

# TECHNICAL SUPPORT DOCUMENT

TECHNICAL INFORMATION PRESENTED IN REVIEW OF AN  
APPLICATION FOR A PART 70 OPERATING PERMIT

SUBMITTED BY

GEORGIA-PACIFIC GYPSUM LLC

for

GEORGIA-PACIFIC GYPSUM LLC

**Part 70 Operating Permit Number: 593  
(Renewal)**

SIC Code - 3275: Gypsum Manufacturing



Clark County  
Department of Air Quality and Environmental Management  
Permitting Section

November, 2009

## I. EXECUTIVE SUMMARY

Georgia-Pacific Gypsum LLC (G-P) is located twenty miles north of the City of Las Vegas, Nevada, in the Apex Valley Airshed, hydrographic basin number 216. Hydrographic basin 216 is unclassified nonattainment area for ozone (regulated through NO<sub>x</sub> and VOC) and PSD for PM<sub>10</sub>, CO and SO<sub>x</sub>.

Georgia-Pacific Gypsum LLC operates a gypsum wallboard and plaster manufacturing facility. All manufacturing and support processes at the site are grouped under the Standard Industrial Classification 3275 – Gypsum Products (NAICS: 327420 – Gypsum Products Manufacturing). G-P processes gypsum ore and manufactures wallboard and alpha and beta plaster. The emission units at the source include rock crushing and screening, transport of raw rock, mill operations, plaster operations, and wallboard manufacturing. The potential emissions for the source are shown in Table 1:

**Table 1: Source-Wide PTE (tons per year)**

<b>PM<sub>10</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>VOC</b>	<b>HAP</b>
<b>61.11</b>	<b>99.87</b>	<b>256.37</b>	<b>2.52</b>	<b>30.72</b>	<b>2.64</b>

Clark County Department of Air Quality and Environmental Management (DAQEM) has been delegated authority to implement the requirement of the Part 70 operating permit program. The G-P facility is a major source for NO<sub>x</sub> and CO. The modification to the NSR permit (ATC/OP Modification 5, Revision 0, issued May 16, 2006) lowered the NO<sub>x</sub> PTE below the major source threshold, though the source remains a major for both NO<sub>x</sub> and CO.

The first renewal for Part 70 Operating Permit was issued on October 24, 2003; and NSR ATC/OP Modification 5, Revision 0 was issued on May 16, 2006, NSR ATC/OP Modification 6, Revision 0, was issued on October 13, 2006, and NSR ATC/OP Modification 7, Revision 1 was issued on July 13, 2009. DAQEM received the Title V renewal application on February 26, 2008. Based on the information submitted by the applicant and a technical review performed by the DAQEM staff, the DAQEM proposed the renewal of a Part 70 Operating Permit to Georgia-Pacific Gypsum LLC.

***This Technical Support Document (TSD) accompanies the proposed Part 70 Operating Permit for Georgia-Pacific Gypsum LLC.***

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## II. ACRONYMS

**Table II-1: List of Acronyms**

<b>Acronym</b>	<b>Term</b>
AQIA	Air Quality Impact Analysis
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct
ATC/OP	Authority to Construct/Operating Permit
BCC	Clark County Board of County Commissioners
BHP	Brake Horse Power
CAO	Field Corrective Action Order
CE	Control Efficiency
CF	Control Factor
CFR	United States Code of Federal Regulations
CO	Carbon Monoxide
CPI	Urban Consumer Price Index
DAQEM	Clark County Department of Air Quality & Environmental Management
EF	Emission Factor
EPA	United States Environmental Protection Agency
EU	Emission Unit
g/dscm	Grams/dry standard cubic meter
gr/dscf	Grains/dry standard cubic foot
HAP	Hazardous Air Pollutant
HP	Horse Power
MMcf	Million cubic feet
Msf	Thousand square feet
NAC	Nevada Administrative Code
NAICS	North American Industry Classification System
NCA #1	Nevada Cogeneration Associates #1
NEI	Net Emission Increase
NO <sub>x</sub>	Nitrogen Oxides
NOV	Notice of Violation
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standards
NSR	New Source Review
OP	Operating Permit
PEP	Potential to Emit Particulate
PM <sub>2.5</sub>	Particulate Matter less than 2.5 microns
PM <sub>10</sub>	Particulate Matter less than 10 microns
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
scf	Standard Cubic Feet
SCC	Source Classification Codes
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO <sub>x</sub>	Sulfur Oxides
TCS	Toxic Chemical Substance
TSD	Technical Support Document
VE	Visible Emissions
VOC	Volatile Organic Compound
Δp	Pressure Differential

### III. SOURCE INFORMATION

#### A. General

Permittee	Georgia-Pacific Gypsum LLC
Mailing Address	P.O Box 337350, Las Vegas, Nevada 89033
Contacts	David J. Neal, Plant Manager John Wilkes, Environmental Coordinator
Phone Number	(702) 643-8100 X 302
Fax Number	(702) 643-2049
Source Location	Twenty miles North of the City of Las Vegas, Nevada
Hydrographic Area	216
Township, Range, Section	T18S, R63E, Sections 34 & 35
SIC Code	3275 – Gypsum Products
NAICS Code	327420 – Gypsum Products Manufacturing

#### B. Description of Process

The major raw material for gypsum wallboard and plaster production is gypsum rock. The rock is mined at Georgia-Pacific Gypsum, LLC mining operation located approximately 120 miles north of the source and trucked to the plant where it is stockpiled prior to being loaded into feed hoppers.

##### Wallboard Process Description:

A belt conveyor carries the raw gypsum rock from the feed hopper to the primary crusher. The crushed rock is then fed into the 200 ton rock bin. Material from the rock bin is then transferred to the secondary crusher.

From the secondary crusher, material is conveyed to five impact (IMP) mills that pulverize, dry, and calcine the gypsum rock into a stucco powder. The stucco is blended and transferred to storage bins. Stucco from the storage bins is blended and conveyed to the pin mixer. As it is conveyed, small amounts of various other raw materials are added such as sugar, boric acid, and chopped fiberglass. The combination and amounts of each additive vary with the type of board being produced. At the pin mixer, water and foaming agents are combined with the stucco to form a slurry mixture.

The slurry is sandwiched between continuous sheets of facing and backing material and solidifies while moving down the forming line. At the end of the forming line, the board is cut to length and the free water in the board is evaporated in a three-zone board dryer.

Two methods are used for supplying heat energy to the five calciners (IMP mills) and board dryers. Under the primary scenario, heat for the board dryer is supplied by turbine exhaust gas from Nevada Cogeneration Associates #1 (NCA #1) turbine exhaust gas and natural gas combustion only as needed. Under the alternative scenario, the heat for the dryers and calciners is supplied by natural gas combustion. Upon exiting the dryer, the board is trimmed, packaged, and stored for subsequent transport and sale.

### Plaster Process Description:

Gypsum plaster manufacturing uses the same raw materials as wallboard. The gypsum is fed into one of two different feed hoppers depending on the type of stucco to be produced. The first type, referred as beta stucco, is a more conventional type of stucco. The second type, referred to as alpha stucco, is produced with different process equipment and has different qualities than conventional beta stucco.

Material fed into beta rock hoppers is screened and crushed before it is conveyed to storage bins. From there it is conveyed to one of two roller mills which grind the rock into a fine powder. Each roller mill has a natural gas fired burner that can be used to provide added heat for drying the gypsum, if necessary. The milled product is referred to as landplaster and it is conveyed to storage bins after milling. This material serves as feed to one of two kettles that have natural gas fired burners which are used to heat the fine gypsum indirectly in a batch and calcine process. The product is referred to as beta stucco, and it is conveyed to storage bins. This material can also be put in bulk tank trucks and sold as beta stucco. From the storage bins, beta stucco is screened and milled into a very fine powder and conveyed to one of six final product storage bins.

Material fed into the alpha rock hoppers is coarsely sized gypsum rock. This material is screened before it is conveyed to one of two storage bins. Alpha stucco is produced by calcining this material in a batch process using a high pressure direct steam vessels known as autoclaves. Steam supply for the autoclaves is produced by a small boiler. From the autoclaves, the calcined gypsum is dried in indirectly heated pan dryers. It is then crushed and finely ground and screened to produce alpha stucco. The final product is conveyed to storage bins.

Plaster products require varying amounts of alpha and beta stucco as well as small amounts of other raw materials. Each is conveyed to one of two weigh hoppers to produce batches of different plaster products. The hoppers dump into mixers which gently blend the different materials. From each mixer, plaster can be loaded into bulk tank trucks or bulk bags. It can also be conveyed to one of two bag packing machines which automatically fill 50-100 pound bags and palletized them.

## **C. Permitting History**

Georgia-Pacific Gypsum LLC is regulated by Clark County Department of Air Quality and Environmental Management, and has a Title V permit. The facility is a major source for NO<sub>x</sub> and CO. The initial Part 70 Operating Permit was issued October 27, 1998, and first renewed on October 24, 2003. Since the 2003 renewal, the NSR permit modifications were: ATC/OP Modification 5, Revision 0, issued May 16, 2006; ATC/OP Modification 6, Revision 0, issued October 13, 2006; and ATC Modification 7, Revision 1, issued July 13, 2009. DAQEM received the renewal Title V application on February 26, 2008. On June 4, 2008, DAQEM received an amendment to the renewal application to incorporate NSR Modification 7. On December 10, 2008, DAQEM received a second amendment to the renewal application to revise the Title V permit by changing the methodology in calculating the wallboard and plaster operations emissions from grain loading and flow rate to using AP-42 efficiency factors and the CAM plan was updated.

