# ADEQ OPERATING AIR PERMIT

Transfer of Permit is Effective April 25, 2002.

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

Permit #: 598-AOP-R2

IS ISSUED TO:

BPB Gypsum
794 State Highway 369 North
Nashville, AR 71852
Howard County
CSN: 31-0010

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:

Keith A. Michaels	SECTION I: FA	CII ITV INI	EODMATION	Date Modified
Signed:				
AND IS SUBJECT TO	ALL LIMITS AND	CONDITIO	NS CONTAINE	ED HEREIN.
June 11,	1999	and	June	10, 2004

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PERMITTEE: BPB Gypsum, Inc.

CSN: 31-0010 PERMIT NUMBER: 598-AOP-R2

FACILITY ADDRESS: 794 State Highway 369 North

Nashville, AR 71852

COUNTY: Howard

CONTACT POSITION: Ms. Jerri Campos

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UTM North-South (X): 3771.4 UTM East-West (Y): 420.1

#### **SECTION II: INTRODUCTION**

James Hardie Gypsum (previously Briar Gypsum) owns and operates a gypsum wallboard manufacturing facility in Nashville (Howard County), Arkansas. This permit modification

authorizes the facility to replace the existing primary crusher (SN-06) with a unit of twice the crushing capacity. This permit also authorizes the facility to reroute a sleuter machine emission source from one baghouse (SN-18) to another (SN-05). This permitting action also removes references to a portable crusher (SN-54), which was never installed. Emission changes associated with this action include an hourly particulate increase of 30.6 lb/hr and an annual particulate decrease of 0.7 ton/yr.

The Department also recognizes with this permitting action that in 1999, Air Permit 598-AOP-R0 classified James Hardie Gypsum as a major source under the Prevention of Significant Deterioration (PSD) regulations in error. The facility did not have the physical capability to emit at major stationary source thresholds at that time. With the installation of the new crusher (SN-06) for the current modification, the facility is hereby newly classified as a major stationary source under PSD. Any subsequent modifications above the PSD significant emission rates will require a full PSD permit review.

#### **Process Description**

The James Hardie Gypsum plant has an open pit quarry located approximately 1.5 miles south-southeast of the manufacturing facility. The mine currently removes 1.25 million cubic yards of overburden per year in order to produce 750,000 tons of gypsum ore. The gypsum ore lies in three dominant seams, each separated by varying thicknesses of overburden. After the overburden has been removed, the exposed gypsum ore is drilled then blasted to fragment the ore into manageable sizes so that the ore can be loaded and transported to the manufacturing facility.

At the receiving area, adjacent to the manufacturing site, the raw ore is dumped directly into the receiving pit or is staged in a covered storage area next to the receiving pit. At the receiving pit there is a large jack hammer mounted on a hydraulic boom which breaks up the oversized pieces of ore which fail to pass through the pit opening to the screening grate.

Once the ore has passed over the screening grate, the ore is crushed by the primary crusher. After the primary crusher, the ore is transported via moving belt conveyor to the dry ore storage area. The gypsum from the storage area is removed on a semi-continuous basis as needed. Upon demand, the ore from the dry ore storage area is reclaimed and transported by conveyor to the secondary crusher receiving hopper. There, the ore is further reduced in size prior to being transported to one of the seven rock storage bins located inside the facility. A shuttle conveyor drops the crushed ore into one of the storage bins automatically so as to keep the level of crushed ore at an optimal level.

At this point, there are six identical parallel process lines plus a seventh independent line. Each of the six identical lines includes a rock bin, Raymond Roller mill, cyclone and associated

ducting and material handling equipment. The following discussion describes one of the six identical process lines but applies to all since they are essentially the same.

From the rock storage bin, the ore is metered into its corresponding Raymond Roller mill. The Raymond Roller mill grinds the gypsum rock into a fine powder which is then conveyed pneumatically to a high efficiency cyclone to separate the gypsum powder from the air stream. The small amount of material not collected in the cyclone is captured and collected by the associated baghouse on each Raymond Roller Mill. The ground gypsum is referred to as land plaster. The land plaster is then conveyed from the cyclone hopper and baghouse rotary valve via screw conveyor to one of six (6) land plaster storage bins.

From the storage bins the land plaster is metered into the continuous calcining kettles. The gypsum is metered into the calcining kettles (6 units) in such a way that the correct residence time and corresponding product temperature is achieved. The calcining kettles are heated by natural gas fired burners. This process facilitates the removal of the chemically bound moisture in the raw gypsum. The resultant product, with the chemically bound water removed, is referred to as plaster of Paris or stucco.

The stucco is gravity fed from the kettles into hot pits. The stucco, still hot as it exits the hot pits, is conveyed via screw conveyor and then pneumatically to a collecting and cooling baghouse where the finished stucco is separated from the conveying air stream. The stucco collected in the stucco baghouse, called the Kettle Buell Baghouse, is then transferred to Kettle Stucco 500 ton Storage Bin.

The seventh independent line includes a rock bin which meters the crushed rock via a chain feeder into the Claudius Peter Flash Calciner (CP Mill). The CP Mill utilizes a natural gas heater and lot gas recirculation system with two baghouses (CP Mill Baghouses) to both grind and flash calcine the rock directly into stucco. The stucco is removed from the lot gas stream by the CP Mill baghouses and transferred by conveyors then pneumatically to the CP Mill Buell Baghouse. The stucco collected in the CP Mill Buell Baghouse is then transferred to the CP Mill 500 ton Stucco Storage Bin.

From the feed hoppers, the stucco is metered into a mixing screw conveyor. At this point the material is conveyed through a screw conveyor to the pin mixer. Several ingredients are metered into this screw conveyor depending on the type of wallboard to be made. These products, the purpose they serve, and their associated emission points are discussed in detail below.

#### Vermiculite

Vermiculite, from the vermiculite storage tank, is added to enhance the fire rating of the board. The vermiculite is off-loaded in bulk quantities and the dust laden air generated in the transfer process is vented to the vermiculite transfer baghouse prior to being vented to the atmosphere.

# **Fiberglass**

Fiberglass is introduced into the wallboard mixture through a mixing screw conveyor to act as a binding agent for the fire retardant wallboard.

#### Corn Starch & Land Plaster

A mixture of corn starch and land plaster is blended together in a ball mill prior to being introduced into the screw conveyor. The land plaster acts as an accelerator which causes the liquid wallboard mixture (mud) to set up faster. The starch from the starch storage tank is used as a viscosity enhancing agent which makes the mud easier to handle and also help prevent settling of the suspended particles in the mixture. The starch is off-loaded in bulk quantities and the dust laden air generated in the transfer process is vented to the starch transfer baghouse.

#### Potash/Boric Acid

Potash and/or boric acid, from their respective storage tanks, is added to the stucco as it is conveyed through the screw conveyor depending on the type of wallboard to be produced (i.e., fire rated or standard). Both materials are off-loaded in bulk quantities and the dust laden air generated in the transfer process is vented to the potash transfer baghouse or the boric acid transfer baghouse as appropriate.

The resultant dry mixture enters the Pin Mixer which is a large, closed top, agitated mixing vessel where water and a foaming agent are added to produce the correct mixture or slurry. When water resistant wallboard is being produced, a liquid silicone based product is also added. Once the slurry or mud has reached the right consistency, it is poured onto the moving wallboard paper and then extruded between the top and bottom layers of paper. The paper is approximately four feet wide as it comes off the roll. The deposition process takes place on a forming table with a vibrating roller and is then transferred to a belt moving at approximately 400 feet per minute.

