Coarse material of with a moisture content of approximately 45% is hauled from a stockpile (SN-15) and transferred to the inlet hopper (SN-07). This material is then conveyed to the precrusher (SN-16), and on to the rotary kiln dryer (SN-01). Material leaves the kiln dryer with a moisture content of 20-30%. A dry ore elevator then takes this dry material to the Tramco conveyor. From the conveyor this material is taken to bin 26 which is the feed for the Raymond Roller Mill (SN-05). The Raymond mill reduces the particle size to an average of between 5 and 15 microns. Material is then pneumatically conveyed to an enclosed cyclone which allows the material to drop by rotary valve into the flash calciner feed bin. The fine powder is fed to the flash calciner (SN-06) and the moisture content is further lowered to between 5 and 10%.

## **Option B: Raymond Milling of Smaller Material**

This option is fed using material that has undergone previous size reduction from Process #1 and/or Process #2. The particle size would be 4 mesh and finer. The material (moisture content 20-30%) would be taken from semibulk supersack or storage bins and moved to the auxiliary hopper (SN-19). This hopper feeds a drag conveyor which transfers the material conveyor that discharges into 26 bin. This bin feeds the Raymond Mill. From this point the material follows the same path presented in option A.

# **Option C: Elliot Milling of Smaller Material**

This option also involves material from Process #1 and/or Process #2. It would be of the same size and moisture content as the starting material for Option B. This fine material would be fed to any or all of the following: Elliot Mill #1 (SN-14), Elliot Mill #2 (SN-12) or Elliot Mill #3 (SN-11). Discharge from Elliot Mills #1 and #2 would be transferred via supersack to feed the calciner directly or would be pneumatically transferred to the MB bin. Discharge from Elliot Mill #3 would either drop into the MB bin directly or be conveyed by screw to supersacks for intermediate storage. This material is eventually fed to the flash calciner.

## Remainder of Process 3: From Flash Calciner to Final Product

Flash calcined powder is either collected at the dust collector (SN-06) through the airlock into supersacks or pneumatical conveyed to either the agglomerator feed bin (SN-09) or to the FB bin (SN-49). The FB bin could be used to store material until transfer to the agglomerator feed bin or the material could be loaded out to containers ranging in size from drums to railcar. This material could also be transferred to Process 8. The powder that is fed to the agglomerator is formed into spheres through the action of water spray and rotation. The spheres vary somewhat in size and have a moisture content in the 30-40% range. These spheres are conveyed to supersacks where they undergo a curing phase. In this phase, water evaporates from the spheres

and they develop crush strength. After the curing phase is complete (within 24 hours), the spheres have a moisture content of approximately 25%. These spheres are loaded onto belts and fed to the calcining kilns #1 (SN-04) and #2 (SN-03). The calcining kilns reduce the moisture to between 5 and 10%. The spheres pass through the cooling tube (SN-03) and onto the Rotex screens. They are then conveyed into supersacks or drums for storage or shipping.

#### **Process 4: Bauxite Extrusions**

Coarse material with a moisture content of approximately 45% is transferred from a stockpile (SN-15) to the inlet hopper (SN-07). From this hopper, material is taken to a pre-crusher (SN-16). After the pre-crusher, the material is conveyed to the rotary dryer kiln (SN-01). The dry ore elevator takes material to the Hot Rock Belt, bypassing Hummer #1, and on to Hot Rock Bins 1 and 2. B elevator moves the material to Hummers #2 and #3 and onto the roller mills (SN-02). The fine powder would then go to the extruder feed bin by conveyor belt. Material from Process 3 that has been stored in supersacks can also by fed directly to the extruder. Once the material has entered the extruder, it is mixed with water, caustic soda (a binder agent), and possibly Methocel (a binder/lubricant) or Manganese Dioxide (a binder/lubricant) in order to prepare the mixture to be pressed through the extruder die plate. The extruder discharges through the die plate and is cut into pellets that are sized based on customer specifications. These pellets are then fed to the Dennard kiln (SN-02) for drying or collected in supersacks for an alternate curing phase. Pellets discharged from the Dennard kiln are collected in supersacks. These pellets and the pellets from the alternate curing step are then ready to be fed to the calciners. If calciners #1 and #2 are used, the pellets are fed from supersacks to conveyors that take the pellets to feed elevators for these calciners. These kilns reduce the moisture content to between 3% and 10%. The material tends to break down somewhat while traveling through the kilns and some dust is formed. This dust is picked up by the SN-03 and SN-04 baghouses and is exhausted to the Calcined Materials Receiver (SN-18). This collected dust is transferred from the receiver to bin 18. The dust is unloaded from this bin for bulk shipment or intermediate storage in supersacks or outdoor stockpile. Stockpiled dust may be rotary dried before loading. Kilns #1 and #2 discharge into a drag conveyor which feeds the elevator that takes the material to the Cooling Tube. After the material is cooled, it is sent to the Product Rotex Screens. These screens separate the material into product grades and 60 mesh calcined fines. Any oversized material is sent to an internal hammermill for size reduction and returned by elevator to the Rotex for sizing. Properly sized product is discharged onto a conveyor belt which takes it to supersacks or drums for storage or shipment. If calciners #3 (SN-47) or #4 (SN-48) are used, the pellets are fed from supersacks through a feed screw to the kiln feed chute. After drying the pellets are discharged into intermediate hoppers from which they are transferred to F elevator via an auxiliary chute. The pellets then follow the same path described for calciners #1 and #2.

#### **Process 5: Clay Products**

# **Option A: Formation of Spheres from Virgin Raw Materials**

Finely-powdered raw materials (montmorillonile clay, Attagel 30) are brought into the facility via pneumatic truck and unloaded into storage tanks 1 and 2 (SN-10). From these tanks, the materials are pneumatically moved to the Pelletizer/Agglomerator Feed bin (SN-09) which is also called the Surge Bin. The raw materials then go to the agglomerator. The agglomerator consists of a rotating tub which holds powdered material that is sprayed with water while the tub rotates. This action causes the powder to form spheres. These spheres discharge onto a conveyor belt which takes them either to the upper or lower aging belts or directly to the Dennard Kiln (SN-02). This kiln reduces the moisture to 15-25% and sometimes below 10%. The kiln discharges to a chute that feeds a product elevator. The elevator raises the product to the Sweco screen (SN-01) which sorts the spheres by size. The properly-sized product is discharged from the screen by a chute that empties into a supersack. The same is true for undersized material. Oversized spheres are taken out by the screen and diverted to a small roll mill so that their size may be reduced. The material leaves the roll mill and is sent back to the product elevator for another trip through the Sweco screen. The properly-sized product, which is now in supersacks, is placed in temporary storage in the on site warehouse until approved for shipment (SN-23). The fine clay material that is too small is kept in supersacks until further processing.

# Option B: Formation of Spheres from Re-milled Clay-Elliot Mill #3

Fine material is taken from intermediate storage by supersack and is fed through a hopper and screw assembly to Elliot Mill #3. The finely ground clay product would either be pneumatically transferred to the pelletizer feed bin (SN-09) or taken from SN-11 by screw and loaded back into supersacks for intermediate storage. From the feed bin the material would follow the same path as described in Option A above.

# Option C: Formation of Spheres from Re-Milled Clay-Raymond Mill

Fine clay material from Option A is taken from intermediate storage and sent to the Raymond Mill (SN-19). The Raymond discharges into an enclosed cyclone which would divert the material to either a screw conveyor for supersack loading or to a blower assembly for pneumatic transfer to the pelletizer feed bin (SN-09). From the pelletizer feed bin the material would follow the same path as Option A.

# **Option D: Moisture Reduction of Preformed Clay Materials**

Customers may ask that the moisture content of a previously processed clay material be reduced. Incoming moisture levels could range from 5% to 30% and final moisture levels could be from 2% to 25%. Clay material would be dried in either the Dennard Kiln, calcining kiln #1, or calcining kiln #2. After drying, materials are collected in supersacks for storage or shipment.

# Process 6: Alumina Scale Product

Coarse alumina scale (approximately 35% moisture) is loaded into the inlet hopper (SN-07). It then travels down a chute to a drag conveyor that feeds the pre-crusher (SN-16). The alumina then passes into the rotary dryer kiln (SN-01). The dryer reduces the moisture content to approximately 20%. The dried material goes to the dry ore elevator, to the Hot Rock Belt and on to the hot rock bins 1 and 2. These bins discharge by gravity to a conveyor belt which feeds B elevator. This elevator takes the material to the top floor of the mill building where it goes through the same size separation and reduction process described in Process 1 all the way through the Rotex Screens. The properly sized material is collected in supersacks for intermediate storage before the washing step. The fine (too small) material is also collected in supersacks for storage. The properly sized material is then washed by running city water or pond water over it as it passes over an extremely fine-meshed Sweco screen. The wet material is then fed to calciner #1 (SN-04) and/or calciner #2 (SN-03). This calciner will bring the moisture content of the material back down to 5-20%. The dry material then passes through the cooling tube. The cooled material is then sent to the Product Rotex screens and the screening process is the same as for Process 1.

# **Process 7: Specialty Milling**

Powdered feed material (approximately 80 microns) from the ACC tank or feed material (up to 4 mesh) from intermediate storage is fed to Elliot Mill #3 (SN-11). This mill reduces the particle size to between 2 and 25 microns. The mill discharge is either conveyed by screw to supersacks or dropped by gravity into the MB bin. Material from the MB bin would later be unloaded by screw conveyor into drums, supersacks, trucks, or railcars (SN-23). This material could also be pneumatically transferred to process 8 or to bins 27 or 28 for use in process 3 and/or 11.

# **Process 8: Material Transfer**

Powdered materials having particle sizes ranging from 2 to 80 microns would be pneumatically conveyed from one part of the facility to another. Emissions from the transfer would be vented at various points throughout the facility and have been accounted for in the emissions from the other processes.

# **Process 9 A and B: Toll Regeneration**

Feed materials containing water or hydrocarbons come into the facility by means of railcar, truck, supersacks, or drums. This feed material is unloaded from its arrival containers using the hopper and conveyor belt system. The conveyor belt would take the material to a mill building elevator which would raise the material to a chuteworks that could distribute it, by gravity, into one of the milled material storage bins 3 through 9, 19 or 20. From any of these bins, the material would discharge onto an elevator that feeds either kiln #1 (SN-04) or kiln #2 (SN-03). This material

could also be unloaded onto a conveyor that would feed it directly to one of the kilns. The regenerated material then goes through the same screening described in Process 1. This final product could also be captured in supersacks or drums as it comes off of the Rotex Screens instead of being sent to the final product storage bins.

Material can also be fed to kiln #3 (SN-47) and kiln #4 (SN-48) either by hanging a supersack over a feed hopper that is connected to a feed screw conveyor or by hanging a supersack over a gravity chute that feeds a small elevator. Powdered materials (< 100 micron average) would be discharged to the unit dust collectors equipped with airlock mechanisms that allow the powders to drop into supersacks or drums. Granular or spherical materials would exit the kilns by gravity into intermediate product containers.