The wallboard plant was constructed in 1986 with operations starting in 1987. The facility was initially permitted by the Clark County Health District (CCHD) in 1986. The facility was owned by Georgia-Pacific Corporation. When NSR ATC/OP Modification 2 was issued in 1996, a change of ownership and name change occurred and the facility became Georgia-Pacific Gypsum Corporation. The summarization of G-P's permitting history from 1986 to 2003 refers to the 2003 Renewal Part 70 Operating Permit issued on October 24, 2003.

In March 2003, Georgia-Pacific Gypsum Corporation (G-P Gypsum Corp) applied to consolidate NSR ATC/OP Modification 3 and NSR ATC/OP Modification 4 into one permit. In August 2003, G-P Gypsum Corp applied to incorporate existing emission units not previously permitted under NSR ATC/OP Modification 3 and NSR ATC/OP Modification 4, decrease the VOC and HAP emissions associated with the Board Dryer, update the PTE for the baghouse control equipment, and to remove emission units from the Wallboard and Plaster Plants. In June 2004, G-P Gypsum Corp. replaced the March 2003 and August 2003 applications by combining them into one application. The June 2004 application made the same request as the March 2003 and August 2003 applications. In May 2005 G-P Gypsum Corp submitted a letter to DAQEM, as supplemental information to the current application stating that G-P Gypsum Corp. had conducted a routine internal review for NSPS 40 CFR 60 Subpart OOO and found that numerous emission units were omitted, constructed, or modified that were not permitted and needed to be added to the application. Included in the TSD is a communication dated November 2, 2005, which stated that the Board Dryer (EU: E03) is composed of three zones. Zone 1 and 2 have a maximum heat input rating of 30.0 MMBtu/hr and Zone 3 has a maximum heat input rating of 15 MMBtu/hr when natural gas is used (ATC/OP Modification 5, Revision 0, issued on May 16, 2006).

In July 2006, G-P Gypsum Corp applied to increase the PTE of the Batch/Truck Dumping, to add a Hammer Mill to the Wallboard Plant, to correct some discrepancies that occurred in ATC/OP Modification 5 in some of the hourly production rates, and to make administrative changes to correct the nomenclatures for both the emergency generators and fire pump (ATC/OP Modification 6, Revision 0, issued October 13, 2006).

In December 2006, G-P Gypsum Corp applied for a change of ownership and name change from Georgia-Pacific Gypsum Corporation to Georgia-Pacific Gypsum LLC (G-P). March 2008, G-P applied to add thirteen previously omitted emission units in the Plaster Plant: eight autoclave calciners, two Beta rock grizzly feed screens, two Alpha rock bin screens, and an Alpha rock elevator screen. G-P incorporated using AP-42 emission factors in calculating the emissions for the omitted units and submitted tables for all emissions units in the Wallboard and Plaster Plants. Because the PM<sub>10</sub> emissions from these units had been taken into account when the PTE for the Plaster Plant was first permitted by grain loading and flow rate to the baghouses that were effected, the inclusion of these emission units did not increase the overall PTE of the source (ATC Modification 7, Revision 1, issued July 13, 2009).

The draft Operating Permit was sent out to the source for comments. DAQEM received comments from the source on July 29, 2009. Operating Permit and TSD were updated based on the source comments before the public notice. The Plaster Plant production limit was changed from 189,216 tons per year to 332,880 tons per year. This total production rate is reflective of maximum potential plaster production and is consistent with the calcining throughput limits listed in the Plaster Plant emissions tables.

**Table III-C-1: NSR Permits Issued to Georgia-Pacific Gypsum Corporation and Georgia-Pacific Gypsum LLC**

Date Issued	Permit Number	Description
07/13/2009	ATC Modification 7, Revision 1	Authority to Construct: The addition of eight autoclave calciners, two Beta rock grizzly feed screens, two Alpha rock bin screens, and an Alpha rock elevator screen. There was no increase to the PTE of the facility. G-P also provided calculation tables using AP-42 emission factors for all emission units in the Wallboard and Plaster Plants.
10/13/06	ATC/OP Modification 6, Revision 0	Authority to Construct/Operating Permit: Increased the throughput of the Batch/Truck Dumping, corrections in discrepancies in hourly production rates, addition of a Hammer Mill, and administrative changes to correct the nomenclature of the generator and fire pump.
05/16/06	ATC/OP Modification 5, Revision 0	Authority to Construct/Operating Permit: Consolidated NSR ATC/OP Modification 3 and Modification 4, incorporated existing emission units not previously permitted, updated VOC and HAP emissions associated with the Board Dryer, updated the PTE for the baghouse controlled equipment, and removal of emission units from the Wallboard Plant and Plaster Plant.

#### D. Operating Scenario

G-P is a producer of gypsum wallboard, alpha plaster, and beta plaster. The manufacturing of the wallboard and plasters process starts by pulverizing and drying the gypsum rock to produce landplaster. The landplaster is calcined to remove the chemically bonded water from the gypsum to produce stucco, which is the principal component in gypsum wallboard and alpha and beta plaster.

### IV. Emission Information

#### A. Source-Wide Potential to Emit

Table IV-A-1 reflects the sum of the PTEs of all permitted emission units. G-P is a major source for NO<sub>x</sub> and CO; and a non-major source for PM<sub>10</sub>, SO<sub>x</sub>, VOC, and HAP:

**Table IV-A-1: Source-Wide PTE (tons per year)**

PM <sub>10</sub>	NO <sub>x</sub>	CO	SO <sub>x</sub>	VOC	HAP
61.11	99.87	256.37	2.52	30.72	2.64

#### B. Control Technology

The Best Available Control Technology (BACT) analyses for the Wallboard Plant, Plaster Plant, fugitive emissions, the diesel generator, and fire pump for NSR ATC/OP Modifications 5 and 6, and NSR ATC Modification 7 are discussed below. The BACT determinations are applied to all processes at the facility.

The NSR ATC Modification 7, Revision 1, issued on July 13, 2009, involved the addition of previously omitted emissions units of the Plaster Plant and administrative changes to change the Owner of record and change the name of the business. The omitted emission units are two

Beta Rock Grizzly Feed Screens, two Alpha Rock Bin Screens, an Alpha Rock Elevator Screen, and eight autoclave, used as calciners (EUs: E174 through E186 inclusive). The screens are enclosed with a capture efficiency of 100 percent and each enclosure is connected to a baghouse (BH-01 and BH-13), with each baghouse having a 99.0 percent control efficiency for PM<sub>10</sub> emissions. The PM<sub>10</sub> emissions from the autoclaves are controlled by the autoclaves being fully enclosed with a capture efficiency of 100 percent. All these control methods meet BACT.

The NSR ATC/OP Modification 6, Revision 0, issued October 13, 2006, increased throughputs to the Batch Dumping emission units (EUs: FE300, FE141, FE200a, and FE200b) and the Wallboard Trucks (EU: A01), corrected discrepancies in hourly production rates for seventeen emission units between the Wallboard and Plaster Plants from the 2003 Part 70 Operating Permit and NSR ATC/OP Modification 5, Revision 0 (EUs: E102, E110, E111, E113 through E118, E121, E166 through E169, G13, G15, and G17), added a Hammer Mill (EU: D18) at the Wallboard Plant, and an administrative change to correct the nomenclature of the Perkins fire pump and the Caterpillar emergency generator, which had gotten reversed in NSR ATC/OP Modification 5, Revision 0. The fugitive emissions from the Batch Dumping emission units are controlled by moisture for any materials 0.25 inches or less, which are kept at a moisture of 1.5 percent. Wallboard Trucks are hauled over a paved road with a control of 98.0 percent. Any fugitive emissions from the paved road are controlled with water spray and sweeping. The seventeen emission units that had their hourly production rates increased therefore, correcting an administrative error, are enclosed with a capture efficiency of 100 percent and are all connected to baghouses with control efficiencies of 99.0 percent or better. The Hammer Mill is an enclosed unit with a capture efficiency of 100 percent and is attached to a baghouse (BH-W13) with a control efficiency of 99.0 percent. All these control methods meet BACT.

The NSR ATC/OP Modification 5, Revision 0, issued May 16, 2006, incorporated existing emission units not previously permitted (EUs: G02 through G33 inclusive), decreased the VOC and HAP emissions associated with the Board Dryer (EU: E03), changed the PTE for baghouses control equipment in the Plaster Plant using performance test data for the grain loading, and removed emission units from both the Wallboard and Plaster Plants. The BACT determinations from the emission units consolidated from Modification 3 and Modification 4 remain in effect. Emission units that were not previously permitted (EUs: G02 through G31 inclusive) are enclosed with a capture efficiency of 100 percent and are attached to baghouses that have a control efficiency of 99.0 percent or better. The Perkins fire pump and Caterpillar emergency generator (EUs: G32 and G33) shall use only low sulfur diesel fuel and the Caterpillar emergency generator shall be turbocharged and aftercooled. The Board Dryer (EU: E03) decreased its VOC and HAP emissions by changing to low VOC ink products used in the printing process. The PTE of the baghouse control equipment in the Plaster Plant was updated to reflect the performance test data for grain loading. All of the baghouses meet 99.0 percent control efficiency or better. All these control methods meet BACT.

### C. Emission Units, Emission Limitations, and PTE

Tables IV-C-1 through IV-C-9 summarizes the PTE for each emission unit. Actual and allowable annual emissions shall not exceed the calculated PTE for each emission unit.