The rate at which mud is deposited is controlled to correspond to the thickness of wallboard being produced, the thicker the wallboard, the quicker the deposition rate. As the wallboard is produced, the edges of the bottom sheet of paper are turned up to keep the mud from leaking out of the newly formed wallboard. A thin bead of glue is placed onto the top layer of paper and is then allowed to bond to the lower piece. Once the two sheets of paper have been glued together, the mud is contained in the "paper envelope." The wallboard is produced in a continuous sheet as it is conveyed down the long roller bed. As the wallboard travels down the conveyor line, the

plaster of Paris (mud) begins to re-hydrate and set up. By the time it reaches approximately the mid point of the conveyer, the product is already firm to the touch. At the end of the conveyor system, the wallboard is cut to length and sent through an inverter prior to entering the board dryer.

Drying is accomplished in one of two continuously moving board dryers. Line 1 feeds Board Dryer 1, and Line 2 feeds Board Dryer 2. The wallboard travels slowly down the length of the dryer and exits the dryer in a dry condition ready to withstand final handling, stacking, and long term storage and shipping.

After the product exits the dryer, it enters the end trim machines. These machines, as the name suggests, trim the length of the wallboard to precise lengths and then apply a narrow strip of paper onto the exposed end of the wallboard. At this point, the product is ready to be stacked and moved to the warehouse.

As the product comes off the production line, it is conveyed onto stackers to be made ready for shipping. To facilitate handling by forklifts, spacers (sleuters) made of narrow pieces of wallboard, are fabricated. Several of these strips are subsequently glued together to produce a laminated wallboard sleuter approximately four feet long, four inches wide, and three inches tall.

These individual wallboard strips are made by running four feet by four feet by three inch blocks of wallboard into a circular saw with 11 blades turning on a common shaft, spaced approximately four inches apart. The sawing machines are essentially enclosed and are maintained under negative pressure to control fugitive dust emissions. There are two of these sleuter making machines.

#### Regulations

James Hardie Gypsum is subject to regulation under *Arkansas Air Pollution Control Code* (Regulation 18), the *Regulations of the Arkansas Plan of Implementation for Air Pollution Control* (Regulation 19), the *Regulations of the Arkansas Air Permit Operating Program* (Regulation 26), and the *Prevention of Significant Deterioration Regulations* (PSD). This facility is also subject to regulation under the New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants and Subpart UUU - Standard of Performance for Calciners and Dryers in Mineral Industries.

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.

	EMISSIC	ON SUMMARY	Y		
Sour	Description	Pollutant	<b>Emission Rates</b>		Cross
ce No.			lb/hr	tpy	Reference Page
	Total Allowable Emissions	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>x</sub>	220.3 220.3 1.1 123.9 29.8 70.0	224.4 224.4 1.8 160.8 114.8 291.0	N/A
06	Primary Crusher	PM PM <sub>10</sub>	0.4 0.4	0.7 0.7	13
07	Primary Screen	PM PM <sub>10</sub>	12.0 12.0	8.0 8.0	13
19	Secondary Crusher Building Baghouse	PM PM <sub>10</sub>	1.7 1.7	7.3 7.3	16
49	Raymond Mills Baghouse #1				
50	Raymond Mills Baghouse #2	PM	11.6	50.4	
51	Raymond Mills Baghouse #3	${ m PM}_{10} \ { m SO}_2$	11.6 0.6	50.4 0.6	10
52	Raymond Mills Baghouse #4	VOC CO	0.6 0.6	0.7 2.0	19
53	Raymond Mills Baghouse #5	$NO_X$	2.0	8.8	
38	Raymond Mills Baghouse #6				
22	Kettle Combustion Stack #1				
23	Kettle Combustion Stack #2	PM	1.8	3.4	
24	Kettle Combustion Stack #3	${ m PM}_{10} \ { m SO}_2$	1.8 0.1	3.4 0.1	
46	Calcining Baghouse #1	VOC	0.3	0.2	22
47	Calcining Baghouse #2	CO NO <sub>x</sub>	2.9 11.4	1.7 49.8	
48	Calcining Baghouse #3				

	EMISSION SUMMARY				
Sour	Description	Pollutant	<b>Emission Rates</b>		Cross
ce No.			lb/hr	tpy	Reference Page
01	North Calcining ESP	D) (	4.6	7.6	
20	Process Water Heat Exchanger	$\mathrm{PM}_{10}$	4.6 4.6	7.6 7.6	
25	Kettle Combustion Stack #4	$SO_2$	0.1	0.1	25
26	Kettle Combustion Stack #5	VOC CO	0.1 1.3	0.2 1.7	
27	Kettle Combustion Stack #6	$NO_X$	5.1	6.7	
39	Claudius/Peter Mill & Flash Calciner Baghouse #1 & #2	PM PM <sub>10</sub> SO <sub>2</sub> VOC CO NO <sub>X</sub>	3.1 3.1 0.1 0.2 4.0 6.5	13.4 13.4 0.2 0.8 17.4 28.5	27
04	Kettle Buell Baghouse	PM	5.6	24.6	20
40	CP Mill Transfer Points Baghouse	$PM_{10}$	5.6	24.6	30
41	CP Mill Buell Baghouse (Line 1 and Line 2 - 500 ton)	PM	8.4	36.9	22
42 42a	100 Ton Stucco Storage Baghouse (Line 1 and Line 2 - 100 ton)	$PM_{10}$	8.4	36.9	33
33	Vermiculite Storage Bin Vent	${ m PM} \over { m PM}_{10}$	0.9 0.9	0.1 0.1	36
34	Starch Storage Bin Vent	PM PM <sub>10</sub>	2.4 2.4	0.1 0.1	36
35	Potash Storage Bin Vent	PM PM <sub>10</sub>	2.3 2.3	0.1 0.1	36
36	Boric Acid Storage Bin Vent	$PM$ $PM_{10}$	0.7 0.7	0.1 0.1	36

	EMISSION SUMMARY				
Sour	Description	Pollutant	Emissio	n Rates	Cross
ce No.			lb/hr	tpy	Reference Page
44	Dryer #1	$PM$ $PM_{10}$ $SO_2$	1.6 1.6 0.2	6.6 6.6 0.8	38
45	Dryer #2	VOC CO NO <sub>x</sub>	35.6 21.0 45.0	155.5 92.0 197.2	
18	Take-off / End trim Baghouse #1	PM	2.6	11.1	40
32	Take-off / End trim Baghouse #2	$PM_{10}$	2.6	11.1	40
05	Recut Baghouse	$PM$ $PM_{10}$	0.5 0.5	1.4 1.4	42
43	Recycle Baghouse	$PM$ $PM_{10}$	1.1 1.1	4.7 4.7	44
08	Storage Tanks	VOC	86.7	1.7	46
37	Facility Non-Point Source Emissions	PM PM <sub>10</sub> VOC	159.0 159.0 0.4	47.9 47.9 1.7	47
02	South Calcining ESP	-	with Three N-50, SN-51		_
03	Raymond Mills Baghouse #1		with Five s N-54, SN-55		_
09- 17					
21	Wet Plant Dryer Exhaust	This sou	irce is no lo	onger in ope	eration.
28	Starch Transfer Baghouse	Source no	longer vent	ed to the at	mosphere.
29	Vermiculite Transfer Baghouse	Source no	longer vent	ed to the at	mosphere.
30	Potash Transfer Baghouse	Source no	longer vent	ed to the at	mosphere.
31	Boric Acid Transfer Baghouse	Source no	longer vent	ed to the at	mosphere.