# Process 10: Toll Drying

This process involves the drying of powdered, granular, or spherical materials in the rotary dryer kiln. Wet material is dumped into the inlet hopper and passes through the precrushing equipment. The precrushing equipment is not turned on in this process. The material then passes through the dryer and to a loadout station equipped with a dust hood to control fugitive emissions. Powder is discharged from the dryer to an eductor inlet instead of dropping to a drag conveyor. The eductor would pneumatically transfer the powder to 25 bin. The material could then be unloaded from this bin into different containers.

# **Process 11: Milled and Flash Calcined Aluminas**

# Option A: Milling on the Raymond Mill

This process involves milling of alumina materials from a size of approximately 8 mesh down to sizes ranging from 2 to 20 microns. These materials could be packaged as is or flash calcined to lower the moisture content from approximately 30% to approximately 5%. Materials are received in railcars and/or bulk trucks. It is offloaded into bin 26 which feeds the Raymond Mill (SN-05), or it can be blown into the ACC tank which feeds Elliot Mill #3 (SN-11). Powder from the Raymond Mill moves by airstream to an enclosed cyclone which drops the material through a rotary valve into a feed screw for the classifier. The classifier returns oversized material to the Raymond mill while allowing the properly sized material to flow to bin 27. Material from bin 27 may be pneumatically taken directly to the flash calciner, blown to bin 28, or transferred to Process 8. Flash calciner discharge could be caught in supersacks or sent to bins 4 and 5 for load out into drums, supersacks, bulk trucks, or railcars.

# Option B: Milling on Elliot Mill #3

Elliot Mill #3 can be fed either by screw from the ACC tanks or by supersacks via a hopper and screw conveyor assembly. The product collector (SN-11) receives the milled powder and drops

it through an airlock. This milled product can be loaded to drums, supersacks, bulk trucks, or railcars at this point. It can also be conveyed to bin 27, bin 28, or Process 8.

# **Options Associated with Process 8**

Any milled material from Option A or Option B that has entered Process 8 may be loaded out from the 4 and 5 bins into drums, supersacks, bulk trucks, or railcars, or it may be transferred to the Ground Hydrate Bins (SN-29) described in Process 12.

## Option C: Milling on Elliot Mills #1 and #2

This option involves the use of Elliot Mills #1 and #2 which may be fed from supersacks through a hopper and screw assembly or from the Underground Hydrate Storage Bins (SN-20). Material from these mills is collected and transferred either to the ground hydrate bins or to Process 8. Material that is in the ground hydrate bins can either be fed to the active plant flash calciner (SN-27) or transferred to Process 8. Discharge from the flash calciner is routed through an eductor inlet which allows for transfer to 4 and 5 bins for loadout.

## **Process 12: Active Plant**

Alumina Trihydrate (hydrate) enters as a raw material either by rail or truck. The hydrate is unloaded pneumatically into raw material storage bins. Hydrate milling would be performed under processes #7 and #11. The particle size of the milled hydrate ranges from 60 to 80 microns before milling. Milled hydrate has an average particle size in the range of 5 to 10 microns. The milled hydrate is pneumatically transferred to the ground hydrate storage bins (SN-29). These storage bins feed the flash calciner. This material now has a moisture content of approximately 8% and is called flash-calcined alumina (FCA). The FCA is then fed to the tub feed bin. From the feed bin the FCA passes through a weigh feeder and a turbilizer which acts as a mechanical agitator for the FCA powder. The FCA powder enters a rotating tub where it is combined with water or a water/promoter solution. Promoters would be sodium carbonate, calcium oxide, magnesium oxide, magnesium hydroxide, sodium acetate, calcium hydroxide, calcium carbonate, lithium carbonate, lithium hydroxide, titanium dioxide, and potassium permanganate. Some of these promoters are insoluble in water and would require batchwise blending before being sent to the tub for formation. The tub forms the FCA into spheres of varying sizes. These spheres discharge from the tub onto a covered curing belt designed to keep the heat and moisture between the belt and cover. This would be a slow moving belt that maintains a warm, moist atmosphere of approximately 180 EF. The curing belt discharges the spheres into the belt activator. The activator generates temperatures up to 1000EF but typically runs no higher than 850 EF in order to bring the moisture content back down to approximately 8%. The belt activator discharges into an elevator that moves the spheres to a 3-deck Sweco screen or a roll crusher depending on the type of final product desired. Spherical materials of the proper size go to the A or B product bins to be loaded into supersacks or drums. Oversized spheres are sent to a roll crusher, then an

elevator which lifts them to a second sweco screen for sizing of granular product alumina. Properly sized spheres go to granular bins A or B for loadout to shipping or storage. Off-sized material would be collected in supersacks for batch milling in Elliot Mill #2. The milled material would be recycled and blended with fresh FCA so that it could be fed to the tub for sphere formation.

# Process 13A: Catalyst Toll Processing (Extrusion)

Processes 13 A-D use the equipment listed in this permit as SN-30 through SN-41 and emissions are vented through the wet scrubber (SN-42). Feed materials for the extrusion process may be brought in by bulk truck for pneumatic off loading to storage bins (SN-30) or by supersacks for batch loading to the feed blender. The blender (SN-31) dry blends the feed components prior to the addition of water and acids. Material could be fed to the Simpson Mix-Muller (SN-32) by screw conveyor, feed tank, or direct loading. The Simpson Mix-Muller is a chamber used for mixing liquid and solid components uniformly before the mixture if fed to the extruder. When necessary, effluent from SN-32 and/or SN-33 will be routed through a scrubber (SN-42) in order to remove any airborne contaminants present. The extruder forces the mix through an extruder head which compresses the mix into strands having varying shapes. The extruder discharges onto a belt dryer . The dryer discharges to an elevator that feeds the sweco screen. After screening, the material enters the extrusion calciner. Fines from this first screening are collected in supersacks and then fed to an internal mill which dumps into the feed tank so it can go through the process again. The final extruded product can then be loaded into drums or supersacks in preparation for shipping.

# Process 13B: Catalyst Toll Processing (Impregnation)

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 HAPs. Feed material may enter in the form of powders, granules, spheres, or extrudates. Powdered materials could be fed either to the batch blender (SN-31) or directly to the Munson mixer. Any powder that is blended in the batch blender would be transferred to supersacks before being fed to the Munson mixer or loaded as a dry-blended mix. Material could discharge from the Munson mixer in a number of ways. Powdered material could by conveyed to the calciner or loaded into supersacks for processing in one of the calciners. Granular, spherical, or extruded materials would be conveyed by elevator or discharged into supersacks for feed to the Process 13 calciner. Materials could also be sent to the belt dryer for drying prior to packaging, screening or calcining.

# Process 13C: Catalyst Toll Processing (Calcination)

Powdered feed that has been unloaded into the storage bins (SN-30) may be either fed by screw conveyor directly to the calciner or may be loaded into supersacks for feed to the calciner.

Powdered, granular, spherical, or extruded materials from Process 13B may also be fed to calciners #5 (SN-39), #6 (SN-40), #7 (SN-37), or #8 (SN-38) by elevator or supersack. The moisture content is reduced from a range of 10-30% to a range of 2-10% for these materials. Powdered calciner discharge is conveyed by screw to the packaging area (SN-41) bypassing the Sweco screens. Granular, spherical, or extruded product would move by elevator, either directly to the packaging area or to the Sweco screens. Effluent from any or all calciners would be passed through the scrubber (SN-42) if warranted.

# Process 13D: Catalyst Toll Processing (Calsicat Material Calcination)

Powdered feed that has been unloaded into the storage bins (SN-30) may be either fed by screw conveyor directly to the calciner or may be loaded into supersacks for feed to the calciner. Powdered, granular, spherical, or extruded materials from Process 13B may also be fed to calciners #5 (SN-39), #6 (SN-40), #7 (SN-37), or #8 (SN-38) by elevator or supersack. The moisture content is reduced from a range of 10-30% to a range of 2-10% for these materials. Powdered calciner discharge is conveyed by screw to the packaging area (SN-41) bypassing the Sweco screens. Granular, spherical, or extruded product would move by elevator, either directly to the packaging area or to the Sweco screens. Effluent from any or all calciners would be passed through the scrubber (SN-42) if warranted.

# Process 14: Raw Materials Unloading

Alumina Trihydrate, as described in Process 12, comes to the plant site either in railcars or bulk trucks. The hydrate would either be vacuum conveyed to (SN-20), a baghouse dust collector which empties into the underground hydrate storage bins, or it would be pressure conveyed to the same bins.

# Process 15: Active Plant - Second Train

Alumina trihydrate (hydrate) enters as a raw material by either rail or bulk truck transport. The hydrate is unloaded pneumatically into raw material storage bins as described in Process 14. Hydrate from UHSB-2 is milled using Hummer Mills HM-3 (SN-52) and/or HM-4 (SN-53). The milled hydrate is either loaded into supersacks or blown to bins GH-1, GH-2, Process 8, or dropped into bins GH-3 and/or GH-4. From these locations the milled hydrate may be loaded into supersacks, pneumatically conveyed to storage bins G1 and G2, or transferred to Process 8. Hydrate from UHSB-1 is milled using Hummer Mills HM-1 (SN-14) and HM-2 (SN-12) and is loaded into supersacks, blown to GH-3 or GH-4, or is dropped into GH-1 and GH-2. The milled hydrate can then be transferred to supersacks, GH-3 and GH-4, or Process 8.

Hydrate from bin 26 that is milled using the Raymond Mill is stored in bin 27. From there, the milled hydrate is fed to the flash calciner, transferred to supersacks, to bin 28, the FCF bin, the MB bin, or to Process 8.

Hydrate from the ACC tank is milled in Elliot Mill #3 (SN-11). From there, the milled hydrate is fed to the flash calciner, transferred to supersacks, to bin 27, the FCF bin, the MB bin, or to Process 8.

Flash calcination of the hydrate lowers the moisture content from approximately 35% to 8%. The intermediate material from the flash calciner is called flash calcined alumina (FCA). The FCA is conveyed by screw to enclosed storage bins. From the storage bins the FCA is screw conveyed to a feeder that empties into tub powder feed stream where it is combined with milled recycled alumina and any third component powder being used. This mixture is sent to the tub feed bin.

The tub feed stream enters the tub feed accumulator #3 via air flow . SN-55 picks up alumina particles from the tub, the activator, all elevators, Sweco screens, roll crusher, and product bins. On those occasions when a non-water-soluble promoter is needed for sphere formation, supersacks of powdered promoter could be hung over a third feeder. This makes it possible for one, two, or all three feeders to contribute to the tub feed stream at any given time. Powder from the tub feed accumulator #3 passes through the turbulizer which acts as a mechanical agitator preparing it for formation.

The powder enters the rotating tub where it is combined with water or a water and promoter solution. The tub forma the powder into spheres of varying size. The spheres discharge from the tub via the discharge chute which allows them to fall onto the curing belt. This is a covered, slow moving belt that maintains an atmosphere of warm, moist air at approximately 180EF. Additional heat is provided by a heat exchanger. The curing belt discharges the spheres to the belt activator, A-2. The activator generates temperatures up to 1000EF, but typically will run no higher than 850EF to remove any moisture gained in the tub. The spheres are then sent to elevator #2 which moves them to a Sweco screen or a roll crusher depending on the final product desired. Spherical materials of the proper size and type are loaded into supersacks or drums as product.