**Table IV-C-1: Wallboard Plant PM<sub>10</sub> PTE for Non-Combustion Emission Units**

EU	Description	SCC	Throughput		EF (lbs/ tons) <sup>1</sup>	CF <sup>2</sup>	Control Method	PTE		Type <sup>4</sup>
			tons/ hour	tons/ year				lbs/ hour <sup>3</sup>	tons/ year	
A03	Rock/Recycle Feeder System	30501509	5.0	43,800	0.02	0.01	Enclosed Process connected to Baghouse: BH-W01	0.01	0.01	P1
B01	Crushing Area Conveyor	30501504	80.0	700,800	0.20	0.01		0.16	0.70	P1
B02	Primary Crusher	30501505	80.0	700,800	0.13	0.01		0.10	0.46	P1
B03	200 Ton Rock Bin	30501509	80.0	700,800	0.04	0.01		0.03	0.14	P1
F01	End Trim/Bundler	30501521	43.0	376,680	0.75	0.01		0.32	1.41	P1
F02	Re-cut Machine	30501521	5.0	43,800	0.75	0.01		0.04	0.16	P1
F03	Riser Machine	30501521	5.0	43,800	0.75	0.01		0.04	0.16	---
D17	Milling Area Conveyors	30501518	50.0	438,000	0.20	0.01		0.10	0.44	P1
B04	Secondary Crusher	30501506	80.0	700,800	0.13	0.01		0.10	0.46	P1
G02	Bucket Elevator - Cemco Feed	30501504	50.0	438,000	0.01	0.01		0.01	0.02	---
G03	Bucket Elevator - Rock Tank	30501504	50.0	438,000	0.01	0.01		0.01	0.02	---
G04	Bucket Elevator -Rock Supply	30501504	50.0	438,000	0.01	0.01		0.01	0.02	---
<b>Total PM<sub>10</sub> for BH-W01</b>								<b>0.93</b>	<b>4.00</b>	
C01	Imp Mill No. 1	30501513	10.0	87,600	100	0.001	Enclosed/ BH-W02	1.00	4.38	P1
<b>Total PM<sub>10</sub> for BH-W02</b>								<b>1.00</b>	<b>4.38</b>	
C02	Imp Mill No. 2	30501513	10.0	87,600	100	0.001	Enclosed/ BH-W03	1.00	4.38	P1
<b>Total PM<sub>10</sub> for BH-W03</b>								<b>1.00</b>	<b>4.38</b>	
C03	Imp Mill No. 3	30501513	10.0	87,600	100	0.001	Enclosed/ BH- W04	1.00	4.38	P1
<b>Total PM<sub>10</sub> for BH-W04</b>								<b>1.00</b>	<b>4.38</b>	
C04	Imp Mill No. 4	30501513	10.0	87,600	100	0.001	Enclosed/ BH-W05	1.00	4.38	P1

EU	Description	SCC	Throughput		EF (lbs/ tons) <sup>1</sup>	CF <sup>2</sup>	Control Method	PTE		Type <sup>4</sup>
			tons/ hour	tons/ year				lbs/ hour <sup>3</sup>	tons/ year	
<b>Total PM<sub>10</sub> for BH-W05</b>								<b>1.00</b>	<b>4.38</b>	
C05	Imp Mill No. 5	30501513	10.0	87,600	100	0.001	Enclosed/ BH-W06	1.00	4.38	P1
<b>Total PM<sub>10</sub> for BH-W06</b>								<b>1.00</b>	<b>4.38</b>	
D01a	Stucco Area Conveyor	30501518	50.0	438,000	0.05	0.01	Enclosed/ BH-W07	0.03	0.11	P1
<b>Total PM<sub>10</sub> for BH-W07</b>								<b>0.03</b>	<b>0.11</b>	
D01b	Stucco Area Conveyor	30501518	50.0	438,000	0.05	0.01	Enclosed/ BH-W08	0.03	0.11	P1
<b>Total PM<sub>10</sub> for BH-W08</b>								<b>0.03</b>	<b>0.11</b>	
D01c	Stucco Area Conveyor	30501518	50.0	438,000	0.05	0.01	Enclosed/ BH-W09	0.03	0.11	---
G05	Bucket Elevator - Stucco Transfer	30501504	50.0	438,000	0.01	0.01		0.01	0.02	---
<b>Total PM<sub>10</sub> for BH-W09</b>								<b>0.04</b>	<b>0.13</b>	
D01d	Stucco Area Conveyor	30501518	50.0	438,000	0.05	0.01	Enclosed /BH-W10	0.03	0.11	---
<b>Total PM<sub>10</sub> for BH-W10</b>								<b>0.03</b>	<b>0.11</b>	
D01e	Stucco Area Conveyor	30501518	50.0	438,000	0.05	0.01	Enclosed Process connected to Baghouse: BH-W13	0.03	0.11	P1
G06	Bucket Elevator - Stucco Tank	30501504	50.0	438,000	0.01	0.01		0.01	0.02	---
G07	Bucket Elevator - Stucco Supply	30501504	50.0	438,000	0.01	0.01		0.01	0.02	---
G08	Bucket Elevator - Stucco Recirculating	30501504	50.0	438,000	0.01	0.01		0.01	0.02	---
D18	Hammermill	30501599	50.0	438,000	0.13	0.01		0.07	0.28	P1
D06	Stucco Blender #2	30501518	50.0	438,000	0.01	0.01		0.01	0.02	P1
<b>Total PM<sub>10</sub> for BH-W13</b>								<b>0.14</b>	<b>0.47</b>	
D03	North Stucco Storage Bin	30501514	50.0	438,000	0.16	0.01	Enclosed/ BH-W11	0.08	0.35	S2
<b>Total PM<sub>10</sub> for BH-W11</b>								<b>0.08</b>	<b>0.35</b>	
D04	South Stucco Storage Bin	30501514	50.0	438,000	0.16	0.01	Enclosed/ BH-W12	0.08	0.35	S2
<b>Total PM<sub>10</sub> for BH-W12</b>								<b>0.08</b>	<b>0.35</b>	
D07	Pin Mixer	30501516	50.0	438,000	0.01	0.01	Enclosed	0.01	0.02	P1

EU	Description	SCC	Throughput		EF (lbs/ tons) <sup>1</sup>	CF <sup>2</sup>	Control Method	PTE		Type <sup>4</sup>
			tons/ hour	tons/ year				lbs/ hour <sup>3</sup>	tons/ year	
D08	Vermiculite Bin	30501599	2.0	17,520	0.16	0.01	Process connected to Baghouse: BH-W14	0.01	0.01	S2
D09	Landplaster Bin #1	30501510	2.0	17,520	0.16	0.01		0.01	0.01	S2
D10	Landplaster Bin #2	30501510	2.0	17,520	0.16	0.01		0.01	0.01	S2
D11	Ball Mill #1	30501515	5.0	43,800	0.13	0.01		0.01	0.03	P1
D12	Ball Mill #2	30501515	5.0	43,800	0.13	0.01		0.01	0.03	P1
D13	Interior Baghouse Conveyors	30501504	50.0	438,000	0.20	0.01		0.10	0.44	P1
D14	Interior Baghouse Hopper	30501514	0.00	0.00	0.00	0.01		0.00	0.00	S2
D15	Fiberglass Feed Hopper	30501599	0.00	0.00	0.00	0.01		0.00	0.00	S2
D16	Concrete Basin	30501599	0.00	0.00	0.00	0.01		0.00	0.00	---
G09	Bucket Elevator - Land Plaster	30501504	2.0	17,520	0.01	0.01		0.01	0.01	---
G10	Bucket Elevator - Vermiculite	30501504	2.0	17,520	0.01	0.01	0.01	0.01	---	
<b>Total PM<sub>10</sub> for BH-W14</b>								<b>0.18</b>	<b>0.57</b>	
<b>TOTAL PM<sub>10</sub> PTE for Non-Combustion Emission Units for the Wallboard Plant</b>								<b>6.54</b>	<b>28.10</b>	

<sup>1</sup>Efficiency factors are based on AP-42 emission rated for Gypsum Manufacturing Chapter 11.16.

<sup>2</sup>Control factor values: 0.01 is equivalent to 99.0 percent control from a baghouse and 0.001 is equivalent to 99.9 percent control from a baghouse.

<sup>3</sup>Hourly PTE and production rates listed are for informational purposes only and are not enforceable limits.

<sup>4</sup>Type is a designation for emission unit billing purpose: P1 = process equipment; S2 = Storage Silo. Fees are listed in Section 18 of the AQR.