	EMISSION SUMMARY						
Sour	Description	Pollutant	Emissio	n Rates	Cross		
ce No.			lb/hr	tpy	Reference Page		
54	4 Portable Crusher Source deleted - never installed.			lled.			

#### **SECTION III: PERMIT HISTORY**

598-A was issued to Weyerhaeuser Company (Briar Plant) on April 4, 1980. This initial permit included emissions from the drying kettles and from three electrostatic precipitators (ESPs).

598-AR-1 was issued on December 6, 1989. This permit modification set the major source baseline for the facility and also addressed the change of ownership from Weyerhaeuser to Briar Gypsum.

598-AR-2 was issued on July 2, 1990. This permit modification addressed the addition of two baghouses and the permitting of some previously unpermitted sources. This permit brought the facility below 250 tons per year of particulate matter and thus made the facility a minor source in regards to PSD regulations.

598-AR-3 was issued on February 19, 1993. This permit modification addressed the permitting of two additional previously unpermitted sources.

598-AR-4 was issued on July 28, 1994 to Briar Gypsum Company. This permit modification addressed the addition of existing unpermitted sources, the revision of combustion emissions, and the removal of the Wet Plant Dryer.

598-AOP-R0 was issued on July 1, 1999. This permit action represented the issuance of an initial Regulation #26 permit, the change of ownership from Briar Gypsum to James Hardie Gypsum, and the addition of a new production line and associated sources (SN-34 through SN-49). In addition, the electrostatic precipitator associated with the Raymond Roller Mills (SN-03) was replaced with a baghouse, the wet plant dryer exhaust (SN-21) was deleted, and the four storage bin vents (SN-30 through SN-33) have been added to the permit. Emission limits were 178.5 tpy PM/PM<sub>10</sub>, 1.9 tpy SO<sub>2</sub>, 143.3 tpy VOC, 130.5 tpy CO, and 310.7 tpy NO<sub>x</sub>. NO<sub>x</sub> emissions were below 250 tpy prior to the issuance of permit #598-AOP-R0. The addition of sources has raised the NO<sub>x</sub> emissions above the PSD threshold. Subsequent modifications to this permit will require review for PSD applicability.

598-AOP-R1 was issued September 14, 2000. This modification allowed the facility to increase the annual production from 1.6 billion ft² to 1.8 billion ft². Usage time for SN-01 was also increased from 876 hours per year to 2,628 hours per year. The existing primary screen (SN-07) was replaced with a more efficient unit, with no changes in emissions. Also, a portable crusher (SN-54) was added to the facility. The facility was given allowance to transfer off-spec material from the calciners to an outside waste pile and the seal stacks at SN-44 and SN-45 were designated as insignificant. Finally, the method used to calculate baghouse emissions was changed to use grain loading factors contained in the NSPS Subpart OOO.

**SECTION IV: EMISSION UNIT INFORMATION** 

# SN-06 and SN-07 Primary Crusher and Primary Screen

#### **Source Description**

Coarse gypsum from the quarry is transported to a receiving area at the manufacturing plant site. At the receiving area, the raw ore is dumped directly into the receiving pit or is staged in a covered area next to the receiving pit. Minus 3 inch material is separated by a vibrating grizzly and then transported to the primary screen (SN-07). Overs from the screen are transported to an ore storage warehouse. Plus 3 inch material passes over the new grizzly feeder and primary crusher system (SN-06) where it is reduced in size. Crushed material is then transported to the ore storage warehouse. The new primary crusher system is subject to the requirements contained in 40 CFR Part 60, Subpart OOO.

#### **Specific Conditions**

1. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for sources SN-06 and SN-07. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Specific Condition 8.

Source	Pollutant	lb/hr	tpy
SN-06	$PM_{10}$	0.4	0.7
SN-07	$PM_{10}$	12.0	8.0

2. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall not exceed the air pollutant emission rates set forth in the following table for sources SN-06 and SN-07. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Specific Condition 8.

Source	Pollutant	lb/hr	tpy
SN-06	PM	0.4	0.7
SN-07	PM	12.0	8.0

3. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60 Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants*, the primary crusher (SN-06) is subject to all applicable requirements of the New Source Performance Standards (NSPS)

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Subpart OOO, as identified in the Code of Federal Regulations (CFR) Title 40, Part 60.670. A copy of this Subpart is provided in Appendix A.

- 4. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.672(c), the primary crusher shall not exceed 15% opacity from source SN-06. Compliance shall be demonstrated by the initial compliance test for opacity required by Specific Condition 5 and by the daily opacity observation requirement contained in Specific Condition 7.
- 5. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.675 (c)(1) and (2), the permittee shall conduct compliance testing for opacity from the primary crusher (SN-06) using EPA Reference Method 9 and the procedures in 40 CFR Part 60.11. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3
- 6. Pursuant to §19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-07 as measured by EPA Reference Method 9.
- 7. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from sources SN-06 and SN-07 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request.
  - a. The date and time of the observation
  - b. If visible emissions which appeared to be above the permitted limit were detected
  - c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
  - d. The name of the person conducting the opacity observations.
- 8. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 70.6, the permittee shall process no more than 1,860,000 tons of gypsum rock through the primary crusher (SN-06) during any consecutive twelve (12) month period.

9. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which demonstrate compliance with the limit set in Specific Condition 8 and may be used by the Department for enforcement purposes. Compliance shall be determined on a monthly basis by totaling the amount of gypsum rock processed for the previous twelve months. Each twelve month total shall be available for inspection by the last day of the month after the reported twelve months. These records shall be maintained on site and shall be provided to Department personnel upon request.

# SN-19 Secondary Crusher

#### **Source Description**

Coarsely crushed gypsum rock, which is kept in the dry ore storage building, is transported by belt conveyor to the secondary crusher. Here the ore is further reduced in size by the secondary crusher prior to being transported by a moving belt conveyor to the rock storage bins located inside the main facility. The dust produced by the crushing process is controlled by drawing air out of the crusher area and venting it to the Secondary Crusher Baghouse. This cone crusher is subject to the requirements contained in 40 CFR Part 60, Subpart OOO.

#### **Specific Conditions**

10. Pursuant to §19.501 et seq of Regulation 19, §18.801 of Regulation 18, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for source SN-19. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Specific Condition 16.

Pollutant	lb/hr	tpy
PM	1.7	7.3
$PM_{10}$	1.7	7.3

- 11. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60 Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants*, the secondary crusher (SN-19) is subject to all applicable requirements of the New Source Performance Standards (NSPS) Subpart OOO provisions as identified in the Code of Federal Regulations (CFR) Title 40, Part 60.670. A copy of this Subpart is provided in Appendix A.
- 12. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.672, the secondary crusher (SN-19) shall not exceed the following emission limits. Compliance shall be demonstrated by the initial compliance test (for PM and opacity) required by Specific Conditions 13 and 14 and by the weekly opacity observation requirement contained in Specific Condition 15.

Regulation Citation	Pollutant	Emission Limit
40 CFR 60.672 (a)(1)	PM	0.05 g/dscm

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40 CFR 60.672 (a)(2)	Opacity	7% (Stack Emissions)
10 0111 0010 (2)	o pareneg	( ( State in Ennissions)

- 13. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.675 (b), the permittee shall conduct compliance testing for particulate matter from the secondary crusher baghouse (SN-19) using EPA Reference Method 5 or Method 17. 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. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.
- 14. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.675 (b), the permittee shall conduct compliance testing for opacity from the secondary crusher baghouse (SN-19) using EPA Reference Method 9 and the procedures in 40 CFR Part 60.11. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.
- 15. Pursuant to §18.1004 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, weekly observations of the opacity from source SN-19 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.
  - a. The date and time of the observation
  - b. If visible emissions which appeared to be above the permitted limit were detected
  - c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
  - d. The name of the person conducting the opacity observations.
- 16. Pursuant to §19.705 of Regulation 19, A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 70.6, the facility shall process no more than 1,681,920 tons of gypsum rock through the secondary crusher (SN-19) during any consecutive twelve (12) month period.