The following table is a summary of emissions from the facility. Specific conditions and emissions for each source can be found starting on the page cross referenced in the table.

	EMISSION SUMMARY				
Source No.	Description	Pollutant	Emissic	on Rates	Cross Reference
			lb/hr	tpy	Page
Total	Allowable Emissions	*PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub> HAP <sup>1</sup>	30.2 1.8 4.0 18.5 48.6 0.36	100.6 1.8 14.5 79.6 209.5 1.57	
01	Dryer-Dryer Bldg	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	2.2 0.1 0.1 0.6 2.3	9.5 0.1 0.4 2.5 9.8	21
02	Mill-Dennard Kiln-Mill Bldg.	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	1.0 0.1 0.1 0.6 2.3	4.4 0.1 0.4 2.5 9.8	22
03	Calciner #2-Shipping Bldg. Rotex, Cooling Tube	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	1.0 0.1 1.2 6.5 4.2	4.0 0.1 5.3 28.4 18.4	23
04	Calciner #1	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.9 0.1 1.2 6.5 4.2	3.6 0.1 5.3 28.4 18.4	24
05	Raymond Mill	PM/PM <sub>10</sub>	0.1	0.2	25
06	Flash Calciner (F1)	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.6 0.1 0.1 0.6 2.3	2.6 0.1 0.4 2.5 9.8	26
07	Inlet Hopper	PM/PM <sub>10</sub>	3.1	9.0	27
08	Storage Bin- Packaging/Shipping	PM/PM <sub>10</sub>	0.1	0.2	28
09	Agglomerator (Pelletizer) Storage and Feed	PM/PM <sub>10</sub>	0.1	0.2	29
10	Pneumatic Feed-Storage	<b>PM/PM</b> <sub>10</sub>	0.1	0.2	30

	EMI	SSION SUMMAR	Y		
Source	Description Pollutant		Emissic	Emission Rates	
No.				tpy	Reference Page
11	Elliott Mill #3	PM/PM <sub>10</sub>	0.1	0.3	31
12	Hummer Mill #2	PM/PM <sub>10</sub>	0.1	0.2	32
13	Pneumatic Material Transfer	PM/PM <sub>10</sub>	0.1	0.4	33
14	Hummer Mill #1	PM/PM <sub>10</sub>	0.1	0.3	34
15	Ore Stockpile	PM/PM <sub>10</sub>	0.3	0.9	35
16	Pre-crusher	PM/PM <sub>10</sub>	0.4	1.1	36
17	Receiver Exhauster- Calciners	No	Emissions fro	om this Sourc	ce
18	Receiver Exhauster-Mill and Dryer	No Emissions from this Source			ce
19	Auxiliary Hopper	PM/PM <sub>10</sub>	3.6	7.7	37
20	Pneumatic Feed-Storage	PM/PM <sub>10</sub>	0.2	0.5	38
21	Shipping/Storage	PM/PM <sub>10</sub>	0.1	0.4	39
22	Receiving-Mill Feed-Sling Box	PM/PM <sub>10</sub>	4.2	9.0	40
23	Packing/Shipping	PM/PM <sub>10</sub>	0.7	2.9	41
24	Storage Bin	PM/PM <sub>10</sub>	0.1	1.0	42
25	Storage Bin-Classifier	PM/PM <sub>10</sub>	0.1	0.2	43
26	Feed,Blender,Tub,Activator (A1), Screening/Crushing	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.5 0.1 0.1 0.2 0.8	2.2 0.1 0.2 0.9 3.4	44
27	Flash Calciner (F2)	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	1.0 0.1 0.1 0.6 2.3	4.4 0.1 0.4 2.5 9.8	45
28	Recycle Milling (HM#2)	PM/PM <sub>10</sub>	0.1	0.2	46
29	Mill Feed-Storage	PM/PM <sub>10</sub>	0.1	0.2	47
30	Receiving-Storage	PM/PM <sub>10</sub>	0.2	0.4	48

	EMI	ISSION SUMMAR	XΥ		
Source No	Description	Pollutant	Emissic	on Rates	Cross Reference
110.			lb/hr	tpy	Page
31	Feed-Blender	PM/PM <sub>10</sub>	0.2	0.7	49
32	Mixer- Extruder,Drying,Screening	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.3 0.1 0.1 0.3 1.2	1.3 0.1 0.2 1.3 4.9	50
33	Calciner,Cooling Screening	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.6 0.1 0.1 0.3 1.2	2.5 0.1 0.2 1.3 4.9	51
34	Packaging/Shipping	PM/PM <sub>10</sub>	0.1	0.3	52
35	Impregnation	PM/PM <sub>10</sub>	0.1	0.1	53
36	Utility Dryer-Screening	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.6 0.1 0.1 0.1 0.5	2.5 0.1 0.1 0.5 1.9	54
37	Calciner Unit 3-Screening	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.9 0.1 0.1 0.2 5.6	3.7 0.1 0.1 0.7 24.3	55
38	Calciner Unit 4-Screening	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.9 0.1 0.1 0.2 5.6	3.7 0.1 0.1 0.7 24.3	56
39	Calciner Unit 5-Screening	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.3 0.1 0.1 0.1 5.5	1.0 0.1 0.1 0.5 23.9	57
40	Calciner Unit 6-Screening	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.9 0.1 0.1 0.6 6.7	3.7 0.1 0.4 2.3 29.1	58
41	Packaging/Shipping	PM/PM <sub>10</sub>	0.2	0.5	59

	EMISSION SUMMARY				
Source	Description	Pollutant	Emissic	on Rates	Cross
No.			lb/hr	tpy	Reference Page
42	Wet Scrubber	PM/PM <sub>10</sub> HAP <sup>*</sup>	0.36 0.36	1.57 1.57	60
43	Jet Mill	PM/PM <sub>10</sub>	0.2	0.5	62
44	Utility Unit A (Portable Vac.)	PM/PM <sub>10</sub>	0.1	0.1	63
45	Utility Unit B (Portable Vac.)	PM/PM <sub>10</sub>	0.1	0.1	64
46	Super Sack	PM/PM <sub>10</sub>	0.2	0.4	65
47	Calciner #3	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.4 0.1 0.1 0.1 0.4	1.8 0.1 0.1 0.5 1.8	66
48	Calciner #4	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	0.4 0.1 0.1 0.2 0.4	1.8 0.1 0.1 0.7 1.8	67
49	FB Storage Bin	PM/PM <sub>10</sub>	0.1	0.2	68
50	Feed Tank	PM/PM <sub>10</sub>	0.1	0.2	69
51	Pneumatic Feed-Storage	PM/PM <sub>10</sub>	0.2	0.5	70
52	Hummer Mill #3	PM/PM <sub>10</sub>	0.1	0.3	71
53	Hummer Mill #4	PM/PM <sub>10</sub>	0.1	0.3	72
54	Flash Calciner (F3)	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	1.0 0.1 0.1 0.6 2.3	4.4 0.1 0.5 2.5 9.8	73
55	Feed, Blender, Tub, Activator (A2), Screening/Crushing	PM/PM <sub>10</sub> SO <sub>2</sub> VOC CO NO.	0.5 0.1 0.1 0.2 0.8	2.2 0.1 0.2 0.9 3.4	74

Compliance with the PM/PM<sub>10</sub> emissions shall be demonstrated on a plantwide basis only. Emissions must be below limits set forth in Plantwide Conditions #5 and #7.

1. HAP emissions must comply with the requirements set forth in Plantwide Condition #13.

# SECTION III: PERMIT HISTORY

Porocel was issued its first 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 0635-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 0635-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 0635-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.

SECTION IV: EMISSION UNIT INFORMATION

## Dryer-Dryer Building

# **Source Description**

The dryer building contains the dryer that takes material from Processes 1-4, 6, and 10 and lowers the moisture content of feed material by 20 to 25%. The dryer was installed in 1980 and is rated at 16 MMBtu/hr. The emissions from this source are vented through a pulsating baghouse operating at 12,800 cfm. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

1. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Conditions #5 and #6 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	2.2	9.5
SO <sub>2</sub>	0.1	0.1
VOC	0.1	0.4
СО	0.6	2.5
NO <sub>x</sub>	2.3	9.8

- 2. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, \$60.382(a)(2) visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition # 9.
- 3. Pursuant to 40 CFR Part 60, Subpart LL, SN-01 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

## SN-02 Mill-Dennard Kiln-Mill Building

#### **Source Description**

The Dennard kiln is fired by natural gas at an operating rate of 16 MMBtu/hr. The mill building holds the roller mills used to reduce the size of oversized material. Emissions from this source are discharged through a Reverse Jet pulsating baghouse with an operation rate of 14,700 cfm. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

#### **Specific Conditions**

4. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Conditions #5 and #6 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	1.0	4.4
SO <sub>2</sub>	0.1	0.1
VOC	0.1	0.4
СО	0.6	2.5
NO <sub>x</sub>	2.3	9.8

- 5. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart OOO, §60.672(a)(2) visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 6. Pursuant to 40 CFR Part 60, Subpart OOO, SN-02 is an affected source and is therefore subject to the applicable requirements of this subpart as listed in Plantwide Condition #11.

Calciner #2-Shipping Building, Rotex, Cooling Tube

# **Source Description**

Calciner #2 was replaced in 1993 and is rated at 30 MMBtu/hr. Emissions are controlled by a Mikropulseair Reverse Jet, Model 100S-8-20, baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

7. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Conditions #5 and #6 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	1.0	4.0
$SO_2$	0.1	0.1
VOC	1.2	5.3
СО	6.5	28.4
NO <sub>x</sub>	4.2	18.4

- 8. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, \$60.382(a)(2) and 40 CFR 60, Subpart OOO, \$60.672(a)(2) visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a), SN-03 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Conditions #10 and #11.

#### Calciner #1

#### **Source Description**

Calciner #1 was replaced in 1993 and is fueled by natural gas. It is rated at 30 MMBtu/hr and can process up to 4 tons an hour of various materials. Emissions are controlled using a pulsating baghouse with an operational flow rate of 25,000 cfm. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

#### **Specific Conditions**

10. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Conditions #5 and #6 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.9	3.6
SO <sub>2</sub>	0.1	0.1
VOC	1.2	5.3
СО	6.5	28.4
NO <sub>x</sub>	4.2	18.4

- 11. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, \$60.382(a)(2) visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 12. Pursuant to 40 CFR Part 60, Subpart LL, SN-04 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

## Raymond Mill

## **Source Description**

The Raymond mill is used to reduce the size of various materials to the desired level. Emissions from this source are controlled by a Mikropulseair reverse jet baghouse, model 100S-8-20. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

13. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.2

- 14. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart OOO, visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 15. Pursuant to 40 CFR Part 60, Subpart OOO, SN-05 is considered an affected source and is therefore subject to the applicable requirements of this subpart as listed in Plantwide Condition #11.