**Table IV-C-2: Wallboard Plant PTE for Combustion Emission Units**

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons) <sup>1</sup>	PTE		Type <sup>3</sup>
						lbs/hour <sup>2</sup>	tons/year	
C01	IMP Mill #1 7.5MMBtu/hr BH-W02	30501513	10 tons/hr 24 hrs/day 8,760 hrs/yr	PM <sub>10</sub>	Included in PM emissions tables		N/A	
				NO <sub>x</sub>	0.127 lb/MMBtu	0.95		4.16
				CO	0.473 lb/MMBtu	3.55		15.55
				SO <sub>x</sub>	0.003 lb/MMBtu	0.02		0.08
				VOC	0.009 lb/MMBtu	0.07		0.30
				HAP	0.003 lb/MMBtu	0.02		0.10

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons) <sup>1</sup>	PTE		Type <sup>3</sup>
						lbs/hour <sup>2</sup>	tons/year	
C02	IMP Mill #2 7.5MMBtu/hr BH-W03	30501513	10 tons/hr 24 hrs/day 8,760 hrs/yr	PM <sub>10</sub>	Included in PM emissions tables			N/A
				NO <sub>x</sub>	0.127 lb/MMBtu	0.95	4.16	
				CO	0.473 lb/MMBtu	3.55	15.55	
				SO <sub>x</sub>	0.003 lb/MMBtu	0.02	0.08	
				VOC	0.009 lb/MMBtu	0.07	0.30	
				HAP	0.003 lb/MMBtu	0.02	0.10	
C03	IMP Mill #3 7.5MMBtu/hr BH-W04	30501513	10 tons/hr 24 hrs/day 8,760 hrs/yr	PM <sub>10</sub>	Included in PM emissions tables			N/A
				NO <sub>x</sub>	0.127 lb/MMBtu	0.95	4.16	
				CO	0.473 lb/MMBtu	3.55	15.55	
				SO <sub>x</sub>	0.003 lb/MMBtu	0.02	0.08	
				VOC	0.009 lb/MMBtu	0.07	0.30	
				HAP	0.003 lb/MMBtu	0.02	0.10	
C04	IMP Mill #4 7.5MMBtu/hr BH-W05	30501513	10 tons/hr 24 hrs/day 8,760 hrs/yr	PM <sub>10</sub>	Included in PM emissions tables			N/A
				NO <sub>x</sub>	0.127 lb/MMBtu	0.95	4.16	
				CO	0.473 lb/MMBtu	3.55	15.55	
				SO <sub>x</sub>	0.003 lb/MMBtu	0.02	0.08	
				VOC	0.009 lb/MMBtu	0.07	0.30	
				HAP	0.003 lb/MMBtu	0.02	0.10	
C05	IMP Mill #5 7.5MMBtu/hr BH-W06	30501513	10 tons/hr 24 hrs/day 8,760 hrs/yr	PM <sub>10</sub>	Included in PM emissions tables			N/A
				NO <sub>x</sub>	0.127 lb/MMBtu	0.95	4.16	
				CO	0.473 lb/MMBtu	3.55	15.55	
				SO <sub>x</sub>	0.003 lb/MMBtu	0.02	0.08	
				VOC	0.009 lb/MMBtu	0.07	0.30	
				HAP	0.003 lb/MMBtu	0.02	0.10	

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons) <sup>1</sup>	PTE		Type <sup>3</sup>
						lbs/hour <sup>2</sup>	tons/year	
E01	Paper Heaters 1.75 MMBtu/hr	30501599	0.002MMcf/hr 24 hrs/day 8,760 hrs/year	PM <sub>10</sub>	5.7 lb/MMcf	0.01	0.04	F1
				NO <sub>x</sub>	100.0 lb/MMcf	0.17	0.73	
				CO	84.0 lb/MMcf	0.14	0.61	
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.01	
				VOC	5.5 lb/MMcf	0.01	0.04	
				HAP	1.9 lb/MMcf	0.01	0.01	
E02 <sup>4</sup>	Forming Line	30501519	43 tons/hr	VOC/HAP	Included in EU: E03		---	
E03	Board Dryer: Natural Gas Heaters: Zone 1 & 2: 30.0 MMBtu/hr Zone 3: 15.0 MMBtu/hr and/or Heat supplied by NCA #1 [includes emissions from EU: E02]	30501599	43.0 Msf/hr 24 hrs/day 8,760 hrs/year	PM <sub>10</sub>	0.04 lb/Msf	1.73	7.57	F1
				NO <sub>x</sub>	0.26 lb/ton	11.23	49.20	
				CO	1.29E-04 lb/lb	35.09	153.70	
				SO <sub>x</sub>	0.01 lb/ton	0.43	1.89	
				VOC <sup>†</sup>	low VOC	15.74	27.49	
				HAP <sup>†</sup>	None	0.53	1.53	
<b>Totals PTE for Combustion Emission Units for the Wallboard Plant</b>						<b>lbs/hour</b>	<b>tons/year</b>	
						<b>PM<sub>10</sub></b>	<b>1.74</b>	<b>7.61</b>
						<b>NO<sub>x</sub></b>	<b>16.15</b>	<b>70.73</b>
						<b>CO</b>	<b>52.98</b>	<b>232.06</b>
						<b>SO<sub>x</sub></b>	<b>0.54</b>	<b>2.30</b>
						<b>VOC</b>	<b>16.10</b>	<b>29.03</b>
						<b>HAP</b>	<b>0.64</b>	<b>2.04</b>

<sup>1</sup>The combustion emission factors for the IMP Mills are based on worse case scenario utilizing 50% heat from natural gas and 50% heat from NCA #1 exhaust gas, emission factors for the Paper Heater is based on AP-42 1.4-1, 1.4-2 and 1.4-3, and the emission factors for the board dryer is based on 1993 and 1999 dryer source testing for PM factors and natural gas burning.

<sup>2</sup>Hourly PTE and production rates listed are for informational purposes only and are not enforceable limits except for EU E03

<sup>3</sup>Type is a designation for emission unit billing purposes; F1 = fuel burning equipment; N/A = Not applicable: these emission units have already been accounted for under the non-combustion table as P1 = process equipment. Fees are listed in Section 18 of the AQR.

<sup>4</sup>Forming Line emissions are on Table IV-C-3 and accounted for in E03: Board Dryer.

**Table IV-C-3: VOC and HAP Emissions Associated with the Board Dryer (EU: 03)<sup>1</sup>**

Raw Materials	Throughput (lbs/hr)	Throughput (lbs/yr)	% VOC	% HAP	VOC PTE (lbs/hr)	VOC PTE (tons/yr)	HAP PTE (lbs/hr)	HAP PTE (tons/yr)
Soap & other board additives	57.0	176,723	16.0	0.00	9.06	14.14	0.00	0.00
Edge adhesive (TR)	108.0	336,207	0.005	0.00	0.01	0.01	0.00	0.00
Edge adhesive (DAP/DGG)	6.0	17,240	0.09	0.00	0.01	0.01	0.00	0.00
Silicone	147.0	459,732	3.50	0.00	5.16	8.05	0.00	0.00
Gold paint	8.0	25,054	1.92	0.00	0.15	0.24	0.00	0.00
Wallboard plant ink	1.0	4,441	21.63	20.00	0.31	0.48	0.28	0.44
<b>Raw Materials Subtotal</b>					<b>14.70</b>	<b>22.93</b>	<b>0.28</b>	<b>0.44</b>
<b>Other</b>					<b>VOC PTE (lbs/hr)</b>	<b>VOC PTE (tons/yr)</b>	<b>HAP PTE (lbs/hr)</b>	<b>HAP PTE (tons/yr)</b>
Contribution from Nevada Cogeneration Associates #1					1.04	4.56	0.25	1.09
<b>NCA #1 Subtotal</b>					<b>1.04</b>	<b>4.56</b>	<b>0.25</b>	<b>1.09</b>
<b>TOTAL emitted from Board Dryer</b>					<b>VOC PTE (lbs/hr)</b>	<b>VOC PTE (tons/yr)</b>	<b>HAP PTE (lbs/hr)</b>	<b>HAP PTE (tons/yr)</b>
Raw Materials Subtotal					14.70	22.93	0.28	0.44
Other Subtotal					1.04	4.56	0.25	1.09
<b>Total VOCs and HAPs Emitted from Board Dryer</b>					<b>15.74</b>	<b>27.49</b>	<b>0.53</b>	<b>1.53</b>

<sup>1</sup>Table IV-C-3 provides detailed calculations for VOC and HAP emissions for the Forming Line (EU: E02) and the Board Dryer (EU: E03). All the emissions for the Forming Line are accounted for in the Board Dryer.

**Table IV-C-4: VOC and HAP Emissions Associated with the Plaster Mill Ink (EU: G32)<sup>1</sup>**

Raw Materials	Throughput (lbs/hr)	Throughput (lbs/yr)	% VOC	% HAP	VOC PTE (lbs/hr)	VOC PTE (tons/yr)	HAP PTE (lbs/hr)	HAP PTE (tons/yr)
Plaster Mill Ink (EU: G32)	1.0	158.0	21.63	20.0	0.22	0.02	0.04	0.01

<sup>1</sup>Table IV-C-4 provides detailed calculations for VOC and HAP emissions for the Plaster Mill Ink (EU: G32).

**Table IV-C-5: Plaster Plant PM<sub>10</sub> PTE for Non-Combustion Emission Units**

EU	Description	SCC	Throughput		EF (lbs/ tons) <sup>1</sup>	CF <sup>2</sup>	Control Method	PTE		Type <sup>4</sup>
			tons/ hour	tons/ year				lbs/ hour <sup>3</sup>	tons/ year	
E101	Roll Crusher	30501506	50.0	438,000	0.13	0.01	Enclosed Process connected to Baghouse: BH-01	0.07	0.28	P1
E102	Rock Conveyors	30501504	100.0	879,000	0.05	0.01		0.05	0.22	P1
E164	Alpha Rock Screen	30501507	50.0	438,000	0.08	0.01		0.04	0.18	P1
E174	North Beta Rock Grizzly Feed Screen	30501599	50.0	438,000	0.08	0.01		0.04	0.18	P1
E175	South Beta Rock Grizzly Feed Screen	30501599	50.0	438,000	0.08	0.01		0.04	0.18	P1
<b>Total for BH-01</b>								<b>0.24</b>	<b>1.04</b>	
E103	West Beta Rock Bin	30501509	50.0	438,000	0.16	0.01	Enclosed/ BH-02	0.08	0.35	S2
<b>Total for BH-02</b>								<b>0.08</b>	<b>0.35</b>	
E104	East Beta Rock Bin	30501509	50.0	438,000	0.16	0.01	Enclosed/ BH-03	0.08	0.35	S2
<b>Total for BH-03</b>								<b>0.08</b>	<b>0.35</b>	
E105	West Roller Mill	30501502	25.0	219,000	2.60	0.005	Enclosed/ BH-04	0.33	1.42	P1
<b>Total for BH-04</b>								<b>0.33</b>	<b>1.42</b>	
E106	East Roller Mill	30501502	25.0	219,000	2.60	0.005	Enclosed/ BH-05	0.33	1.42	P1
<b>Total for BH-05</b>								<b>0.33</b>	<b>1.42</b>	
E108	West LP Bin	30501599	25.0	219,000	0.16	0.01	Enclosed/ BH-06	0.04	0.18	S2
<b>Total for BH-06</b>								<b>0.04</b>	<b>0.18</b>	
E109	East LP Bin	30501599	25.0	219,000	0.16	0.01	Enclosed/ BH-07	0.04	0.18	S2
<b>Total for BH-07</b>								<b>0.04</b>	<b>0.18</b>	
E110	West Kettle (w/out combustion added)	30501511	15.0	131,400	26.0	0.001	Enclosed/ BH-08	0.39	1.71	P1
<b>Total for BH-08</b>								<b>0.39</b>	<b>1.71</b>	
E111	East Kettle (w/out combustion added)	30501511	15.0	131,400	26.0	0.001	Enclosed/ BH-09	0.39	1.71	P1