17. Pursuant to §19.705 of the Regulation 19 and 40 CFR Part 52 Subpart E, the permittee shall maintain records which demonstrate compliance with the limit set in Specific Condition 16 and may be used by the Department for enforcement purposes. Compliance shall be determined on a monthly basis by totaling the amount of gypsum rock processed for the previous twelve months. Each twelve month total shall be available for inspection by the last day of the month after the reported twelve months. These records shall be maintained on site and shall be provided to Department personnel upon request.

# SN-38, SN-49, SN-50, SN-51, SN-52, and SN-53 Raymond Roller Mills Baghouses #1 thru #6

#### **Source Description**

The coarse gypsum rock stored in the rock bins (6 units) is metered into the six Raymond Roller Mills (SN-38, SN-49 thru SN-53). The Raymond Roller Mills grind the gypsum rock to produce a fine powder which is then referred to as land plaster. The land plaster is conveyed pneumatically from the roller mills to their corresponding cyclones to separate the majority of the land plaster from the air stream. The relatively clean air stream exiting the cyclones is then ducted back to the inlet of the conveying fan. A vent stack on each duct work stream is connected to a baghouse to further reduce the particulate loading prior to venting to the atmosphere. The land plaster is then conveyed by screw conveyor to the six land plaster bins which feed the six kettle calciners.

Raymond Roller Mills #1 thru #5 (SN-49 thru SN-53) are equipped with a 3.0 MMBtu/hr natural gas burner each. The new Raymond Roller Mill #6 (SN-38) is equipped with a 5.0 MMBtu/hr natural gas burner. These natural gas burners account for the additional criteria pollutant emissions. The new Raymond Roller Mill #6 (SN-38) will be subject to the requirements contained in 40 CFR Part 60, Subpart OOO.

#### **Specific Conditions**

18. Pursuant to §19.501 et seq of Regulation 19, §18.801 of Regulation 18, A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for sources SN-38, SN-49, SN-50, SN-51, SN-52, and SN-53. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment. The ton per year pollutant emission rates are effectively limited by Plantwide Conditions 8 and 10.

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Source	Pollutant	lb/hr	tpy
SN-38			
SN-49	PM	11.6	50.4
SN-50	$egin{array}{c} \operatorname{PM}_{10} \\ \operatorname{SO}_2 \end{array}$	11.6 0.6	50.4 0.6
SN-51	VOC	0.6	0.7
SN-52	CO NO <sub>x</sub>	0.6 2.0	2.0 8.8
SN-53			

- 19. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60 Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants*, the Raymond Mills Baghouse (SN-38) is subject to all applicable requirements of the New Source Performance Standards (NSPS) Subpart OOO provisions as identified in the Code of Federal Regulations (CFR) Title 40, Part 60.670. A copy of this Subpart is provided in Appendix A.
- 20. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.672, the Raymond Mills Baghouse (SN-38) shall not exceed the following emission limits. Compliance shall be demonstrated by the initial compliance test (for PM and opacity) required by Specific Conditions 21 and 22 and by the weekly opacity observation requirement contained in Specific Condition 24.

Regulation Citation	Pollutant	<b>Emission Limit</b>	
40 CFR 60.672 (a)(1)	PM	0.05 g/dscm	
40 CFR 60.672 (a)(2)	Opacity	7% (Stack Emissions)	

21. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.675 (b), the permittee shall conduct compliance testing for particulate matter from the Raymond Mills Baghouse (SN-38) using EPA Reference Method 5 or Method 17. 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. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.

- 22. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.675 (b), the permittee shall conduct compliance testing for opacity from the Raymond Mills Baghouse (SN-38) using EPA Reference Method 9 and the procedures in 40 CFR Part 60.11. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.
- 23. Pursuant to §18.501 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall not exceed 7% opacity from sources SN-49, SN-50, SN-51, SN-52, and SN-53 as measured by EPA Reference Method 9.
- 24. Pursuant to §18.1004 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, weekly observations of the opacity from sources SN-38, SN-49, SN-50, SN-51, SN-52, and SN-53 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.
  - a. The date and time of the observation
  - b. If visible emissions which appeared to be above the permitted limit were detected
  - c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
  - d. The name of the person conducting the opacity observations.

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# SN-22, SN-23, SN-24, SN-46, SN-47, and SN-48 Calcining Kettles #1 thru #3 and Calcining Baghouses #1 thru #3

#### **Source Description**

Calcining Kettles #1 thru #3 (SN-22 thru SN-24) are each heated by means of a 27.0 MMBtu/hr natural gas combustion system. This heat is required to remove (dehydrate) three fourths of the chemically bound water from the land plaster in order to produce plaster of Paris, also referred to as stucco. Particulate emissions from each of the three calcining kettles are routed to one of the dedicated Calcining Baghouses #1 thru #3 (SN-46 thru SN-48).

#### **Specific Conditions**

25. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for sources SN-22, SN-23, SN-24, SN-46, SN-47, and SN-48. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment. The ton per year pollutant emission rates from the natural gas combustion are based on the maximum capacity of the equipment, and the ton per year pollutant emission rate for particulate matter is effectively limited by Plantwide Conditions 8 and 10.

Source	Pollutant	lb/hr	tpy
SN-22			
SN-23	PM	1.8	3.4
SN-24	$egin{array}{c} \operatorname{PM}_{10} \ \operatorname{SO}_2 \end{array}$	1.8 0.1	3.4 0.1
SN-46	VOC	0.3	0.2
SN-47	CO NO <sub>x</sub>	2.9 11.4	1.7 49.8
SN-48			

26. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60 Subpart UUU, *Standards of Performance for Calciners and Dryers in Mineral Industries*, the Calcining Kettle Baghouses (SN-46, SN-47, and SN-48) are subject to all applicable requirements of the New Source Performance Standards (NSPS) Subpart UUU provisions as identified in the Code of Federal Regulations (CFR) Title 40, Part 60.730. A copy of this Subpart is provided in Appendix B.

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27. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.732, the Calcining Kettle Baghouses (SN-46, SN-47, and SN-48) shall not exceed the following emission limits. Compliance shall be demonstrated by the initial compliance test (for PM and opacity) required by Specific Conditions 28 and 29 and by the weekly opacity observation requirement contained in Specific Condition 31.

Regulation Citation	Pollutant	Emission Limit	
40 CFR 60.732 (a)	PM	0.092 g/dscm	
40 CFR 60.732 (b)	Opacity	10% (Stack Emissions)	

- 28. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.736 (b)(1), the permittee shall conduct compliance testing for particulate matter from the Calcining Kettle Baghouses (SN-46, SN-47, and SN-48) using EPA Reference Method 5. The sampling time and volume for each test run shall be at least 2 hours and 1.70 dscm. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.
- 29. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.675 (b), the permittee shall conduct compliance testing for opacity from the Calcining Kettle Baghouses (SN-46, SN-47, and SN-48) using EPA Reference Method 9 and the procedures in 40 CFR Part 60.11. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.
- 30. Pursuant to §18.501 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from sources SN-22, SN-23, and SN-24 as measured by EPA Reference Method 9. Compliance with this opacity limit is demonstrated by the burning of natural gas as required by Plantwide Condition 10.
- 31. Pursuant to §18.1004 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, weekly observations of the opacity from sources SN-46, SN-47, and SN-48 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific

condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.