Flash Calciner (F1)

## **Source Description**

This flash calciner was installed in 1990. It is natural gas fired with a operating rate of 16 MMBtu/hr. Emissions from this unit are controlled by a Dalamatic baghouse operating at 35,000 ACFM. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

16. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Conditions #5 and #6 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.6	2.6
$SO_2$	0.1	0.1
VOC	0.1	0.4
СО	0.6	2.5
NO <sub>x</sub>	2.3	9.8

- 17. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 18. Pursuant to 40 CFR Part 60, Subpart LL, SN-06 is considered an affected source as is therefore subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

#### Inlet Hopper

## **Source Description**

The inlet hopper is the starting point for many of the processes at this facility. Raw materials are taken from an outdoor stockpile and fed to the rest of the process through the inlet hopper. Emissions are controlled by a building over the hopper that gives 60% enclosure with the remaining 40% leaving as fugitive emissions. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

19. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and by maintaining the control efficiency of the enclosure.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	3.1	9.0

- 20. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60.382-2(b), fugitive emissions shall not exceed 10 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition # 9.
- 21. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a), SN-07 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

Storage Bin-Packaging/Shipping

## **Source Description**

This storage bin is used to hold final product until it can be loaded out for shipping. Emissions from the bin and packaging and shipping operations are controlled using a DCE "dalamatic" model DLM-V20-10F, bin vent filter operating at 1,000 ACFM. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

22. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the fabric filter in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.2

- 23. Pursuant to 18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60-672-2, visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 24. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a), SN-08 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Conditions #10 and #11.

Agglomerator (Pelletizer) Storage and Feed

## **Source Description**

This source was installed in 1990 and its emissions are controlled by a DCE "dalamatic" model DLM-V20-10F, bin vent filter operating at 1,000 ACFM. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

25. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the fabric filter in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.2

- 26. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60.382(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 27. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a), SN-09 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

Pneumatic Feed-Storage

## **Source Description**

Pneumatic feed is used to feed various powdered materials to pieces of equipment throughout the plant. Emissions are controlled by a DCE "Dalamatic" DLM, model V30/15F, bin vent filter. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

28. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the fabric filter in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.2

- 29. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR Part 60, Subpart OOO, §60.672(a)(2), the visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO,
  §60.670(a), SN-10 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Conditions #10 and #11.

#### Elliott Mill #3

#### **Source Description**

The Elliott Mill was installed in 1993. It can process up to 4 tons per hour of various materials. Emissions are controlled using a Mikropulseair reverse jet baghouse, model 100S-8-20. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

31. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.3

- 32. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 33. Pursuant to 40 CFR 60, Subpart OOO, §60.670(a), SN-11 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #11.

#### Hummer Mill #2

## **Source Description**

The Hummer Mill was installed in 1993. It can process up to 4 tons per hour of various materials. Emissions are controlled using a Torit Downflow, model 2DF12, baghouse operating at 4,500 cfm at a temperature of 180EF. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

34. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.2

- 35. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart OOO, \$60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 36. Pursuant to 40 CFR 60, Subpart OOO, §60.670(a), SN-12 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #11.

Pneumatic Material Transfer

## **Source Description**

Air is used to transport powdered materials to various locations throughout this facility. Emissions are vented through a Torit, model DFT3-24(12), baghouse operating between 4,500 and 9,000 cfm. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

37. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.4

38. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, visible emissions from this source shall not exceed 5 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.

#### Hummer Mill #1

## **Source Description**

The Hummer Mill was installed in 1993. It can process up to 4 tons per hour of various materials. Emissions are controlled using a Mikropulseair reverse jet baghouse, model 100S-8-20. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

39. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.3

- 40. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart OOO, \$60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 41. Pursuant to 40 CFR 60, Subpart OOO, §60.670(a), SN-11 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #11.

## Ore Stockpile

## **Source Description**

This is a large outdoor pile of raw materials on the site of this facility. Trucks are loaded from a this pile and the raw materials are sent to the inlet hopper for feed to the process. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

# **Specific Conditions**

42. Pursuant to \$19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.3	0.9

43. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR Part 60, Subpart OOO, §60.672(a)(2), the visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.

#### Pre-crusher

## **Source Description**

Material comes from the inlet hopper and passes through the pre-crusher. The pre-crusher reduces the particles to a maximum diameter of 4 inches. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process. Emissions from this source are fugitive.

## **Specific Conditions**

44. Pursuant to \$19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.4	1.1

- 45. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60.382(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 46. Pursuant to 40 CFR 60, Subpart LL, §60.380(a), SN-16 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

Auxiliary Hopper

## **Source Description**

This hopper feeds a conveyor that feeds another conveyor that discharges in 26 bin. This hopper is used when material from storage must go through further size reduction in order to be processed. Emissions are controlled by an enclosure that gives a 40% capture efficiency. The remaining 60% of the emissions are identified as fugitives. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

#### **Specific Conditions**

47. Pursuant to \$19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and by maintaining the 40% capture efficiency of the enclosure.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	3.6	7.7

- 48. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60-682(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 49. Pursuant to 40 CFR Part 60, Subpart LL, §60-680(a), SN-19 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.
Pneumatic Feed-Storage

### **Source Description**

Pneumatic feed is used to feed various powdered materials to pieces of equipment throughout the plant. This system was installed in 1998 and can move up to 10 tons per hour of material. Emissions are controlled by a Torit Downflow model 3DFT-36 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.2	0.5

- 51. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, \$60.382(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 52. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a), SN-19 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

## Shipping/Storage

#### **Source Description**

This source is not in use at this time at Porocel, but may be used when needed. It has a capacity of 8 tons per hour. Emissions are controlled by a DCE "Dalamatic" DLM-V20/10F bin vent filter. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.4

- 54. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 55. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-21 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Conditions #10 and #11.

Receiving-Mill Feed-Sling Box

## **Source Description**

Trucks are unloaded at this point. New material is introduced and emissions from this source are fugitive.

## **Specific Conditions**

56. Pursuant to \$19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	4.2	9.0

- 57. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, \$60.382(a)(2), fugitive emissions from this source shall not exceed 10 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 58. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) SN-22 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

### Packing/Shipping

### **Source Description**

This equipment was installed from 1990 to 1993 and operates at various rates. Emissions are fugitive and are partially controlled by an enclosure. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

59. Pursuant to \$19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.7	2.9

- 60. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, \$60.382(a)(2) and 40 CFR 60, Subpart OOO, \$60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 61. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-21 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

## Storage Bin

### **Source Description**

This bin was installed in 1997 and can transfer 10 tons per hour. Emissions are controlled by an Enclosed Pneumatic System Torit TBV-4 bin vent filter. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	1.0

- 63. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, \$60.382(a)(2) and 40 CFR 60, Subpart OOO, \$60.672(a)(2), which state that the visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 64. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-24 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

## Storage Bin-Classifier

## **Source Description**

This bin was installed in 1997 and can handle 3 tons of material per hour. Emissions are controlled by an enclosed pneumatic system Torit TBV-4 bin vent filter. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.2

- 66. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, \$60.382(a)(2) and 40 CFR 60, Subpart OOO, \$60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 67. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-25 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

Feed, Blender, Tub, Activator (A1), Screening/Crushing

## **Source Description**

The curing-activator is used in the impregnation of materials. It is fired by natural gas and is rated at 5.5 MMBtu/hr. Emissions are vented through a Torit Downflow 2DF-4 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.5	2.2
$SO_2$	0.1	0.1
VOC	0.1	0.2
СО	0.2	0.9
NO <sub>x</sub>	0.8	3.4

- 69. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, \$60.382(a)(2), which states that the visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 70. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a), SN-28 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

#### Flash Calciner (F2)

### **Source Description**

This calciner was installed in 1997 and is rated at 16 MMBtu/hr of natural gas. Emissions are vented through a Torit Downflow 4DF-32 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	1.0	4.4
$SO_2$	0.1	0.1
VOC	0.1	0.4
СО	0.6	2.5
NO <sub>x</sub>	2.3	9.8

- 72. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60.382(a)(2), which states that the visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 73. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a), SN-27 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

Recycle Milling (HM#2)

### **Source Description**

These pieces of equipment all vent through a Torit Dustex 4DFT-16 baghouse. Various minerals and materials pass through at different rates. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.2

- 75. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, \$60.382(a)(2) and 40 CFR 60, Subpart OOO, \$60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 76. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-26 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

#### Mill Feed-Storage

### **Source Description**

This equipment can process up to 4.0 tons per hour and was installed in 1997. Emissions are controlled by a Torit TBV-4 bin vent filter. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.2

- 78. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO,
  §60.670(a) SN-29 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

#### **Receiving-Storage**

## **Source Description**

Up to 10 tons per hour of material can be received at this source. Emissions are controlled by a Torit TBV-4 bin vent filter. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.2	0.4

- 81. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO,
  §60.670(a) SN-30 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

#### Feed-Blender

### **Source Description**

This source was installed in 1997. Emissions are controlled by a Torit 2DF4 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.2	0.7

- 84. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60.382(a)(2), the visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 85. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a), SN-31 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

## **SN-32** Mixer-Extruder, Drying, Screening

## **Source Description**

This equipment was installed in 1997. The mixer and extruder can process materials at a rate of 2 tons per hour. The dryer is fired by natural gas at a heat input of 3.5 MMBtu/hr. All three vent emissions through a Torit 2DF-8 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

#### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.3	1.3
$SO_2$	0.1	0.1
VOC	0.1	0.2
СО	0.3	1.3
NO <sub>x</sub>	1.2	4.9

- 87. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 88. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-32 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

## SN-33 Calciner, Cooling Screening

#### **Source Description**

This calciner was installed in 1997 and can dry up to 4 tons per hour of material. It is fired by natural gas and is rated at 8 MMBtu/hr. Emissions are controlled by a Torit 2DF-8 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.6	2.5
$SO_2$	0.1	0.1
VOC	0.1	0.2
СО	0.3	1.3
NO <sub>x</sub>	1.2	4.9

- 90. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 91. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-33 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Conditions #10 and #11.

## Packaging/Shipping

## **Source Description**

The equipment used in this operation was installed in 1997 and can process up to 4 tons per hour of products. Emissions are vented through a Torit Dustex 4DFT-16 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.3

- 93. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, \$60.382(a)(2) and 40 CFR 60, Subpart OOO, \$60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 94. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-34 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

## Impregnation

#### **Source Description**

This is the process used to impregnate catalyst with specific materials. Various solutions are mixed with the alumina and formed into spheres. Up to 4 tons per hour can be processed at this point. Emissions are controlled by a Torit 2DFT-8 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

#### **Specific Conditions**

95. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.1

96. Pursuant to §18.5 of the Arkansas Air Pollution Control Code and 40 CFR Part 52, Subpart E, visible emissions from this source shall not exceed 5 percent opacity. Compliance with this condition shall be demonstrated through Plantwide Condition #9.