EU	Description	SCC	Throughput		EF (lbs/ tons) <sup>1</sup>	CF <sup>2</sup>	Control Method	PTE		Type <sup>4</sup>
			tons/ hour	tons/ year				lbs/ hour <sup>3</sup>	tons/ year	
<b>Total for BH-09</b>								<b>0.39</b>	<b>1.71</b>	
E142	Alpha Rock Conveyors	30501504	50.0	438,000	0.05	0.01	Enclosed Process connected to Baghouse: BH-13	0.03	0.11	P1
E143	South Alpha Rock Bin	30501509	50.0	438,000	0.16	0.01		0.08	0.35	S2
E144	North Alpha Rock Bin	30501509	50.0	438,000	0.16	0.01		0.08	0.35	S2
E176	South Alpha Rock Bin Grizzly Feed Screen	30501599	50.0	438,000	0.08	0.01		0.04	0.18	P1
E177	North Alpha Rock Bin Grizzly Feed Screen	30501599	50.0	438,000	0.08	0.01		0.04	0.18	P1
E178	Alpha Rock Elevator Screen	30501599	50.0	438,000	0.08	0.01		0.04	0.18	P1
E149	Pan Dryer #1	30501599	2.0	17,520	0.04	0.01		0.01	0.01	---
E150	Pan Dryer #2	30501599	2.0	17,520	0.04	0.01		0.01	0.01	---
E151	Pan Dryer #3	30501599	2.0	17,520	0.04	0.01		0.01	0.01	---
G24	Bucket Elevator - Alpha Basket	30501514	20.0	175,200	0.01	0.01		0.01	0.01	---
<b>Total for BH-13</b>								<b>0.35</b>	<b>1.39</b>	
E179	Autoclave #1	30501512	1.0	8,760	Enclosed Batch Process		0.00	0.00	---	
E180	Autoclave #2	30501512	1.0	8,760	Enclosed Batch Process		0.00	0.00	---	
E181	Autoclave #3	30501512	1.0	8,760	Enclosed Batch Process		0.00	0.00	---	
E182	Autoclave #4	30501512	1.0	8,760	Enclosed Batch Process		0.00	0.00	---	
E183	Autoclave #5	30501512	1.0	8,760	Enclosed Batch Process		0.00	0.00	---	
E184	Autoclave #6	30501512	1.0	8,760	Enclosed Batch Process		0.00	0.00	---	
E185	Autoclave #7	30501512	1.0	8,760	Enclosed Batch Process		0.00	0.00	---	
E186	Autoclave #8	30501512	1.0	8,760	Enclosed Batch Process		0.00	0.00	---	
E152	Alpha IMPACT Mill #1	30501599	6.0	52,560	0.13	0.01	Enclosed Process connected to	0.01	0.03	---
E161	Alpha Crusher #1	30501515	6.0	52,560	0.13	0.01		0.01	0.03	P1
E162	Alpha Crusher #2	30501515	6.0	52,560	0.13	0.01		0.01	0.03	P1
E160	Alpha Hammermill	30501599	6.0	52,560	0.13	0.01		0.01	0.03	P1
E154	Alpha Hummer Screen	30501599	6.0	52,560	0.08	0.01		0.01	0.02	P1
E155	Alpha Air Separator	30501599	6.0	52,560	0.08	0.01		0.01	0.02	---

EU	Description	SCC	Throughput		EF (lbs/ tons) <sup>1</sup>	CF <sup>2</sup>	Control Method	PTE		Type <sup>4</sup>
			tons/ hour	tons/ year				lbs/ hour <sup>3</sup>	tons/ year	
E157	South Alpha Storage Bin	30501514	6.0	52,560	0.16	0.01	Baghouse: BH-14	0.01	0.04	S2
E158	North Alpha Storage Bin	30501514	6.0	52,560	0.16	0.01		0.01	0.04	S2
G11	Alpha Surge Bin	30501514	6.0	52,560	0.16	0.01		0.01	0.04	S2
G25	Bucket Elevator - Alpha Surge Bin	30501514	20.0	175,200	0.01	0.01		0.01	0.01	S2
G26	Bucket Elevator - Alpha Reheater Feed	30501514	6.0	52,560	0.01	0.01		0.01	0.01	---
G27	Bucket Elevator - Alpha Reheater Disch.	30501514	6.0	52,560	0.01	0.01		0.01	0.01	---
G28	Bucket Elevator - Alpha Storage Bin	30501514	6.0	52,560	0.01	0.01		0.01	0.01	---
<b>Total for BH-14</b>								<b>0.13</b>	<b>0.32</b>	
E156	Alpha Reject Screens	30501599	6.0	52,560	0.08	0.01	Enclosed Process connected to Baghouse: BH-10 and BH-33	0.01	0.02	P1
E107	LP Bulk Loadout Bin w/ Enclosed Screw Conveyor	30501510	30.0	262,800	0.16	0.01		0.05	0.21	P1
E165	LP Bulk Loadout	30501517	16.0	140,160	0.16	0.01		0.03	0.11	---
G12	Ag Gyp Packer	30501517	20.0	175,200	0.16	0.01		0.03	0.14	P1
E173	LP Bin Airvy System	30501599	30.0	262,800	0.16	0.01		0.05	0.21	P1
<b>Total for BH-10 and 33</b>								<b>0.17</b>	<b>0.69</b>	
G13	LP Bulk Bagging	30501517	12.0	105,120	0.04	0.01	Enclosed/BH-11	0.01	0.02	P1
E113	Reject Bin	30501514	20.0	175,200	0.16	0.01		0.03	0.14	S2
<b>Total for BH-11</b>								<b>0.04</b>	<b>0.16</b>	
E166	Stucco Sweeco Screen	30501599	20.0	175,200	0.08	0.01	Enclosed/BH-12	0.02	0.07	P1
E114	Stucco Bulk Loadout Bin	30501514	25.0	219,000	0.16	0.01		0.04	0.18	S2
E167	Stucco Bulk Loadout	30501517	25.0	219,000	0.16	0.01		0.04	0.18	---
<b>Total for BH-12</b>								<b>0.10</b>	<b>0.43</b>	
E115	West Hummer Screen	30501599	25.0	219,000	0.08	0.01	Enclosed Process connected to Baghouse: BH-15	0.02	0.09	P1
E117	West Stucco Bin	30501514	25.0	219,000	0.16	0.01		0.04	0.18	S2
E121	West Air Separator	30501599	15.0	131,400	0.08	0.01		0.01	0.05	---
E119	West Beta IMPACT Mill #1	30501515	10.0	87,600	0.13	0.01		0.01	0.06	P1
G14	West Beta IMPACT Mill #2	30501515	10.0	87,600	0.13	0.01		0.01	0.06	P1

EU	Description	SCC	Throughput		EF (lbs/ tons) <sup>1</sup>	CF <sup>2</sup>	Control Method	PTE		Type <sup>4</sup>
			tons/ hour	tons/ year				lbs/ hour <sup>3</sup>	tons/ year	
G29	Bucket Elevator - East Finish Stucco	30501514	20.0	175,200	0.01	0.01		0.01	0.01	---
<b>Total for BH-15</b>								<b>0.10</b>	<b>0.45</b>	
E118	East Stucco Bin	30501514	25.0	219,000	0.16	0.01	Enclosed Process connected to Baghouse: BH-16	0.04	0.18	S2
E116	East Hummer Screen	30501599	25.0	219,000	0.08	0.01		0.02	0.09	P1
E120	East Beta IMPACT Mill #1	30501515	10.0	87,600	0.13	0.01		0.01	0.06	P1
G16	East Beta IMPACT Mill #2	30501515	10.0	87,600	0.13	0.01		0.01	0.06	P1
G30	Bucket Elevator - West Finish Stucco	30501514	20.0	175,200	0.01	0.01		0.01	0.01	---
<b>Total for BH-16</b>								<b>0.09</b>	<b>0.40</b>	
E122	Split Finish Bin #1 South	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-17	0.08	0.35	S2
<b>Total for BH-17</b>								<b>0.08</b>	<b>0.35</b>	
E123	Split Finish Bin #1 North	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-18	0.08	0.35	S2
<b>Total for BH-18</b>								<b>0.08</b>	<b>0.35</b>	
E124	Split Finish Bin #2 South	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-19	0.08	0.35	S2
<b>Total for BH-19</b>								<b>0.08</b>	<b>0.35</b>	
E125	Split Finish Bin #2 North	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-20	0.08	0.35	S2
<b>Total for BH-20</b>								<b>0.08</b>	<b>0.35</b>	
E126	Split Finish Bin #3 South	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-21	0.08	0.35	S2
<b>Total for BH-21</b>								<b>0.08</b>	<b>0.35</b>	
E127	Split Finish Bin #3 North	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-22	0.08	0.35	S2
<b>Total for BH-22</b>								<b>0.08</b>	<b>0.35</b>	
E128	South Alpha Bin	30501514	20.0	175,200	0.16	0.01	Enclosed/BH-23	0.03	0.14	S2
<b>Total for BH-23</b>								<b>0.03</b>	<b>0.14</b>	
E130	Cement Bin	30501599	20.0	175,200	0.16	0.01	Enclosed/BH-24	0.03	0.14	S2
<b>Total for BH-24</b>								<b>0.03</b>	<b>0.14</b>	
E129	North Alpha Bin	30501514	20.0	175,200	0.16	0.01	Enclosed/BH-25	0.03	0.14	S2
<b>Total for BH-25</b>								<b>0.03</b>	<b>0.14</b>	
E172	HiVAC Vacuum System	30501599	50.0	438,000	0.08	0.01	Enclosed/BH-32	0.04	0.18	S2
<b>Total for BH-32</b>								<b>0.04</b>	<b>0.18</b>	