- a. The date and time of the observation
- b. If visible emissions which appeared to be above the permitted limit were detected
- c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
- d. The name of the person conducting the opacity observations.

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# SN-01, SN-20, SN-25, SN-26, and SN-27 North Calcining ESP, Process Water Heat Exchanger, and Calcining Kettles #4 thru #6

#### **Source Description**

Calcining Kettles #4 thru #6 (SN-25 thru SN-27) are each heated by means of a 12.0 MMBtu/hr natural gas combustion system. This heat is required to remove (dehydrate) three fourths of the chemically bound water from the land plaster in order to produce plaster of Paris, also referred to as stucco. A portion of the exhaust gases from the calcining kettles is used for the process water heat exchanger (SN-20). Particulate emissions from the three calcining kettles are routed to the North Calcining ESP (SN-01). These kettles are estimated to only be used 30% of the time or 2,268 hr/yr. These calcining kettles are not subject to regulation under 40 CFR Part 60, Subpart UUU due to the installation and modification dates of the units.

#### **Specific Conditions**

32. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for sources SN-20, SN-25, SN-26, and SN-27. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment. The ton per year pollutant emission rates from the natural gas combustion are based on the maximum capacity of the equipment, and the ton per year pollutant emission rate for particulate matter is effectively limited by Specific Condition 36.

Source	Pollutant	lb/hr	tpy
SN-01	D) (	4.6	<b>7</b> (
SN-20	$PM$ $PM_{10}$	4.6 4.6	7.6 7.6
	$SO_2$	0.1	0.1
SN-25	VOC	0.1	0.2
SN-26	CO	1.3	1.7
SN-27	NO <sub>x</sub>	5.1	6.7

- 33. Pursuant to §19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 20% opacity from source SN-01 as measured by EPA Reference Method 9.
- 34. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, daily observations of the opacity from source SN-01 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA

Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated daily, kept on site, and made available to Department personnel upon request.

- a. The date and time of the observation
- b. If visible emissions which appeared to be above the permitted limit were detected
- c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
- d. The name of the person conducting the opacity observations.
- 35. Pursuant to §18.501 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall not exceed 5% opacity from sources SN-25, SN-26, and SN-27 as measured by EPA Reference Method 9. Compliance with this opacity limit is demonstrated by the burning of natural gas as required by Plantwide Condition 10.
- 36. Pursuant to §19.705 of Regulation 19 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR 70.6, the permittee shall operate the Calcining Kettles (SN-25, SN-26, and SN-27) no more than 2,628 hours during any consecutive twelve (12) month period.
- 37. Pursuant to §19.705 of the Regulation 19 and 40 CFR Part 52 Subpart E, the permittee shall maintain records which demonstrate compliance with the limit set in Specific Condition 36 and may be used by the Department for enforcement purposes. Compliance shall be determined on a monthly basis by totaling the hours of operation for the Calcining Kettles (SN-25, SN-26, and SN-27) for the previous twelve months. Each twelve month total shall be available for inspection by the last day of the month after the reported twelve months. These records shall be maintained on site and shall be provided to Department personnel upon request.

# SN-39 Claudius/Peter Mill & Flash Calciner Baghouses #1 and #2

#### **Source Description**

The coarse gypsum rock not sent to the rock bins #1 thru #6 are conveyed to rock bin #7. This material then enters the new Claudius Peter Mill/Flash Calciner. The processed gypsum (stucco) is collected by two parallel baghouses, whose air streams are routed together into a single discharge point (SN-39), and then sent to a pneumatic cooling system baghouse, CP Buell Baghouse, (SN-41). In addition to the particulate emissions generated from the crushing process, the Mill/Flash Calciner is equipped with a 65 MMBtu/hr natural gas burner. The Claudius Peter Mill/Flash Calciner is not subject to the requirements contained in 40 CFR Part 60, Subpart UUU.

#### **Specific Conditions**

38. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for source SN-39. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Conditions 8 and 10.

Source	Pollutant	lb/hr	tpy
SN-39	PM	3.1	13.4
	$PM_{10}$	3.1	13.4
	$SO_2$	0.1	0.2
	VOC	0.2	0.8
	CO	4.0	17.4
	$NO_x$	6.5	28.5

- 39. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60 Subpart UUU, *Standards of Performance for Calciners and Dryers in Mineral Industries*, the Claudius/Peter Mill & Flash Calciner Baghouses #1 and #2 (SN-39) is subject to all applicable requirements of the New Source Performance Standards (NSPS) Subpart UUU provisions as identified in the Code of Federal Regulations (CFR) Title 40, Part 60.730. A copy of this Subpart is provided in Appendix B.
- 40. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.732, the Claudius/Peter Mill & Flash Calciner Baghouses #1 and #2 (SN-39) shall not exceed the following emission limits. Compliance shall be demonstrated by the initial compliance test (for PM and

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opacity) required by Specific Conditions 41 and 42 and by the weekly opacity observation requirement contained in Specific Condition 43.

Regulation Citation	Pollutant	Source	<b>Emission Limit</b>
40 CFR 60.732(a)	PM	Baghouses #1 & #2 (Flash Calciner)	0.092 g/dscm
40 CFR 60.732(b)	Opacity	Baghouses #1 & #2 (Flash Calciner)	10% (Stack Emissions)

- 41. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.736 (b)(1), the permittee shall conduct compliance testing for particulate matter from the combined exhaust of the Flash Calciner Baghouses #1 & #2 (SN-39) using EPA Reference Method 5. The sampling time and volume for each test run shall be at least 2 hours and 1.70 dscm. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.
- 42. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.736 (b)(2), the permittee shall conduct compliance testing for opacity from the combined exhaust of the Claudius/Peter Mill & Flash Calciner Baghouses #1 and #2 (SN-39) using EPA Reference Method 9 and the procedures in 40 CFR Part 60.11. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.
- 43. Pursuant to §18.1004 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, weekly observations of the opacity from source SN-39 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.
  - a. The date and time of the observation
  - b. If visible emissions which appeared to be above the permitted limit were detected
  - c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.

d. The name of the person conducting the opacity observations.

# SN-04 and SN-40 Kettle Buell Baghouse and CP Mill Transfer Points Baghouse

#### **Source Description**

(SN-04) The stucco is gravity fed from the Kettles into the hot pits. The stucco, still hot as it exits the hot pits, is conveyed via screw conveyor and then pneumatically to the Kettle Buell Baghouse (SN-04) where the finished stucco is separated from the conveying air stream and transferred to the Kettle Stucco 500 ton storage bin.

(SN-40) The stucco discharged from the CP Mill Baghouse is transferred via screw conveyor to the pneumatic transfer pick up for the CP Mill Buell Baghouse. The CP Mill Transfer Points Baghouse

(SN-40) collects the dust from the transfer points for the CP Mill Transfer screw conveyors. SN-40 also collects the dust from the mechanical transfer systems from both the Kettle Stucco 500 ton storage bin and the CP Mill Stucco 500 ton storage bin to the production 100 Ton Stucco Bins #1 & #2 (SN-42 and SN-42a). The CP Mill Transfer Points Baghouse (SN-40) is subject to the requirements contained in 40 CFR Part 60, Subpart OOO. The existing Kettle Buell Baghouse (SN-04) is not subject to regulation under 40 CFR Part 60, Subpart OOO due to the installation and modification dates of the unit.