### Utility Dryer-Screening

#### **Source Description**

This dryer was installed in 1997 and can dry up to 4 tons per hour. It is fired by natural gas and is rated at 3 MMBtu/hr. Emissions are vented through a Torit 2DF-8 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.6	2.5
$SO_2$	0.1	0.1
VOC	0.1	0.1
СО	0.1	0.5
NO <sub>x</sub>	0.5	1.9

- 98. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 99. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-36 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

Calciner Unit 3-Screening

### **Source Description**

This calciner was installed in 1997 and can dry up to 2 tons per hour. It is fired by natural gas and has a heat input of 4 MMBtu/hr. Emissions are vented through a Torit 2DF-4 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.9	3.7
$SO_2$	0.1	0.1
VOC	0.1	0.1
СО	0.2	0.7
NO <sub>x</sub>	5.6	24.3

- 101. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO,
  §60.670(a) SN-37 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

Calciner Unit 4-Screening

## **Source Description**

This calciner was installed in 1997 and can dry up to 2 tons per hour. It is fired by natural gas and has a heat input of 4 MMBtu/hr. Emissions are vented through a Torit 2DF-4 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.9	3.7
$SO_2$	0.1	0.1
VOC	0.1	0.1
СО	0.2	0.7
NO <sub>x</sub>	5.6	24.3

- 104. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 105. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-38 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

Calciner Unit 5-Screening

### **Source Description**

This calciner was installed in 1997 and can dry 1 ton per hour. It is fired by natural gas and has a heat input of 3 MMBtu/hr. Emissions are vented through a Torit 2DF-4 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.3	1.0
$SO_2$	0.1	0.1
VOC	0.1	0.1
СО	0.1	0.5
NO <sub>x</sub>	5.5	23.9

- 107. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 108. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-39 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

Calciner Unit 6-Screening

### **Source Description**

This calciner was installed in 1997 and can dry up to 4 tons per hour. It is fired by natural gas and has a heat input of 15 MMBtu/hr. Emissions are vented through a Torit 2DF-8 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.9	3.7
$SO_2$	0.1	0.1
VOC	0.1	0.4
СО	0.6	2.3
NO <sub>x</sub>	6.7	29.1

- 110. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), the visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO,
  §60.670(a) SN-40 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

### Packaging/Shipping

### **Source Description**

Up to 6 tons per hour can be loaded at this point. Emissions are controlled by a Torit 4DFT-16 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.2	0.5

- 113. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO,
  §60.670(a) SN-41 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

### Wet Scrubber

#### **Source Description**

This scrubber must be used whenever Processes 13 A-D are being operated. Emissions from sources SN-31 through SN-41 will be controlled by this scrubber. It will use a variety of scrubbing liquids at a flow rate ranging between 10 and 30 gallons per minute and a gas flow rate of 3500 ft<sup>3</sup> per minute. The pressure drop across this scrubber has a minimum value of 5 inches of water and a maximum of 10 inches of water. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

#### **Specific Conditions**

115. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Conditions #5 and operation of the scrubber in accordance with the specifications listed in Specific Conditions #117 and #119.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub> <sup>1</sup>	0.36	1.57

1.  $PM/PM_{10}$  emissions include HAP emissions.

116. Pursuant to §18.8 of the Arkansas Air Pollution Control Code, the permittee shall not exceed the emissions rates set forth in the following table. Compliance with this specific condition shall be demonstrated through compliance with Plantwide Condition #14.

Pollutant	lb/hr	tpy
$HAP^{1}$	0.36	1.57

1. HAP emissions must comply with the requirements set forth in Plantwide Condition #13.

117. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR Part 70.6, the permittee shall maintain a scrubbing liquid flow rate between 10 and 30 gallons per minute. Compliance shall be determined through the installation of the monitoring device required by Specific Condition #120.

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- 118. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO, §60.670(a) SN-42 is an affected source and subject but not limited to the requirements of these subparts as listed in Plantwide Conditions #10 and #11.
- 119. Pursuant to §19.7 of the Arkansas Plan of Implementation for Air Pollution Control and 40 CFR Part 52, Subpart E, within 90 days of permit issuance and every 12 months thereafter, Porocel shall test the wet scrubber for particulate emissions using EPA reference method 5 or other EPA approved test method for particulate emissions and for opacity using EPA Reference Method 9. The tests shall be performed during the operation of Processes 13A, 13B, 13C, and 13D. These processes include sources SN-31 through SN-41. While performing the particulate tests, the processes shall be operating at 95% of the maximum possible throughput rate and Porocel shall also test the scrubber's efficiency using an inlet/outlet efficiency test approved by ADPC&E. If Porocel meets the emission rates during each test performed over a three year period, testing shall then be required once every twentyfour months with the first such annual test to be performed during the twenty-fourth month immediately following the third consecutively passed annual test. Porocel shall submit a written testing protocol to the Compliance Section Manager at least 15 days prior to any scheduled test.
- 120. Pursuant to 40 CFR 60, Subpart LL, §60.384(a) and 40 CFR 60, Supbart OOO, §60.674(a), the owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the change in pressure of the gas stream through the scrubber for any affected facility using a wet scrubber emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±250 pascals (±1 inch of water) gauge pressure and must be calibrated on an annual basis in accordance with the manufacturer's instructions.
- 121. Pursuant to 40 CFR 60, Subpart LL, §60.384 (b) and 40 CFR 60, Supbart OOO, §60.674(b), the owner or operator subject to the provisions of this subpart shall install, calibrate, maintain, and operate a monitoring device for the continuous measurement of the scrubbing liquid flow rate to a wet scrubber for any affected facility using any type of wet scrubbing emission control device. The monitoring device must be certified by the manufacturer to be accurate within ±5 percent of design scrubbing liquid flow rate and must be calibrated on at least an annual basis in accordance with the manufacturer's instructions.
- 122. Pursuant to 40 CFR 60, Subpart LL, §60.385(b) during the initial performance test of a wet scrubber, and at least weekly thereafter, the owner or operator shall record the measurements of both the change in pressure of the gas stream across the scrubber and the scrubbing liquid flow rate.

## Jet Mill

## **Source Description**

This mill was installed in 1997 and can process up to 6 tons per hour. Emissions are controlled by a Torit 2DFT-8 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.2	0.5

- 124. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR 60, Subpart OOO, \$60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 125. Pursuant to 40 CFR 60, Subpart OOO, §60.670(a) SN-43 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #11.

## **SN-44** Utility Unit A (Portable Vacuum)

## **Source Description**

This is a portable unit used at various sites around the plant. Emissions are vented through a Torit 2DFT-4 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

126. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.1

127. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.

## SN-45 Utility Unit B (Portable Vacuum)

## **Source Description**

This is a portable unit used at various sites around the plant. Emissions are vented through a Torit 2DFT-4 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

128. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Condition #5 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.1

129. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.

### Super Sack

## **Source Description**

This is where the supersacks are filled for storage and shipping. It can load 4 tons per hour of products. Emissions are controlled by a Torit 2DFT-8 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.2	0.4

- 131. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO,
  §60.670(a) SN-46 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

## Calciner #3

#### **Source Description**

This calciner was installed in 1998 and can dry up to 4 tons per hour. It is fired by natural gas at a rate of 4 MMBtu/hr. Emissions are vented through a Torit 2D-F baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.4	1.8
$SO_2$	0.1	0.1
VOC	0.1	0.1
СО	0.1	0.5
NO <sub>x</sub>	0.4	1.8

- 134. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60.382(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 135. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) SN-47 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

#### Calciner #4

#### **Source Description**

This calciner was installed in 1998 and can dry up to 4 tons per hour. It is fired by natural gas at a rate of 4 MMBtu/hr. Emissions are vented through a Torit 2D-F baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.4	1.8
$SO_2$	0.1	0.1
VOC	0.1	0.1
СО	0.2	0.7
NO <sub>x</sub>	0.4	1.8

- 137. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60.382(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 138. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) SN-48 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

## FB Storage Bin

### **Source Description**

This bin is used to store bauxite that has been flash calcined. Up to 3 tons per hour can pass through this bin. Emissions are controlled by a Torit TBV-F bin vent filter. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.2

- 140. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, 40 CFR Part 60, Subpart LL, §60.382(a)(2) and 40 CFR 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) and 40 CFR 60, Subpart OOO,
  §60.670(a) SN-49 is an affected source and subject to the requirements of these subpart as listed in Plantwide Conditions #10 and #11.

#### Feed Tank

### **Source Description**

This feed tank can feed materials at a maximum rate of 2 tons per hour. Emissions are controlled by a Torit 4DFT-16 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.2

- 143. Pursuant to \$18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR 60, Subpart LL, \$60.382(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 144. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) SN-50 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

Pneumatic Feed - Storage

#### **Source Description**

Pneumatic feed is used to feed various powdered materials to pieces of equipment throughout the plant. This system was installed in 1998 and can move up to 10 tons per hour of material. Emissions are controlled by a Torit Downflow model 3DFT-36 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

#### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.2	0.5

- 146. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60.382(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 147. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a), SN-19 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

#### Hummer Mill #3

### **Source Description**

The Hummer Mill was installed in 1998. It can process up to 4 tons per hour of various materials. Emissions are controlled using a Torit 2DFT-8 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.3

- 149. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 150. Pursuant to 40 CFR 60, Subpart OOO, §60.670(a), SN-11 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #11.

#### Hummer Mill #4

### **Source Description**

The Hummer Mill was installed in 1998. It can process up to 4 tons per hour of various materials. Emissions are controlled using a Torit 2DFT-8 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

## **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.1	0.3

- 152. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart OOO, §60.672(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 153. Pursuant to 40 CFR 60, Subpart OOO, §60.670(a), SN-11 is considered an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #11.

Flash Calciner (F3)

## **Source Description**

This calciner was installed in 1998 and can dry up to 5 tons per hour. It is fired by natural gas at a rate of 16 MMBtu/hr. Emissions are vented through a Torit 4DF-32 (80) baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

### **Specific Conditions**

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	1.0	4.4
$SO_2$	0.1	0.1
VOC	0.1	0.5
СО	0.6	2.5
NO <sub>x</sub>	2.3	9.8

- 155. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60.382(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 156. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a) SN-48 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.
#### SN-55

Feed, Blender, Tub, Activator (A2), Screening/Crushing

#### **Source Description**

The curing-activator is used in the impregnation of materials. It is fired by natural gas and is rated at 5.5 MMBtu/hr. Emissions are vented through a Torit Dustex 4DFT-16 baghouse. Hourly emissions are based on maximum capacity of equipment and annual rates are based on production rates as determined by maximum possible material flow through the process.

#### **Specific Conditions**

157. Pursuant to §19.5 of the Regulations of the Arkansas State Implementation Plan for Air Pollution Control and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table. Compliance with this specific condition shall be demonstrated by maintaining the throughput limits set forth in Plantwide Conditions #5 and #6 and operation of the baghouse in accordance with the specifications listed in the permit application.