EU	Description	SCC	Throughput		EF (lbs/ tons) <sup>1</sup>	CF <sup>2</sup>	Control Method	PTE		Type <sup>4</sup>
			tons/ hour	tons/ year				lbs/ hour <sup>3</sup>	tons/ year	
E169	MP Bulk Bagging	30501517	12.0	105,120	0.04	0.01	Enclosed/BH-28	0.01	0.02	---
E140	MP Bulk Load Out Bin	30501514	30.0	262,800	0.16	0.01		0.05	0.21	S2
<b>Total for BH-28</b>								<b>0.06</b>	<b>0.23</b>	
E139	FP Bulk Load Out Bin	30501514	20.0	175,200	0.16	0.01	Enclosed/BH-29	0.03	0.14	S2
<b>Total for BH-29</b>								<b>0.03</b>	<b>0.14</b>	
E168	FP Bulk Bagging	30501517	12.0	105,120	0.04	0.01	Enclosed Process connected to Baghouse: BH-30	0.01	0.02	---
E112	Stucco Conveyors	30501518	50.0	438,000	0.20	0.01		0.10	0.44	P1
G15	West Beta IMPACT Mill #3	30501515	15.0	131,400	0.13	0.01		0.02	0.09	---
G17	East Beta IMPACT Mill #3	30501515	15.0	131,400	0.13	0.01		0.02	0.09	---
G22	Bucket Elevator - West Hot Pit	30501514	50.0	438,000	0.01	0.01		0.01	0.02	---
G23	Bucket Elevator - East Hot Pit	30501514	50.0	438,000	0.01	0.01		0.01	0.02	---
<b>Total for BH-30</b>								<b>0.17</b>	<b>0.68</b>	
E137	South Bag Packer	30501517	30.0	262,800	0.04	0.01	Enclosed Process connected to Baghouse: BH-31	0.01	0.05	---
E138	North Bag Packer	30501517	30.0	262,800	0.04	0.01		0.01	0.05	---
E131	South Weigh Hopper	30501599	30.0	262,800	0.02	0.01		0.01	0.03	---
E133	South Mixer	30501516	30.0	262,800	0.04	0.01		0.01	0.05	P1
E132	North Weigh Hopper	30501599	30.0	262,800	0.02	0.01		0.01	0.03	---
E134	North Mixer	30501516	30.0	262,800	0.04	0.01		0.01	0.05	P1
E170	North MP Bulk Loadout	30501599	30.0	262,800	0.16	0.01		0.05	0.21	---
E171	South MP Bulk Loadout	30501599	30.0	262,800	0.16	0.01		0.05	0.21	---
E135	South Bag Packer Feed Hopper	30501514	30.0	262,800	0.02	0.01		0.01	0.03	---
E136	North Bag Packer Feed Hopper	30501514	30.0	262,800	0.02	0.01		0.01	0.03	---
G31	Bucket Elevator - Mixed Product	30501514	30.0	262,800	0.01	0.01		0.01	0.01	---
<b>Total for BH-31</b>								<b>0.19</b>	<b>0.75</b>	
G18	Hamilton Surge Bin	30501514	30.0	262,800	0.16	0.01	Enclosed Process connected to Baghouse: BH-34	0.05	0.21	S2
G19	Hamilton Bulk Loadout Bin	30501514	30.0	262,800	0.16	0.01		0.05	0.21	S2
G20	Hamilton Bulk Loadout	30501599	30.0	262,800	0.16	0.01		0.05	0.21	---
G21	Hamilton Rotary Screens	30501599	30.0	262,800	0.08	0.01		0.02	0.11	P1

EU	Description	SCC	Throughput		EF (lbs/ tons) <sup>1</sup>	CF <sup>2</sup>	Control Method	PTE		Type <sup>4</sup>
			tons/ hour	tons/ year				lbs/ hour <sup>3</sup>	tons/ year	
<b>Total for BH-34</b>								<b>0.17</b>	<b>0.74</b>	
<b>Total PM<sub>10</sub> Emissions of Non-Combustion Emission Units for the Plaster Plant</b>								<b>4.13</b>	<b>17.44</b>	

<sup>1</sup>Efficiency factors are based on AP-42 emission rated for Gypsum Manufacturing Chapter 11.16.

<sup>2</sup>Control factor values: 0.01 is equivalent to 99.0 percent control from a baghouse and 0.005 is equivalent to 99.5 percent control from a baghouse. Enclosed batch process has 100 percent control.

<sup>3</sup>Hourly PTE and production rates listed are for informational purposes only and are not enforceable limits.

<sup>4</sup>Type is a designation for emission unit billing purpose: P1 = process equipment; S2 = Storage Silo. Fees are listed in Section 18 of the AQR.

**Table IV-C-6: Plaster Plant PTE for Combustion Emission Units**

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons) <sup>1</sup>	PTE		Type <sup>3</sup>
						lbs/hour <sup>2</sup>	tons/year	
E105	West Roller Mill 5.7 MMBtu/hr BH-04 (flue gas only)	30501502	5.4E-3 MMcf/hr 24 hrs/day 8,760 hrs/day	PM <sub>10</sub>	5.7 lb/MMcf	0.01	0.01	N/A
				NO <sub>x</sub>	100.0 lb/MMcf	0.54	2.38	
				CO	84.0 lb/MMcf	0.46	2.00	
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.01	
				VOC	5.5 lb/MMcf	0.03	0.13	
				HAP	1.9 lb/MMcf	0.01	0.05	
E106	East Roller Mill 5.7 MMBtu/hr BH-05 (flue gas only)	30501502	5.4E-3 MMcf/hr 24 hrs/day 8,760 hrs/day	PM <sub>10</sub>	5.7 lb/MMcf	0.01	0.01	N/A
				NO <sub>x</sub>	100.0 lb/MMcf	0.54	2.38	
				CO	84.0 lb/MMcf	0.46	2.00	
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.01	
				VOC	5.5 lb/MMcf	0.03	0.13	
				HAP	1.9 lb/MMcf	0.01	0.05	
E110	West Kettle 20.0 MMBtu/hr (flue gas only)	30501511	19.0E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM <sub>10</sub>	5.7 lb/MMcf	0.11	0.48	N/A
				NO <sub>x</sub>	100.0 lb/MMcf	1.90	8.34	
				CO	84.0 lb/MMcf	1.60	7.01	

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons) <sup>1</sup>	PTE		Type <sup>3</sup>
						lbs/hour <sup>2</sup>	tons/year	
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.05	
				VOC	5.5 lb/MMcf	0.10	0.46	
				HAP	1.9 lb/MMcf	0.04	0.16	
E111	East Kettle 20.0 MMBtu/hr (flue gas only)	30501511	19.0E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM <sub>10</sub>	5.7 lb/MMcf	0.11	0.48	N/A
				NO <sub>x</sub>	100.0 lb/MMcf	1.90	8.34	
				CO	84.0 lb/MMcf	1.60	7.01	
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.05	
				VOC	5.5 lb/MMcf	0.10	0.46	
				HAP	1.9 lb/MMcf	0.04	0.16	
E145	Alpha Boiler 12.0 MMBtu/hr	20200202	11.4E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM <sub>10</sub>	5.7 lb/MMcf	0.07	0.29	F1
				NO <sub>x</sub>	100.0 lb/MMcf	1.14	5.01	
				CO	84.0 lb/MMcf	0.96	4.20	
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.03	
				VOC	5.5 lb/MMcf	0.06	0.28	
				HAP	1.9 lb/MMcf	0.02	0.10	
E146	Paratherm Boiler #1 1.2 MMBtu/hr	20200202	1.1E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM <sub>10</sub>	5.7 lb/MMcf	0.01	0.03	F1
				NO <sub>x</sub>	100.0 lb/MMcf	0.11	0.50	
				CO	84.0 lb/MMcf	0.10	0.42	
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.01	
				VOC	5.5 lb/MMcf	0.01	0.03	
				HAP	1.9 lb/MMcf	0.01	0.01	
E147	Paratherm Boiler #2 1.2 MMBtu/hr	20200202	1.1E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM <sub>10</sub>	5.7 lb/MMcf	0.01	0.03	F1
				NO <sub>x</sub>	100.0 lb/MMcf	0.11	0.50	
				CO	84.0 lb/MMcf	0.10	0.42	
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.01	