#### **Specific Conditions**

44. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for sources SN-04 and SN-40. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Source	Pollutant	lb/hr	tpy
SN-04	DM	5.6	24.6
SN-40	$PM_{10}$	5.6	24.6

45. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall not exceed the air pollutant emission rates set forth in the following table for sources SN-04 and SN-40. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity

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of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Source	Pollutant	lb/hr	tpy
SN-04	DM	5.6	24.6
SN-40	PM	5.6	24.6

- 46. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60 Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants*, the CP Mill Transfer Points Baghouse (SN-40) is subject to all applicable requirements of the New Source Performance Standards (NSPS) Subpart OOO provisions as identified in the Code of Federal Regulations (CFR) Title 40, Part 60.670. A copy of this Subpart is provided in Appendix A.
- 47. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.672, the CP Mill Transfer Points Baghouse (SN-40) shall not exceed the following emission limits. Compliance shall be demonstrated by the initial compliance test (for PM and opacity) required by Specific Conditions 48 and 49 and by the weekly opacity observation requirement contained in Specific Condition 51.

Regulation Citation	Pollutant	Emission Limit	
40 CFR 60.672 (a)(1)	PM	0.05 g/dscm	
40 CFR 60.672 (a)(2)	Opacity	7% (Stack Emissions)	

- 48. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.675 (b)(1), the permittee shall conduct compliance testing for particulate matter from the CP Mill Transfer Points Baghouse (SN-40) using EPA Reference Method 5 or Method 17. 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. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.
- 49. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.675 (b)(2), the permittee shall conduct compliance testing for opacity from the CP Mill Transfer Points Baghouse (SN-40) using EPA Reference Method 9 and the procedures in 40 CFR Part 60.11. The

permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.

- 50. Pursuant to §19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 7% opacity from source SN-04 as measured by EPA Reference Method 9.
- 51. Pursuant to §18.1004 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, weekly observations of the opacity from sources SN-04 and SN-40 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.
  - a. The date and time of the observation
  - b. If visible emissions which appeared to be above the permitted limit were detected
  - c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
  - d. The name of the person conducting the opacity observations.

## SN-41, SN-42 and 42a CP Buell Baghouse and 100 Ton Stucco Storage Baghouses #1 and #2

#### **Source Description**

SN-41 (CP Buell Baghouse). The stucco produced from the CP Mill flash calcining system collected in the two CP Mill Baghouses is transferred by screw conveyor to the pneumatic transfer and cooling system of the CP Mill Buell Baghouse (SN-41). The stucco collected in this baghouse is transferred to the CP Mill 500 ton Stucco Storage Bin.

SN-42 (East Mezzanine Baghouse) The East Mezzanine Baghouse (SN-42) collects the dust from the stucco transfer, mixing and metering conveyors from the discharge of the two 100 ton Stucco Storage tanks to the two pin mixers and the two stucco recirculation pneumatic transfer blowers.

SN-42a (West Mezzanine Baghouse). The West Mezzanine Baghouse (SN-42a) helps control the emissions from the two 100 Stucco Storage tanks, stucco transferred from the two 500 ton Stucco Storage tanks, and the pneumatic recirculation systems for the pin mixer systems entering both tanks. Each of the Stucco Storage Baghouses is not subject to the requirements contained in 40 CFR Part 60, Subpart OOO.

#### **Specific Conditions**

52. Pursuant to §19.501 et seq of Regulation 19, §18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for sources SN-41, SN-42 and SN-42a. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Source	Pollutant	lb/hr	tpy
SN-41	PM	8.4	36.9
SN-42	$PM_{10}$	8.4	36.9

53. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60 Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants*, the Stucco Storage Baghouses (SN-41, SN-42 and SN-42a) are subject to all applicable requirements of the New Source Performance Standards (NSPS) Subpart OOO provisions as identified in the Code of

Federal Regulations (CFR) Title 40, Part 60.670. A copy of this Subpart is provided in Appendix A.

54. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.672, the Stucco Storage Baghouses (SN-41, SN-42 and SN-42a) shall not exceed the following emission limits. Compliance shall be demonstrated by the initial compliance test (for PM and opacity) required by Specific Conditions 55 and 56 and by the weekly opacity observation requirement contained in Specific Condition 57.

Regulation Citation	Pollutant	Emission Limit	
40 CFR 60.672 (a)(1)	PM	0.05 g/dscm	
40 CFR 60.672 (a)(2)	Opacity	7% (Stack Emissions)	

- 55. Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.675 (b)(1), the permittee shall conduct compliance testing for particulate matter from the Stucco Storage Baghouses (SN-41, SN-42 and SN-42a) using EPA Reference Method 5 or Method 17. 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. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.
- Pursuant to §19.304 of Regulation 19 and 40 CFR Part 60.675 (b)(2), the permittee shall conduct compliance testing for opacity from the Stucco Storage Baghouses (SN-41, SN-42 and SN-42a) using EPA Reference Method 9 and the procedures in 40 CFR Part 60.11. The permittee shall conduct the compliance testing and subsequent reporting in accordance with Plantwide Condition 3.
- 57. Pursuant to §18.1004 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, weekly observations of the opacity from sources SN-41, SN-42 and SN-42a shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific

condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.

- a. The date and time of the observation
- b. If visible emissions which appeared to be above the permitted limit were detected
- c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
- d. The name of the person conducting the opacity observations.

## SN-33, SN-34, SN-35, and SN-36 Bulk Material Storage Bin Vents

#### **Source Description**

Stucco from previous processes is mixed with other materials after leaving the stucco bins. There are four bulk storage bins at the facility that receive raw materials to be mixed with the stucco to aid in the production of wallboard. One bin is used for each of the following materials: starch (SN-34), potash (SN-35), boric acid (SN-36), and vermiculite (SN-33). Particulate emissions through the bin vents occur from the filling of these bins. A baghouse that discharges within the manufacturing building is used to collect emissions that are generated during the transfer of each additive to the production area. These baghouses are not included in this permit.

#### **Specific Conditions**

58. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for sources SN-33, SN-34, SN-35, and SN-36. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Specific Condition 60.

Source	Pollutant	lb/hr	tpy
SN-33	$PM_{10}$	0.9	0.1
SN-34	$PM_{10}$	2.4	0.1
SN-35	$PM_{10}$	2.3	0.1
SN-36	$PM_{10}$	0.7	0.1

59. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall not exceed the air pollutant emission rates set forth in the following table for sources SN-33, SN-34, SN-35, and SN-36. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Specific Condition 60.

Source	Pollutant	lb/hr	tpy
SN-33	PM	0.9	0.1
SN-34	PM	2.4	0.1
SN-35	PM	2.3	0.1
SN-36	PM	0.7	0.1

60. Pursuant to §19.705 of Regulation 19, A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, and 40 CFR Part 70.6, the permittee shall not exceed the raw material usage limits set forth in the following table during any consecutive twelve month period.

Source	Raw Material	Usage Limit (tons per consecutive 12 month period)
SN-33	Vermiculite	1,500
SN-34	Starch	15,000
SN-35	Potash	4,266
SN-36	Boric Acid	3,734

61. Pursuant to §19.705 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall maintain records which demonstrate compliance with the limits set in Specific Condition 60 and may be used by the Department for enforcement purposes. Compliance shall be determined on a monthly basis by totaling the amount of raw material processed for the previous twelve months. Each twelve month total shall be available for inspection by the last day of the month after the reported twelve months. These records shall be maintained on site and shall be provided to Department personnel upon request.