Pollutant	lb/hr	tpy
PM/PM <sub>10</sub>	0.5	0.3
$SO_2$	0.1	0.1
VOC	0.1	0.2
СО	0.2	0.9
NO <sub>x</sub>	0.8	3.4

- 158. Pursuant to §18.5 of the Arkansas Air Pollution Control Code, 40 CFR Part 52, Subpart E, and 40 CFR Part 60, Subpart LL, §60.382(a)(2), visible emissions from this source shall not exceed 7 percent opacity. Compliance with this limit shall be demonstrated through Plantwide Condition #9.
- 159. Pursuant to 40 CFR Part 60, Subpart LL, §60.380(a), SN-28 is an affected source and subject to the applicable requirements of this subpart as listed in Plantwide Condition #10.

## SECTION V: PLANTWIDE CONDITIONS

- 1. Pursuant to \$19.4(o) of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. \$8-4-203 as referenced by \$8-4-304 and \$8-4-311, the Director shall be notified in writing within thirty (30) days after construction has commenced, construction is complete, the equipment and/or facility is first placed in operation, and the equipment and/or facility first reaches the target production rate.
- 2. Pursuant to \$19.4(q) of Regulation 19 and 40 CFR Part 52, Subpart E, the Director may cancel all or part of this permit if the construction or modification authorized herein is not begun within 18 months from the date of the permit issuance or if the work involved in the construction or modification is suspended for a total of 18 months or more.
- 3. Pursuant to \$19.7 of Regulation 19, 40 CFR Part 52, Subpart E, and A.C.A. \$8-4-203 as referenced by \$8-4-304 and \$8-4-311, each emission point for which an emission test method is specified in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the Department of the scheduled date of compliance testing at least fifteen (15) days in advance of such test. Compliance test results shall be submitted to the Department within thirty (30) days after the completed testing. The permittee shall provide:
  - (1) Sampling ports adequate for applicable test methods
  - (2) Safe sampling platforms
  - (3) Safe access to sampling platforms
  - (4) Utilities for sampling and testing equipment
- 4. Pursuant to \$19.3 of the Regulations of the Arkansas Plan of Implementation for Air Pollution Control and A.C.A. \$8-4-203 as referenced by A.C. A. \$8-4-304 and \$8-4-311, the equipment, control apparatus and emission monitoring equipment shall be operated within their design limitations and maintained in good condition at all times.
- 5. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR §70.6, this facility shall not exceed the throughput limits for the processes listed below, and as described in this permit, set forth in the following table. Compliance shall be shown through record keeping requirements set forth in Plantwide Condition #8.

Process Number	Process Name	PM/PM <sub>10</sub> Emissions Per Ton Processed <sup>*</sup> (lb)	Tons Processed Per Week
1	Conventional Calcined Granular Material	0.963	672
2	Non-Calcined Mill Materials	0.781	560
3	Spherical Materials	1.192	504
4	Bauxite Pellets	1.182	336
5	Clay Products	1.261	168
6	Alumina Scale Product	1.052	224
7	Specialty Milling	0.274	504
8	Material Transfer	0.022	1,344
9	Toll Regeneration for Moisture	0.495	672
9B	Toll Regeneration for Hydrocarbons	0.520	192
10	Toll Drying	0.701	784
11	Milled & Flash Calcined Aluminas	0.185	2,184
12	Active Plant	0.475	336
13A	Catalyst Toll Processing (Extrusion)	0.473	224
13B	Catalyst Toll Processing (Impregnation)	0.236	448
13C	Catalyst Toll Processing (Calcination)	0.487	1,008
13D	Catalyst Toll Processing (Calsicat Material Calcination)	0.139	228
14	Raw Materials Unloading	0.01	1,120
15	Active Plant Processing - Second Train	0.475	336

\*These factors represent maximum potential emissions per process.

6. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR §70.6, this facility shall use only pipeline quality natural gas as fuel. Natural gas usage shall not exceed 136.8 MMft<sup>3</sup> per month based on a rolling twelve (12) month average, updated monthly. Compliance shall be shown through record keeping requirements set forth in Plantwide Condition #8.

- 7. Pursuant to \$19.5 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed a PM/PM<sub>10</sub> emission rate from material processing (excluding emissions resulting from natural gas combustion) of 1.9 tons per week and 96.3 tons per consecutive 12 month period. Compliance shall be demonstrated through the record keeping requirements set forth in Plantwide Condition #8.
- 8. Pursuant to \$19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, this facility shall maintain records of the amounts and types of products produced at this facility and the emissions resulting from the amount of products produced on a weekly and a rolling 12 month basis. These record shall be kept on the form provided in Attachment B or an equivalent format. Product records are to be kept on a "per process" basis according to the processes listed in Plantwide Condition #5 and described in this permit. Emissions shall be calculated using the pound PM/PM<sub>10</sub> per ton of material processed emission factor as listed in the table in Plantwide Condition #5. The permittee shall also maintain records of the amount of natural gas used at this facility. Natural gas usage records shall be kept on a monthly basis and updated no later than the 15th day of the month following the month to which the records pertain. These records shall be kept on site and made available to Department personnel upon request. A report of these amounts and the emissions associated with them shall be submitted to the Department in accordance with General Provision #7.
- 9. Pursuant to \$19.7 of Regulation 19 and 40 CFR 52, Subpart E, the permittee shall conduct weekly observations of the opacity from all sources and keep a record of these observations. If visible emissions are detected the permittee shall conduct a 6-minute opacity reading in accordance with EPA Reference Method #9. The results of these observations shall be kept on site and made available to Department personnel upon request.
- 10. Pursuant to 40 CFR Part 60 (NSPS), Subpart LL, *Standards of Performance for Metallic Minerals Processing Plants*, sources to which this subpart is applicable as indicated in the emissions unit information section (Section IV) of this permit are subject but not limited to the following requirements:
  - A. Pursuant to §60.382 (a) no owner or operator subject to the provisions of this subpart shall cause to be discharged to the atmosphere from any affected facility any stack emission that:

1.) Contain particulate matter in excess of 0.05 grams per dry standard cubic meter.

2.) Exhibit greater than 7 percent opacity, unless the stack emissions are discharged from an affected facility using a wet scrubbing emission control device.

- B. Pursuant to §60.382 (b) on or after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days of the initial startup, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from an affected facility any process fugitive emissions that exhibit greater than 10 percent opacity.
- C. Pursuant to §60.385(a) the owner operator subject to the provisions of this subpart shall conduct a performance test and submit to the Administrator a written report of the results of the test as specified in §60.8(a).
- D. Pursuant to 60.385(c) after the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when the measurements of the scrubber measurement loss (or gain) and liquid flow rate differ by more than  $\pm 30$  percent from the average obtained during the most recent performance test.
- E. Pursuant to \$60.385(d) the reports required under paragraph (c) shall be postmarked within 30 days following the end of the second and fourth calendar quarters.
- F. Pursuant to §60.386(b) the owner operator shall determine compliance with the particulate matter standards §60.382 as follows:

Method 5 or 17 shall be used to determine the particulate matter concentration. The sample volume for each run shall be at least 1.70 dscm (60 dscf). The sampling probe and filter holder of Method 5 may be operated without heaters if the gas stream being sampled is at ambient temperature. For gas streams above ambient temperature, the Method 5 sampling train shall be operated with a probe and filter temperature slightly above the effluent temperature (up to a maximum filter temperature of 121EC (250EF)) in order to prevent water condensation on the filter.
 Method 9 and the procedures in §60.11 shall be used to determine opacity from stack emissions and process fugitive emissions. The observer shall read opacity only when emissions are identified as emanating solely from the

affected facility being observed.

- G. Pursuant to \$60.386(c) to comply with \$60.385(c) the owner or operator shall use the monitoring devices in \$60.3284(a) and (b) to determine pressure loss of the gas stream through the scrubber and scrubbing liquid flow rate at any time during each particulate matter run, and the average of the three determinations shall be computed.
- 11. Pursuant to 40 CFR Part 60 (NSPS) Subpart OOO, Standards of Performance for

*Nonmetallic Mineral Processing* Plants, sources to which this subpart is applicable as indicated in the emissions unit information section (Section IV) of this permit are subject but not limited to the following requirements:

A. Pursuant to §60.672(a) no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions that:

(1) Contain particulate matter in excess of 0.05 g/dscm; or(2) Exhibit greater than 7 percent opacity, unless the stack emissions are discharged from an affected facility using a wet scrubbing control device.

- B. Pursuant to \$60.672(b) on and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity.
- C. Pursuant to §60.672(c) on and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup, no owner or operator shall cause to be discharged into the atmosphere from any crusher, at which a capture system is not used, fugitive emissions which exhibit greater than 15 percent opacity.
- D. Pursuant to \$60.672(d) truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section.
- E. Pursuant to §60.672(e) If any transfer point on a conveyor belt or any other affected facility is enclosed in a building, then each enclosed affected facility must comply with the emissions limits in paragraphs (a), (b) and (c) of this section, or the building enclosing the affected facility or facilities must comply with the following emission limits:

(1) No owner or operator shall cause to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions except emissions from a vent as defined in §60.671.

<sup>(2)</sup> No owner or operator shall cause to be discharged into the atmosphere from

any vent of any building enclosing any transfer point on a conveyor or any other affected facility emissions which exceed the stack emissions limits in paragraph (a) of this section.

- F. Pursuant to §60.675 (a) in conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures 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). Acceptable alternative methods and procedures are given below.
- G. Pursuant to \$60.675(b) The owner or operator shall determine compliance with the particulate matter standards in \$60.672(a) as follows:

(1) Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121EC (250EF), to prevent water condensation on the filter.

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

H. Pursuant to §60.675(c) in determining compliance with the particulate matter standards in §60.672 (b) and (c), the owner or operator shall use Method 9 and the procedures in §60.11, with the following additions:

(1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(2) The observer shall, when possible, select a position that minimizes interference from other fugitive emissions sources (e.g. road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.
(3) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

I. Pursuant to \$60.675(d) In determining compliance with \$60.672(e), the owner or operator shall use Method 22 to determine fugitive emissions. The performance test

shall be conducted while all affected facilities inside the building are operating. The performance test for each building shall be at least 75 minutes in duration, with each side of the building and the roof be observed for at least 15 minutes.

J. Pursuant to §60.675(e), the owner or operator may use the following as alternatives to the reference methods and procedures specified in this section:

(1) For the method and procedure of paragraph (c) in this section, if emissions from two or more facilities continuously interfere so that the opacity of fugitive emissions from an individual affected facility cannot be read, either of the following procedures may be used:

(i) Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

(ii) Separate the emissions so that the opacity of fugitive emissions from each facility can be read.