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons) <sup>1</sup>	PTE		Type <sup>3</sup>	
						lbs/hour <sup>2</sup>	tons/year		
E148	Paratherm Boiler #3 1.2 MMBtu/hr	20200202	1.1E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	VOC	5.5 lb/MMcf	0.01	0.03	F1	
				HAP	1.9 lb/MMcf	0.01	0.01		
				PM <sub>10</sub>	5.7 lb/MMcf	0.01	0.03		
				NO <sub>x</sub>	100.0 lb/MMcf	0.11	0.50		
				CO	84.0 lb/MMcf	0.10	0.42		
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.01		
E153	Alpha Multiscrew Heater; 1.2 MMBtu/hr	20200202	1.1E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	VOC	5.5 lb/MMcf	0.01	0.03	F1	
				HAP	1.9 lb/MMcf	0.01	0.01		
				PM <sub>10</sub>	5.7 lb/MMcf	0.01	0.03		
				NO <sub>x</sub>	100.0 lb/MMcf	0.11	0.50		
				CO	84.0 lb/MMcf	0.10	0.42		
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.01		
E159	Alpha Duct Burner 1.0 MMBtu/hr	20200202	952.4E-6 MMcf/hr 24 hrs/day 8,760 hrs/yr	VOC	5.5 lb/MMcf	0.01	0.02	F1	
				HAP	1.9 lb/MMcf	0.01	0.01		
				PM <sub>10</sub>	5.7 lb/MMcf	0.01	0.02		
				NO <sub>x</sub>	100.0 lb/MMcf	0.10	0.42		
				CO	84.0 lb/MMcf	0.08	0.35		
				SO <sub>x</sub>	0.6 lb/MMcf	0.01	0.01		
G32 <sup>4</sup>	Plaster Mill Ink	30501599	1.0 lbs/hr 158.0 lbs/yr	VOC <sup>†</sup>	low VOC	0.22	0.02	---	
				HAP <sup>†</sup>	none	0.04	0.01		
<b>Total PTE for Combustion Emission Units for the Plaster Plant</b>						<b>lbs/hour</b>	<b>tons/year</b>		
						<b>PM<sub>10</sub></b>	<b>0.36</b>	<b>1.41</b>	
						<b>NO<sub>x</sub></b>	<b>6.56</b>	<b>28.87</b>	
						<b>CO</b>	<b>5.56</b>	<b>24.25</b>	

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons) <sup>1</sup>	PTE		Type <sup>3</sup>
						lbs/hour <sup>2</sup>	tons/year	
					<b>SO<sub>x</sub></b>	<b>0.10</b>	<b>0.20</b>	
					<b>VOC</b>	<b>0.59</b>	<b>1.62</b>	
					<b>HAP</b>	<b>0.21</b>	<b>0.58</b>	

<sup>1</sup>The combustion emission factors for the combustion units are based on emissions factors based on AP-42 1.4-1, 1.4-2 and 1.4-3.

<sup>2</sup>Hourly PTE and production rates listed are for informational purposes only and are not enforceable limits, except for EU 145.

<sup>3</sup>Type is a designation for emission unit billing purposes; F1 = fuel burning equipment; N/A = Not applicable: these emission units have already been accounted for under the non-combustion table as P1 = process equipment. Fees are listed in Section 18 of the AQR.

<sup>4</sup>Plaster Mill Ink emissions are on Table IV-C-4.

**Table IV-C-7: Emergency Generator and Fire Pump PTE**

EU	Description	SCC	Parameters	Pollutant	EF (lbs/hp-hr) <sup>1</sup>	PTE (lbs/hr)	PTE (tons/yr)	Type <sup>2</sup>
G33	Emergency Generator: Perkins	20200102	HP	PM <sub>10</sub>	2.20E-03	0.13	0.01	---
			59	NO <sub>x</sub>	3.10E-02	1.83	0.03	
				CO	6.68E-03	0.39	0.01	
			Hours	SO <sub>2</sub>	3.63E-04	0.02	0.01	
			30	VOC	2.47E-03	0.15	0.01	
				HAP	4.63E-04	0.03	0.01	
G34	Fire Pump: CAT 3412	20200401	HP	PM <sub>10</sub>	7.000E-04	0.46	0.01	EE1
			660	NO <sub>x</sub>	2.400E-02	15.84	0.24	
				CO	5.500E-03	3.63	0.05	
			Hours	SO <sub>2</sub>	4.045E-04	0.27	0.01	
			30	VOC	6.416E-03	4.23	0.06	
				HAP	1.860E-04	0.12	0.01	
<b>Total PTE for Diesel Generator and Fire Pump</b>						<b>PTE (lbs/hr)</b>	<b>PTE (tons/yr)</b>	
					<b>PM<sub>10</sub></b>	<b>0.59</b>	<b>0.02</b>	
					<b>NO<sub>x</sub></b>	<b>17.67</b>	<b>0.27</b>	
					<b>CO</b>	<b>4.02</b>	<b>0.06</b>	
					<b>SO<sub>2</sub></b>	<b>0.29</b>	<b>0.02</b>	
					<b>VOC</b>	<b>4.38</b>	<b>0.07</b>	
					<b>HAP</b>	<b>0.15</b>	<b>0.02</b>	

<sup>1</sup>Emission factors based on manufacturer's data.

<sup>2</sup>Type is a designation for emission unit billing purposes EE1 = stationary emergency IC engine 500-1,500 HP. Fees are listed in Section 18 of the AQR.

**Table IV-C-8: Fugitive Sources: PTE for Haul Roads**

EU	Description	Length (miles)	Trips/day	VMT/hr	VMT/yr	Weight (tons)	% Control	EF (lbs/VMT) <sup>1</sup>	PTE (lbs/hr)	PTE (tons/yr)	Type <sup>2</sup>
<b>Haul Roads – PAVED</b>											
A01	Wallboard Trucks	0.08	50	0.17	1,489	29.0	98.0	7.57	0.03	0.11	H1
FE100	Rock Trucks (weighted)	0.16	16	0.11	964	42	98.0	7.57	0.02	0.07	---
	Rock Trucks (south route)	0.26	74	0.80	7,008	42	98.0	7.57	0.12	0.53	
	Bulk Plaster Trucks (plaster loop)	0.58	5	0.12	1,051	37.5	98.0	7.57	0.02	0.08	
	Bulk Plaster Trucks (north road)	0.20	10	0.08	701	37.5	98.0	7.57	0.01	0.05	
	Plaster Trucks (flatbed)	0.58	15	0.36	3,154	37.5	98.0	7.57	0.05	0.24	
<b>Haul Roads – UNPAVED</b>											
FE100	Rock Trucks	0.20	45	0.38	3,329	42	90.0	7.57	0.29	1.26	H1
FE200	Loaders	0.038	130	0.21	1,840	30	90.0	7.57	0.16	0.70	---
<b>Subtotals PM<sub>10</sub> Fugitive Emission - Haul Roads</b>									<b>0.70</b>	<b>3.04</b>	

<sup>1</sup>Emission factors are based on DAQEM default emission factors.

<sup>2</sup>Type is a designation for emission unit billing purposes; H1 = haul road. Fees are listed in Section 18 of the AQR.

**Table IV-C-9: Fugitive Source: PTE for Batch/Truck Dumping and Total Fugitive PTE**

EU	Description	Rate (tons/day)	Moisture	Wind Speed (mph)	EF lbs/ton <sup>1</sup>	Control	PTE (lbs/hr)	PTE (tons/yr)	Type <sup>2</sup>
<b>Batch/Truck Dumping &amp; Storage Piles</b>									
FE300	Batch Dumping Beta Rock	720	0.50%	4.5	0.0068	85%	0.03	0.13	---
FE141	Batch Dumping Alpha Rock	175	0.50%	4.5	0.0068	85%	0.01	0.03	---
FE200a	Truck Dumping	1,890	0.50%	4.5	0.0068	0%	0.54	2.35	P1
FE200b	Batch Dumping Board Rock	1,200	0.50%	4.5	0.0068	85%	0.05	0.22	P1
		<b>Acres</b>		<b>EF (lbs/Acre-Day)</b>					
A02	Stockpiles Area	2.5		1.66		Moisture	0.17	0.76	S1
<b>Subtotal PM<sub>10</sub> Fugitive Emissions - Batch/Truck Dumping</b>							<b>0.80</b>	<b>3.49</b>	
<b>Total PM<sub>10</sub> PTE for Fugitive Sources: Haul Roads and Batch/Truck Dumping</b>							<b>1.50</b>	<b>6.53</b>	

<sup>1</sup>Calculation based on AP-42 Section 13.2.4 emission factors lb/tons = (0.35)(0.0032)(U/5)<sup>1.3</sup>(M/2)<sup>1.4</sup>, where: U = wind speed (mph), M = moisture content (%).

<sup>2</sup>Type is a designation for emission unit billing purposes; P1 = process equipment; S1 = disturbed surfaces & stockpiles. Fees are listed in Section 18 of the AQR.