## SN-44 and SN-45 Dryers #1 and #2

### **Source Description**

Wallboard is formed by adding the additives and water to the stucco and casting it into a moving sheet of paper and covering it with a second sheet. The wallboard is then sent to a cutoff knife and into a tunnel dryer, one for each production line, to drive off excess water. Both dryers are equipped with 150 MMBtu/hr natural gas fired burners. Combustion by-products are exhausted along with the excess moisture that has been removed from the board through exhaust stacks SN-44 and SN-45. Because they are tunnel dryers, these dryers will be exempt from the requirements contained in 40 CFR Part 60, Subpart UUU.

### **Specific Conditions**

62. Pursuant to §19.501 et seq of Regulation 19, §18.801 of Regulation 18, and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for source SN-44 and 45. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment. The ton per year pollutant emission rates are effectively limited by Plantwide Conditions 8 and 10.

Source	Pollutant	lb/hr	tpy
SN-44	PM	1.6	6.6
	$PM_{10}$	1.6	6.6
	$SO_2$	0.2	0.8
SN-45	VOC	35.6	155.5
511 13	CO	21.0	92.0
	$NO_x$	45.0	197.2

- 63. Pursuant to §18.501 of Regulation 18 and A.C.A. §8-4-203 as referenced by §8-4-304 and §8-4-311, the permittee shall not exceed 7% opacity from sources SN-44 and SN-45 as measured by EPA Reference Method 9.
- 64. Pursuant to §19.7 of Regulation 19 and 40 CFR Part 52, Subpart E, weekly observations of the opacity from sources SN-44 and SN-45 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA

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Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.

- a. The date and time of the observation
- b. If visible emissions which appeared to be above the permitted limit were detected
- c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
- d. The name of the person conducting the opacity observations.

## SN-18 and SN-32 Take-off/End Trim Baghouses #1 and #2

### **Source Description**

After the product exits the dryer, it enters the end trim machines. These machines, as the name suggests, trim the length of the wallboard to precise lengths and then apply a narrow strip of paper onto the exposed end of the wallboard. At this point, the product is ready to be stacked and moved to the warehouse. Dust generated from this process is collected by a baghouse on each process line (SN-18 and SN-32). Dust laden air from a sleuter making machine is routed to SN-18.

### **Specific Conditions**

65. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for sources SN-18 and SN-32. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Source	Pollutant	lb/hr	tpy
SN-18	DM	2.6	11.1
SN-32	$PM_{10}$	2.6	11.1

66. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall not exceed the air pollutant emission rates set forth in the following table for sources SN-18 and SN-32. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Source	Pollutant	lb/hr	tpy
SN-18	DM	2.6	11.1
SN-32	PM	2.6	11.1

- 67. Pursuant to §19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 7% opacity from sources SN-18 and SN-32 as measured by EPA Reference Method 9.
- 68. Pursuant to \$18.1004 of Regulation 18 and A.C.A \$8-4-203 as referenced by A.C.A. \$8-4-304 and \$8-4-311, weekly observations of the opacity from sources SN-18 and SN-32 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.
  - a. The date and time of the observation
  - b. If visible emissions which appeared to be above the permitted limit were detected
  - c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
  - d. The name of the person conducting the opacity observations.

## SN-05 Recut Baghouse

### **Source Description**

Lifts of wall board are occasionally cut to shorter lengths to satisfy customer demand for odd length wall board that cannot be produced or handled by the existing finishing process. This Recut system involves a chain saw mounted on an assembly to cut through a lift of wall board to the desired length. The Recut system employs the use of a dust collection system to remove the dust than is ducted to SN-05. Dust laden air from a second sleuter making machine is routed to this source.

### **Specific Conditions**

69. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for source SN-05. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Pollutant	lb/hr	tpy
$PM_{10}$	0.5	1.4

70. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall not exceed the air pollutant emission rates set forth in the following table for source SN-05. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Pollutant	lb/hr	tpy
PM	0.5	1.4

71. Pursuant to §19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 7% opacity from source SN-05 as measured by EPA Reference Method 9.

- 72. Pursuant to §18.1004 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, weekly observations of the opacity from source SN-05 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.
  - a. The date and time of the observation
  - b. If visible emissions which appeared to be above the permitted limit were detected
  - c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
  - d. The name of the person conducting the opacity observations.

## SN-43 Recycle Baghouse

### **Source Description**

Some rejected wallboard is pulverized and recycled for use in the manufacturing process. Emissions from the pulverizing of this material are controlled by a baghouse (SN-43).

### **Specific Conditions**

73. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for source SN-43. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Pollutant	lb/hr	tpy
$PM_{10}$	1.1	4.7

74. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall not exceed the air pollutant emission rates set forth in the following table for source SN-43. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Pollutant	lb/hr	tpy
PM	1.1	4.7

- 75. Pursuant to §19.503 of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed 7% opacity from source SN-43 as measured by EPA Reference Method 9.
- 76. Pursuant to §18.1004 of Regulation 18 and A.C.A §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, weekly observations of the opacity from source SN-43 shall be conducted by personnel familiar with the permittee's visible emissions. The permittee

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shall accept such observations for demonstration of compliance. The permittee shall maintain personnel trained in EPA Reference Method 9. If visible emissions which appear to be in excess of the permitted opacity are detected, the permittee shall immediately take action to identify the cause of the visible emissions, implement corrective action, and document that visible emissions did not appear to be in excess of the permitted opacity following the corrective action. The permittee shall maintain records which contain the following items in order to demonstrate compliance with this specific condition. These records shall be updated weekly, kept on site, and made available to Department personnel upon request.

- a. The date and time of the observation
- b. If visible emissions which appeared to be above the permitted limit were detected
- c. If visible emissions which appeared to be above the permitted limit were detected, the cause of the exceedance of the opacity limit, the corrective action taken, and if the visible emissions appeared to be below the permitted limit after the corrective action was taken.
- d. The name of the person conducting the opacity observations.

## SN-08 Gasoline Storage Tank

### **Source Description**

James Hardie Gypsum has several gasoline, diesel, and lubricating oil storage tanks on site. The gasoline storage tank (SN-08) is the only tank with emissions of a great enough magnitude to be included in the permit. The rest of the tanks are included in the list of Insignificant Activities contained in Section VII of this permit.

### **Specific Conditions**

77. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for source SN-08. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment. The ton per year pollutant emission rates are effectively limited by Specific Conditions 78 and 79.

Pollutant	lb/hr	tpy
VOC	86.7	1.7

- 78. Pursuant to §19.705 of the Regulation 19, 40 CFR 70.6, and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall store only gasoline fuel or other motor fuels with a vapor pressure equal to or less than that of gasoline at SN-08.
- 79. Pursuant to §19.705 of the Regulation 19, 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 not exceed the throughput limit of 120,000 gallons of gasoline during any consecutive 12 month period.
- 80. Pursuant to §19.705 of the Regulation 19 and 40 CFR Part 52 Subpart E, permittee shall maintain records which demonstrate compliance with the limit set in Specific Condition 79 and may be used by the Department for enforcement purposes. Compliance shall be determined on a monthly basis by totaling the gasoline throughput for the previous twelve months. Each twelve month total shall be available for inspection by the last day of the month after the reported twelve months. These records shall be maintained on site and shall be provided to Department personnel upon request.

## **Facility Non-Point Source Emissions**

## **Source Description**

Several activities at the James Hardie Gypsum facility result in the production of non-point source emissions. Each of these points involve the handling or processing of raw gypsum ore. The following table gives a complete list of all points included in the Facility Non-Point Source Emissions (SN-37). There are no points included in this list where pulverized land plaster or stucco (dry powdery material) is handled.