- O. Pursuant to 60.676(d) after the initial performance test of a wet scrubber, the owner or operator shall submit semiannual reports to the Administrator of occurrences when measurements of the scrubber pressure loss (or gain) and liquid flow rate differ by more than  $\pm 30$  percent from the average determined during the most recent performance test.
- P. Pursuant to \$60.676(e) the reports required under paragraph (d) shall be postmarked within 30 days following end of the second and fourth calendar quarters.
- Q. Pursuant to \$60.676(f) the owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in \$60.672, including reports of opacity measurements made using Method 9 to demonstrate compliance with \$60.672(b) and (c) and reports of observations made using Method 22 to demonstrate compliance with \$60.672(e).
- 12. Pursuant to §26.8 (b) of the Regulations of the Arkansas Operating Air Permit Program, the facility may perform demonstration runs to evaluate processing of new metallic and non-metallic minerals that may potentially be used in processes 9, 12, and 13, as listed in this permit, provided that the following conditions are met:
  - 1. They are not considered modifications under any provision of Title I of the Act
  - 2. Emissions allowed in this permit are not exceeded
  - 3. These demonstration runs do not violate any applicable requirements; and

4. Do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements.

Compliance with this condition shall be demonstrated through submittal of the following information to the Department:

- A. Within a maximum of 30 days after the completion of a demonstration run, the facility shall submit a summary report of the results to the Department. This report will include information as to the amount of product produced and actual raw materials used, results of stack testing that was performed, and notification as to whether the facility intends to add the new material to their existing permit through a permit modification, place a temporary hold on the incorporation of the new material into the permit until a later date, or not pursue the production of the new material.
- B. The permittee shall maintain records of the emissions generated during demonstration runs. These records shall be used to insure that emissions limits for the facility, including the weekly and 12 month limits listed in Plantwide Condition #7, are not being exceed. These records shall be kept on the form provided as Attachment B or an equivalent format. These records shall be updated within 15 days of the completion of every demonstration run performed at the facility. These records shall be kept on site and made available to Department personnel upon request.
- C. The permittee shall not continuing processing of a product for which a demonstration run has been performed without first modifying their permit to include the new product.
- 13. Pursuant to §18.8 of the Arkansas Air Pollution Control Code, the permittee may use HAP containing materials provided that the HAP emissions exist only in particulate form and the emission rates as listed in the following table are not exceeded. HAPs may only be used in sources SN-31 through SN-41 when emissions from these sources are vented through the wet scrubber (SN-42). Compliance shall be determined using the ACGIH TLV values listed in the ACGIH handbook of <u>Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs)</u>. If no TLV is available from this source, the facility may request the use of an alternate value from the Department. The permittee shall, once a year, on or before February 28, research and update the TLVs for all HAPs. Additionally, the permittee will update specific TLVs on the subsequent monthly emission record if notified by the Department of a change in the TLVs.

TLV of HAP <sup>1</sup> greater than or equal to (mg/m <sup>3</sup> )	Allowable HAP Emission Rate (lb/hr)
0.001	0.0008
0.005	0.0039
0.01	0.0078
0.025	0.0195
0.05	0.039
0.075	0.0585
0.1	0.0781
0.2	0.1561
0.3	0.2342
0.4	0.3123

1. Threshold Limit Values as listed in the current ACGIH <u>TLVs and BEIs</u>

- 14. Pursuant to §18.10 of the Arkansas Air Pollution Control Code and A.C.A. §8-4-203 as referenced by §8-4-304 and 8-4-311, the permittee shall maintain records of the amounts of HAPs emitted both from the processes listed in this permit and from any demonstration runs, as described in Plantwide Condition #12, on a monthly basis. These records shall be used to demonstrated compliance with Plantwide Condition #13 and shall be updated no later than the 5th day of the month following the month to which they pertain. These records shall be kept on site and made available to Department personnel upon request. A report of these emissions shall be submitted to the Department in accordance with General Provision #7.
- 15. Pursuant to \$18.9 of the Arkansas Air Pollution Control Code, no person shall cause or permit the handling, transporting, or storage of any material in a manner which allows or may allow unnecessary amounts of air contaminants to become airborne.
- 16. Pursuant to Regulation 26 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit subsumes and incorporates all previously issued air permits for this facility.

# PERMIT SHIELD LANGUAGE

- 17. Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements, as of the date of permit issuance, included in and specifically identified in item A of this condition:
  - A. The following have been specifically identified as applicable requirements based upon information submitted by the permittee in an application dated August 29, 1997.

Source No.	Regulation	Description
Facility	Arkansas Regulation 19	Compilation of Regulations of the Arkansas State Implementation Plan for Air Pollution Control
Facility	Arkansas Regulation 26	Regulations of the Arkansas Operating Air Permit Program
1,3,4,6,7,8, 9,10,15,16, 19-34,36- 42,44-51, 54,55	New Source Performance Standards, 40 CFR Part 60, Subpart LL	Standards for Performance for Metallic Minerals Processing Plants
2,3,5,8,10,1 1,12,14,15,2 1,23,24,25,2 8,29,30,32,3 3,34,36- 46,49,52,53	New Source Performance Standards, 40 CFR Part 60 Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants

B. The following requirements have been specifically identified as not applicable, based upon information submitted by the permittee in an application dated April 2, 1998.

Description of Regulation	Regulatory Citation	Affected Source	Basis for Determination
NONE			

C. Nothing shall alter or affect the following:

Provisions of Section 303 of the Clean Air Act;

The liability of an owner or operator for any violation of applicable requirements prior to or at the time of permit issuance;

The applicable requirements of the acid rain program, consistent with section 408(a) of the Clean Air Act; or

The ability of the EPA to obtain information under Section 114 of the Clean Air Act.

#### SECTION VI: DE MINIMIS EMISSION SOURCES

Pursuant to §26.3(d) of Regulation 26, the following sources are below the *de minimis* emission levels. Insignificant and trivial activities will be allowable after approval and federal register notice publication of a final list as part of the operating air permit program. Any activity for which a state or federal applicable requirement applies is not *de mimimis*, even if this activity meets the criteria of §3(d) of Regulation 26 or is listed below. *De minimis* emission determinations rely upon the information submitted by the permittee in an application dated April 2, 1998.

SN	Source Name	Justification
17	Receiver Exhauster	Group C #5
18	Receiver Exhauster	Group C #5

Pursuant to §26.3(d) of Regulation 26, the following emission units, operations, or activities have been determined by the Department to be below the de minimis emission levels. Activities included in this list are allowable under this permit and need not be specifically identified.

- 1. Natural gas-burning equipment with a design rate less than 1 million BTU per hour.
- 2. Combustion emissions from propulsion of mobile sources and emissions from refueling these sources unless regulated by Title II and required to obtain a permit under Title V of the federal Clean Air Act, as amended. This does not include emissions from any transportable units, such as temporary compressors or boilers. This does not include emissions from loading racks or fueling operations covered under any applicable federal requirements.
- 3. Air conditioning and heating units used for comfort that do not have applicable requirements under Title VI of the Act.
- 4. Ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing/industrial or commercial process.
- 5. Non-commercial food preparation or food preparation at restaurants, cafeterias, or caterers, etc.
- 6. Consumer use of office equipment and products, not including commercial printers or businesses primarily involved in photographic reproduction.
- 7. Janitorial services and consumer use of janitorial products.

- 8. Internal combustion engines used for landscaping purposes.
- 9. Laundry activities, except for dry-cleaning and steam boilers.
- 10. Bathroom/toilet emissions.
- 11. Emergency (backup) electrical generators at residential locations.
- 12. Tobacco smoking rooms and areas.
- 13. Blacksmith forges.
- 14. Maintenance of grounds or buildings, including: lawn care, weed control, pest control, and water washing activities.
- 15. Repair, up-keep, maintenance, or construction activities not related to the sources' primary business activity, and not otherwise triggering a permit modification. This may include, but is not limited to such activities as general repairs, cleaning, painting, welding, woodworking, plumbing, re-tarring roofs, installing insulation, paved/paving parking lots, miscellaneous solvent use, application of refractory, or insulation, brazing, soldering, the use of adhesives, grinding, and cutting.<sup>1</sup>
- 16. Surface-coating equipment during miscellaneous maintenance and construction activities. This activity specifically does not include any facility whose primary business activity is surface-coating or includes surface coating or products.
- 17. Portable electrical generators that can be "moved by hand" from one location to another.<sup>2</sup>
- 18. Hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning, or machining wood, metal, or plastic.
- 19. Brazing or soldering equipment related to manufacturing activities that do not result in emission of HAPs.<sup>3</sup>

<sup>&</sup>lt;sup>1</sup> Cleaning and painting activities qualify if they are not subject to VOC or HAP control requirements. Asphalt batch plant owners/operators must get a permit.

<sup>&</sup>lt;sup>2</sup>"Moved by hand" means that it can be moved by one person without assistance of any motorized or non-motorized vehicle, conveyance, or device.

<sup>&</sup>lt;sup>3</sup>Brazing, soldering, and welding equipment, and cutting torches related to manufacturing and construction activities that emit HAP metals are more appropriate for treatment as insignificant activities based on size or production thresholds. Brazing, soldering, and welding equipment, and cutting torches related directly to plant maintenance and upkeep and repair or maintenance shop activities that emit HAP metals are treated as trivial and listed separately.

- 20. Air compressors and pneumatically operated equipment, including hand tools.
- 21. Batteries and battery charging stations, except at battery manufacturing plants.
- 22. Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOCs or HAPs.<sup>4</sup>
- 23. Containers of less than or equal to 5 gallons in capacity that do not emit any detectable VOCs or HAPs when closed. This includes filling, blending, or mixing of the contents of such containers by a retailer.
- 24. Storage tanks, reservoirs, and pumping and handling equipment of any size containing soaps, vegetable oil, grease, animal fat, and non-volatile aqueous salt solutions, provided appropriate lids and covers are used and appropriate odor control is achieved.
- 25. Equipment used to mix and package soaps, vegetable oil, grease, animal fat, and non-volatile aqueous salt solution, provided appropriate lids and covers are used and appropriate odor control is achieved.
- 26. Drop hammers or presses for forging or metalworking.
- 27. Equipment used exclusively to slaughter animals, but not including other equipment at slaughter-houses, such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment.
- 28. Vents from continuous emission monitors and other analyzers.
- 29. Natural gas pressure regulator vents, excluding venting at oil and gas production facilities.
- 30. Hand-held applicator equipment for hot melt adhesives with no VOCs in the adhesive.
- 31. Equipment used for surface coating, painting, dipping, or spraying operations, containing less than 0.4 lb/gal VOCs, has no hexavalent chromium, and emits no more than 0.1 tpy of all other HAPs.
- 32. Lasers used only on metals and other materials which do not emit HAPs in the process.
- 33. Consumer use of paper trimmers/binders.

<sup>&</sup>lt;sup>4</sup>Exemptions for storage tanks containing petroleum liquids or other volatile organic liquids are based on size and limits including storage tank capacity and vapor pressure of liquids stored and are not appropriate for this list.

- 34. Electric or steam-heated drying ovens and autoclaves, but not the emissions from the articles or substances being processed in the ovens or autoclaves or the boiler delivering the steam.
- 35. Salt baths using non-volatile salts that do not result in emissions of any air pollutant covered by this regulation.
- 36. Laser trimmers using dust collection to prevent fugitive emissions.
- 37. Bench-scale laboratory equipment used for physical or chemical analysis.
- 38. Routine calibration and maintenance of laboratory equipment or other analytical instruments.
- 39. Equipment used for quality control/assurance or inspection purposes, including sampling equipment used to withdraw materials for analysis.
- 40. Hydraulic and hydrostatic testing equipment.
- 41. Environmental chambers not using hazardous air pollutant gases.
- 42. Shock chambers, humidity chambers and solar simulators.
- 43. Fugitive emissions related to movement of passenger vehicles, provided the emissions are not counted for applicability purposes and any required fugitive dust control plan or its equivalent is submitted.
- 44. Process water filtration systems and demineralizers.
- 45. Demineralized water tanks and demineralizer vents.
- 46. Boiler water treatment operations, not including cooling towers.
- 47. Emissions from storage or use of water treatment chemicals, except for hazardous air pollutants or pollutants listed under regulations promulgated pursuant to Section 112(r) of the Act, for use in cooling towers, drinking water systems, and boiler water/feed systems.
- 48. Oxygen scavenging (de-aeration) of water.
- 49. Ozone generators.
- 50. Fire suppression systems.

- 51. Emergency road flares.
- 52. Steam vents and safety relief valves.
- 53. Steam leaks.
- 54. Steam cleaning operations.
- 55. Steam and microwave sterilizers.
- 56. Site assessment work to characterize waste disposal or remediation sites.
- 57. Miscellaneous additions or upgrades of instrumentation.
- 58. Emissions from combustion controllers or combustion shutoff devices.
- 59. Use of products for the purpose of maintaining motor vehicles operated by the facility, not including air cleaning units or such vehicles (i.e. antifreeze, fuel additives).
- 60. Stacks or vents to prevent escape of sanitary sewer gases through the plumbing traps.
- 61. Emissions from equipment lubricating systems (i.e. oil mist), not including storage tanks, unless otherwise exempt.
- 62. Residential wood heaters, cookstoves, or fireplaces.
- 63. Barbecue equipment or outdoor fireplaces used in conjunction with any residential or recreational use.
- 64. Log wetting areas and log flumes.
- 65. Periodic use of pressurized air for cleanup.
- 66. Solid waste dumpsters.
- 67. Emissions of wet lime from lime mud tanks, lime mud washers, lime mud piles, lime mud filter and filtrate tanks, and lime mud slurry tanks.
- 68. Natural gas odoring activities unless the Department determines that a nuisance may occur.
- 69. Emissions from engine crankcase vents.

- 70. Storage tanks used for the temporary containment of materials resulting from an emergency reporting of an unanticipated release.
- 71. Equipment used exclusively to mill or grind coatings in roll grinding rebuilding, and molding compounds where all materials charged are in paste form.
- 72. Mixers, blenders, roll mills, or calenders for rubber or plastic for which no materials in powder form are added and in which no organic solvents, diluents, or thinners are used.
- 73. The storage, handling, and handling equipment for bark and wood residues not subject to fugitive dispersion offsite (this applies to equipment only).
- 74. Maintenance dredging of pulp and paper mill surface impoundments and ditches containing cellulosic and cellulosic derived biosolids and inorganic materials such as lime, ash, or sand.
- 75. Tall oil soap storage, skimming, and loading.
- 76. Water heaters used strictly for domestic (non-process) purposes.
- 77. Facility roads and parking areas, unless necessary to control offsite fugitive emissions.
- 78. Agricultural operations, including onsite grain storage.

### SECTION VII: GENERAL PROVISIONS

- 1. Pursuant to 40 C.F.R. 70.6(b)(2), any terms or conditions included in this permit which 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 which 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. Pursuant to 40 C.F.R. 70.6(a)(2) and §26.7 of the Regulations of the Arkansas Operating Air Permit Program (Regulation 26), this permit shall be valid for a period of five (5) years beginning on the date this permit becomes effective and ending five (5) years later.
- 3. Pursuant to §26.4 of Regulation 26, it is the duty of the permittee to submit a complete application for permit renewal at least six (6) months prior to the date of permit expiration. Permit expiration terminates the permittee's right to operate unless a complete renewal application was submitted at least six (6) months prior to permit expiration, in which case the existing permit shall remain in effect until the Department takes final action on the renewal application. The Department will not necessarily notify the permittee when the permit renewal application is due.
- 4. Pursuant to 40 C.F.R. 70.6(a)(1)(ii) and §26.7 of Regulation 26, where an applicable requirement of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq* (Act) is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions are incorporated into the permit and shall be enforceable by the Director or Administrator.
- 5. Pursuant to 40 C.F.R. 70.6(a)(3)(ii)(A) and §26.7 of Regulation 26, records of monitoring information required by this permit shall include the following:
  - a. The date, place as defined in this permit, and time of sampling or measurements;
  - b. The date(s) analyses were performed;
  - c. The company or entity that performed the analyses;
  - d. The analytical techniques or methods used;
  - e. The results of such analyses; and
  - f. The operating conditions existing at the time of sampling or measurement.

- 6. Pursuant to 40 C.F.R. 70.6(a)(3)(ii)(B) and §26.7 of Regulation 26, records of all required monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.
- 7. Pursuant to 40 C.F.R. 70.6(a)(3)(iii)(A) and §26.7 of Regulation 26, the permittee shall submit reports of all required monitoring every 6 months. If no other reporting period has been established, the reporting period shall end on the last day of the anniversary month of this permit. The report shall be due within 30 days of the end of the reporting period. Even though the reports are due every six months, each report shall contain a full year of data. All instances of deviations from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official as defined in §26.2 of Regulation 26 and must be sent to the address below.

Arkansas Department of Pollution Control and Ecology Air Division ATTN: Air Enforcement Post Office Box 8913 Little Rock, AR 72219

- 8. Pursuant to 40 C.F.R. 70.6(a)(3)(iii)(B), §26.7 of Regulation 26, and §19.6 of Regulation 19, all deviations from permit requirements, including those attributable to upset conditions as defined in the permit shall be reported to the Department. An initial report shall be made to the Department within 24 hours of discovery of the occurrence. The initial report may be made by telephone and shall include:
  - a. The facility name and location,
  - b. The process unit or emission source which is deviating from the permit limit,
  - c. The permit limit, including the identification of pollutants, from which deviation occurs,
  - d. The date and time the deviation started,
  - e. The duration of the deviation,
  - f. The average emissions during the deviation,
  - g. The probable cause of such deviations,
  - h. Any corrective actions or preventive measures taken or being take to prevent such deviations in the future, and
  - i. The name of the person submitting the report.

A full report shall be made in writing to the Department within five (5) business days of discovery of the occurrence and shall include in addition to the information required by

initial report a schedule of actions to be taken to eliminate future occurrences and/or to minimize the amount by which the permits limits are exceeded and to reduce the length of time for which said limits are exceeded. If the permittee wishes, they may submit a full report in writing (by facsimile, overnight courier, or other means) within 24 hours of discovery of the occurrence and such report will serve as both the initial report and full report.

- 9. Pursuant to 40 C.F.R. 70.6(a)(5) and §26.7 of Regulation 26, and A.C.A.§8-4-203, as referenced by §8-4-304 and §8-4-311, if any provision of the permit or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications hereof which can be given effect without the invalid provision or application, and to this end, provisions of this Regulation are declared to be separable and severable.
- 10. Pursuant to 40 C.F.R. 70.6(a)(6)(i) and §26.7 of Regulation 26, the permittee must comply with all conditions of this Part 70 permit. Any permit noncompliance with applicable requirements as defined in Regulation 26 constitutes a violation of the Clean Air Act, as amended, 42 U.S.C. 7401, *et seq.* and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. Any permit noncompliance with a state requirement constitutes a violation of the Arkansas Water and Air Pollution Control Act (A.C.A. §8-4-101 *et seq.*) and is also grounds for enforcement action; for permit termination, revocation; or for denial of a permit termination, revocation and reissuance, or modification; or permit termination.
- 11. Pursuant to 40 C.F.R. 70.6(a)(6)(ii) and §26.7 of Regulation 26, it shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- 12. Pursuant to 40 C.F.R. 70.6(a)(6)(iii) and §26.7 of Regulation 26, this permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
- 13. Pursuant to 40 C.F.R. 70.6(a)(6)(iv) and §26.7 of Regulation 26, this permit does not convey any property rights of any sort, or any exclusive privilege.
- 14. Pursuant to 40 C.F.R. 70.6(a)(6)(v) and §26.7 of Regulation 26, the permittee shall furnish to the Director, within the time specified by the Director, any information that the Director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Director copies of records

required to be kept by the permit. For information claimed to be confidential, the permittee may be required to furnish such records directly to the Administrator along with a claim of confidentiality.

- 15. Pursuant to 40 C.F.R. 70.6(a)(7) and §26.7 of Regulation 26, the permittee shall pay all permit fees in accordance with the procedures established in Regulation 9.
- 16. Pursuant to 40 C.F.R. 70.6(a)(8) and §26.7 of Regulation 26, no permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for elsewhere in this permit.
- 17. Pursuant to 40 C.F.R. 70.6(a)(9)(i) and §26.7 of Regulation 26, if the permittee is allowed to operate under different operating scenarios, the permittee shall, contemporaneously with making a change from one operating scenario to another, record in a log at the permitted facility a record of the scenario under which the facility or source is operating.
- 18. Pursuant to 40 C.F.R. 70.6(b) and §26.7 of Regulation 26, all terms and conditions in this permit, including any provisions designed to limit a source's potential to emit, are enforceable by the Administrator and citizens under the Act unless the Department has specifically designated as not being federally enforceable under the Act any terms and conditions included in the permit that are not required under the Act or under any of its applicable requirements.
- 19. Pursuant to 40 C.F.R. 70.6(c)(1) and §26.7 of Regulation 26, any document (including reports) required by this permit shall contain a certification by a responsible official as defined in §26.2 of Regulation 26.
- 20. Pursuant to 40 C.F.R. 70.6(c)(2) and §26.7 of Regulation 26, the permittee shall allow an authorized representative of the Department, upon presentation of credentials, to perform the following:
  - a. Enter upon the permittee's premises where the permitted source is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
  - d. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with this permit or applicable requirements.

- 21. Pursuant to 40 C.F.R. 70.6(c)(5) and §26.7 of Regulation 26, the permittee shall submit a compliance certification with terms and conditions contained in the permit, including emission limitations, standards, or work practices. This compliance certification shall be submitted annually and shall be submitted to the Administrator as well as to the Department. All compliance certifications required by this permit shall include the following:
  - a. The identification of each term or condition of the permit that is the basis of the certification;
  - b. The compliance status;
  - c. Whether compliance was continuous or intermittent;
  - d. The method(s) used for determining the compliance status of the source, currently and over the reporting period established by the monitoring requirements of this permit; and
  - e. Such other facts as the Department may require elsewhere in this permit or by \$114(a)(3) and 504(b) of the Act.
- 22. Pursuant to \$26.7 of Regulation 26, nothing in this permit shall alter or affect the following:
  - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the Administrator under that section;
  - b. The liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance;
  - c. The applicable requirements of the acid rain program, consistent with \$408(a) of the Act; or
  - d. The ability of EPA to obtain information from a source pursuant to \$114 of the Act.
- 23. Pursuant to A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, this permit authorizes only those pollutant emitting activities addressed herein.