Facility Non-Point Source Emissions Summary Table		
Description	Pollutant	
Overburden Removal	PM & PM <sub>10</sub>	
Drilling at Mine Site	PM & PM <sub>10</sub>	
Loading of Ore	PM & PM <sub>10</sub>	
Transportation over Unpaved Roads	PM & PM <sub>10</sub>	
Truck Dump into Hopper over Grizzly Feeder	PM & PM <sub>10</sub>	
C-1 Belt to C-2 Belt	PM & PM <sub>10</sub>	
C-2 Belt to C-4 Belt	PM & PM <sub>10</sub>	
Screen Overs to Intermediate Belt	PM & PM <sub>10</sub>	
Intermediate Belt to C-4	PM & PM <sub>10</sub>	
Screen Unders to C-10 Belt	PM & PM <sub>10</sub>	
C-4 Belt to Ore Storage Warehouse (OSW)	PM & PM <sub>10</sub>	
C-10 Belt to Waste Pile	PM & PM <sub>10</sub>	
Storage Bin to Loading Conveyor	PM & PM <sub>10</sub>	
Loading Conveyor to Truck	PM & PM <sub>10</sub>	
Feeder to C-5 Belt beneath OSW	PM & PM <sub>10</sub>	
Transfer from calciner to waste pile	PM & PM <sub>10</sub>	

### **Specific Conditions**

81. Pursuant to §19.501 et seq of Regulation 19 and 40 CFR Part 52, Subpart E, the permittee shall not exceed the emission rates set forth in the following table for source SN-37. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Pollutant	lb/hr	tpy
$PM_{10}$	159.0	47.9
VOC	0.4	1.7

82. Pursuant to §18.801 of Regulation 18 and A.C.A. §8-4-203 as referenced by A.C.A. §8-4-304 and §8-4-311, the permittee shall not exceed the air pollutant emission rates set forth in the following table for source SN-37. Compliance with the particulate matter pollutant emission rates is demonstrated through proper operation of the control device. The pound per hour pollutant emission rates are based on the maximum capacity of the equipment, and the ton per year pollutant emission rates are effectively limited by Plantwide Condition 8.

Pollutant	lb/hr	tpy
PM	159.0	47.9

### SECTION V: COMPLIANCE PLAN AND SCHEDULE

James Hardie Gypsum is in compliance with the applicable regulations cited in the permit application. James Hardie Gypsum will continue to operate in compliance with those identified regulatory provisions. The facility will examine and analyze future regulations that may apply and determine their applicability with any necessary action taken on a timely basis.

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#### **SECTION VI: PLANTWIDE CONDITIONS**

- 1. Pursuant to Section 19.704 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 Section 19.410(B) of Regulation 19, 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 if the work involved in the construction or modification is suspended for a total of 18 months or more.
- 3. Pursuant to Section 19.702(E), 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. Two copies of the 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 Section 19.303 of Regulation 19 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 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.
- 6. Pursuant to §18.801 of the Arkansas Air Pollution Control Code (Regulation 18), the permittee shall not cause or permit the emission of air contaminants, including odors or water vapor and including an air contaminant whose emission is not otherwise prohibited by

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- Regulation #18, if the emission of the air contaminant constitutes air pollution within the meaning of A.C.A. §8-4-303.
- 7. Pursuant to §18.901 of the Arkansas Air Pollution Control Code (Regulation 18), the permittee shall not conduct operations in such a manner as to unnecessarily cause air contaminants and other pollutants from becoming airborne.
- 8. Pursuant to §19.705 of the Regulation 19, 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 not exceed the production limit of 1.8 billion square feet of gypsum wall board during any consecutive 12 month period.
- 9. Pursuant to §19.705 of the Regulation 19 and 40 CFR Part 52 Subpart E, permittee shall maintain records which demonstrate compliance with the limit set in Plantwide Condition 8 and may be used by the Department for enforcement purposes. Compliance shall be determined on a monthly basis by totaling the amount of gypsum wall board produced for the previous 12 months. Each 12 month total shall be available for inspection by the last day of the month after the reported 12 months. These records shall be maintained on site and shall be provided to Department personnel upon request.
- 10. Pursuant to §19.705 of Regulation 19, 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 use only pipeline quality natural gas as fuel for the following units: Raymond Roller Mills #1 thru #6 (SN-38, SN-49 thru SN-53), Calcining Kettles #1 thru #6 (SN-22 thru SN-27), Process Water Heat Exchanger (SN-20), Claudius Peter Mill & Flash Calciner (SN-39), and Dryers #1 and #2 (SN-44 & SN-45).

#### **Title VI Provisions**

- 11. The permittee shall comply with the standards for labeling of products using ozone depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a. All containers containing a class I or class II substance stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced to interstate commerce pursuant to §82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to §82.108.
  - c. The form of the label bearing the required warning must comply with the requirements pursuant to §82.110.

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d. No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

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- 12. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
  - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
  - c. Persons performing maintenance, service repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like appliance" as defined at §82.152.)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to §82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 13. If the permittee manufactures, transforms, destroys, imports, or exports a class I or class II substance, the permittee is subject to all requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
- 14. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant.

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15. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program.

### **Permit Shield**

- 16. 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 November 1, 1996, as amended on January 29, 1998 and February 1, 1999.

Source No.	Regulation	Description
SN-06, SN-19, SN-38, SN-40, SN-41, SN-42,	40 CFR Part 60, Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants
SN-22, SN-23, SN-24, SN-39	40 CFR Part 60, Subpart UUU	Standard of Performance for Calciners and Dryers in Mineral Industries
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

B. The following requirements have been specifically identified as not applicable, based upon information submitted by the permittee in an application dated November 1, 1996, as amended on January 29, 1998 and February 1, 1999.

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Description of Regulation	Regulatory Citation	Affected Source	Basis for Determination
New Source Performance Standards	40 CFR Part 60, Subpart OOO	SN-04, SN-07, SN-49, SN-50, SN-51, SN-52, SN-53	These units were constructed prior to August 31, 1983 and have not been modified or reconstructed since the applicability date.
New Source Performance Standards	40 CFR Part 60, Subpart UUU	SN-25, SN-26, SN-27	These units were constructed prior to April 23, 1986 and have not been modified or reconstructed since the applicability date.

# 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.

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### **SECTION VII: INSIGNIFICANT ACTIVITIES**

Pursuant to §26.3(d) of Regulation 26, the following sources are insignificant activities. 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 insignificant even if this activity meets the criteria of §3(d) of Regulation 26 or is listed below. Insignificant activity determinations rely upon the information submitted by the permittee in an application dated November 1, 1996, as amended on January 29, 1998 and February 1, 1999.

Source	Description	Reason
N/A	Waste Oil Storage Tanks	Regulation 19, Appendix A, Group A, Number 3
N/A	Diesel Fuel Storage Tanks	Regulation 19, Appendix A, Group A, Number 13
N/A	Motor Oil Storage Tanks	Regulation 19, Appendix A, Group A, Number 3
N/A	Gear Oil Storage Tanks	Regulation 19, Appendix A, Group A, Number 3
44	Dryer seal stack	Regulation 19, Appendix A, Group A, Number 13
45	Dryer seal stack	Regulation 19, Appendix A, Group A, Number 13

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

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#### **SECTION VIII: 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.

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- 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 Environmental Quality 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 §19.601 and §19.602 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

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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 and reissuance, or modification; or for denial of a permit renewal application.
- 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

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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.