## D. Performance Testing

The Part 70 OP issued in October 2003 included performance testing requirements. Performance testing for the Wallboard and Plaster Plants shall be conducted annually and within 60 days of the anniversary date of the previous performance test. The performance testing is subject to DAQEM's "Guideline on Performance Testing" (Revised 09/05/03). The required performance testing will be performed using the methods listed in Table IV-D-1:

**Table IV-D-1: Performance Testing Protocol Requirements**

EU	Description	NSPS/AQR Applicability	Compliance Standard	Performance Test	Frequency
A03, B01-B04, D17, F01-F03, & G02-G04	Baghouse: BH-W01	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
C01	Baghouse: BH-W02	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
C02	Baghouse: BH-W03	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
C03	Baghouse: BH-W04	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
C04	Baghouse: BH-W05	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
C05	Baghouse: BH-W06	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
D01a	Baghouse: BH-W07	Section 34	No visible emissions	Method 22	Annual
D01b	Baghouse: BH-W08	Section 34	No visible emissions	Method 22	Annual
D01c & G05	Baghouse: BH-W09	Subpart OOO	No visible emissions	Method 22	Annual
D01d	Baghouse: BH-W10	Section 34	No visible emissions	Method 22	Annual
D03	Baghouse: BH-W11	Subpart OOO	No visible emissions	Method 22	Annual
D04	Baghouse: BH-W12	Subpart OOO	No visible emissions	Method 22	Annual
D01e, D06, D18, & G06-, G08	Baghouse: BH-W13	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
D07-D16, G09, & G10	Baghouse: BH-W14	Subpart OOO	No visible emissions	Method 22	Annual

EU	Description	NSPS/AQR Applicability	Compliance Standard	Performance Test	Frequency
E101, E102, E164, E174, & E175	Baghouse: BH-01	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E103	Baghouse: BH-02	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E104	Baghouse: BH-03	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E105	Baghouse: BH-04	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E106	Baghouse: BH-05	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E108	Baghouse: BH-06	Subpart OOO	No visible emissions	Method 22	Annual
E109	Baghouse: BH-07	Subpart OOO	No visible emissions	Method 22	Annual
E110	Baghouse: BH-08	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
		Subpart UUU	10 percent opacity	Method 9	Annual
			0.092 g/dscm (0.040 gr/dscf)	Method 5 or Method 17	Every 5 years
E111	Baghouse: BH-09	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
		Subpart UUU	10 percent opacity	Method 9	Annual
			0.092 g/dscm (0.040 gr/dscf)	Method 5 or Method 17	Every 5 years
E107, E156, E165, E173, & G12	Baghouse: BH-10 & BH-33	Subpart OOO	No visible emissions	Method 22	Annual
E113 & G13	Baghouse: BH-11	Subpart OOO	No visible emissions	Method 22	Annual
E114, E166, & E167	Baghouse: BH-12	Subpart OOO	No visible emissions	Method 22	Annual
E142-E144, E149-151, E176-E178, & G24	Baghouse: BH-13	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
		Subpart UUU	10 percent	Method 9	Annual

EU	Description	NSPS/AQR Applicability	Compliance Standard	Performance Test	Frequency
			opacity		
			0.092 g/dscm (0.040 gr/dscf)	Method 5 or Method 17	Every 5 years
E152, E154, E155, E157, E158, E160- E162, G11, & G25-G28	Baghouse: BH-14	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E115, E117, E119, E121, G14, & G29	Baghouse: BH-15	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E116, E118, E120, G16, & G30	Baghouse: BH-16	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E122	Baghouse: BH-17	Subpart OOO	No visible emissions	Method 22	Annual
E123	Baghouse: BH-18	Subpart OOO	No visible emissions	Method 22	Annual
E124	Baghouse: BH-19	Subpart OOO	No visible emissions	Method 22	Annual
E125	Baghouse: BH-20	Subpart OOO	No visible emissions	Method 22	Annual
E126	Baghouse: BH-21	Subpart OOO	No visible emissions	Method 22	Annual
E127	Baghouse: BH-22	Subpart OOO	No visible emissions	Method 22	Annual
E128	Baghouse: BH-23	Subpart OOO	No visible emissions	Method 22	Annual
E130	Baghouse: BH-24	Subpart OOO	No visible emissions	Method 22	Annual
E129	Baghouse: BH-25	Subpart OOO	No visible emissions	Method 22	Annual
E140 & E169	Baghouse: BH-28	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E139	Baghouse: BH-29	Subpart OOO	No visible emissions	Method 22	Annual
E112, E168, G15, G17, G22, & G23	Baghouse: BH-30	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E131-E138, E170, E171, & G31	Baghouse: BH-31	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E172	Baghouse: BH-32	Subpart OOO	No visible emissions	Method 22	Annual
G18-G21	Baghouse: BH-34	Subpart OOO Section 34	7 percent opacity	Method 9	Annual

EU	Description	NSPS/AQR Applicability	Compliance Standard	Performance Test	Frequency
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E179-E186	Autoclaves: Enclosed Batch Process	Subpart UUU	10 percent opacity	Method 9	Annual

1. Initial performance testing for the Alpha boiler (EU: E145) were completed on October 18, 2002. Any additional required testing will be performed using the following methods:

**Table IV-D-2: Performance Testing Protocol Requirements for the Alpha Boiler (EU: E145)**

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NO <sub>x</sub>	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10
Stack Gas Parameters	--	EPA Methods 1, 2, 3A, and 4

All performance tests on the Alpha boiler (EU: E145) must conform to AQR Section 49.

2. The NCA #1 exhaust gas and Board Dryer (EU: E03) in the Wallboard Plant shall continue to demonstrate compliance with the following provisions:

NO<sub>x</sub> and CO

- a. the exhaust gas from Nevada Cogeneration Associates #1 (NCA #1) shall be tested for NO<sub>x</sub>, CO, and flow every thirty-six (36) months,
- b. all exhaust gas performance test(s) shall be conducted while the emission unit (EU: E03) is operating between 80 percent and 100 percent of the design capacity,
- c. each subsequent exhaust gas performance testing shall be conducted during the six (6) months prior to the previous performance test, and
- d. stack emissions from the board dryer (EU: E03) shall be combined during stack testing and do not have to be tested individually to determine compliance with the board dryer emission limitations.

**Table IV-D-3: Performance Testing Protocol Requirements for NCA #1 Exhaust Gas**

Test Point	Pollutant/ Parameter	Method
Exhaust Gas from NCA #1	NO <sub>x</sub>	Pounds per hour and/or ppmvd @ reference conditions
Exhaust Gas from NCA #1	CO	Pounds per hour and/or ppmvd @reference conditions
Exhaust Gas from NCA #1	Flow	Pounds per hour

**E. Emissions Monitoring**

Compliance Assurance Monitoring (CAM) is intended to provide for monitoring to assess compliance with emission limitations. CAM requirements apply only to those emission units that have some type of emission limitations, use a control device to comply with the limitation, and have a pre-control potential emission that exceeds the major source threshold for the particular pollutant controlled. Certain specific exemptions may apply for emission units subject to other regulatory programs. In some cases, a device used as a control device for some processes may in fact be integral to another process in other case and exempt for that reason as well.

CAM requirements include the development of a monitoring program for a selection of parameters indicative of control device operability and performance and, therefore, compliance with an applicable emission limitation.

The control devices at the source include a number of baghouses used to control PM<sub>10</sub> emissions. Since the pollutant of concern is PM<sub>10</sub>, only those emission units with pre-control emissions exceeding 100 tons per year are subject to the CAM rule. Table IV-E-1 lists the emission units at the source that are subject to the CAM rule.

**Table IV-E-1: Emission Units Subject to CAM**

EU	Description	Control Device	PM <sub>10</sub> Pre-control Emission (tpy)
A03, B01-B04, D17, F01-F03, & G02-G04	Rock/Recycle Feeder System, Crushing Area Conveyor, Primary Crushing, 200 Ton Rock Bin, End Trim/Bundler, Re-cut Machine, Riser Machine, Milling Area Conveyors, Secondary Crusher, Bucket Elevator – Cemco Feed, Bucket Elevator – Rock Tank and Bucket Elevator – Rock Supply	Baghouse: BH-W01	400.0
C01	IMP Mill #1	Baghouse: BH-W02	4,380
C02	IMP Mill #2	Baghouse: BH-W03	4,380
C03	IMP Mill #3	Baghouse: BH-W04	4,380
C04	IMP Mill #4	Baghouse: BH-W05	4,380
C05	IMP Mill #5	Baghouse: BH-W06	4,380
E101, E102, E164, E174, & E175	Roll Crusher, Rock Conveyors, Alpha Rock Screen, North Beta Rock Grizzly Feed Screen, and South Beta Rock Grizzly Feed Screen	Baghouse: BH-01	103.0
E105	West Roller Mill	Baghouse: BH-04	284.0
E106	East Roller Mill	Baghouse: BH-05	284.0
E110	West Kettle (w/out combustion added)	Baghouse: BH-08	171.0
E111	East Kettle (w/out combustion added)	Baghouse: BH-09	171.0
E142-E144, E149-E151, E176-E178, & G24	Alpha Rock Conveyors, South Alpha Rock Bin, North Alpha Rock Bin, South Alpha Bin Grizzly Feed Screen, North Alpha Rock Bin Grizzly Feed Screen, Alpha Rock Elevator Screen, Pan Dryer #1, Pan Dryer #2, Pan Dryer #3, and Bucket Elevator – Alpha Basket	Baghouse: BH-13	136.0

There are a number of other baghouses used for emission and moisture control throughout the Wallboard and Plaster Plants, however none of the uncontrolled rates for any of these baghouses exceed the one hundred ton per year emission limit. Daily measurements of pressure differential ( $\Delta p$ ) for PM<sub>10</sub> and visible emissions for opacity were selected as CAM indicators. The  $\Delta p$  between inlet and outlet of the baghouse is an accepted standard indicator of satisfactory baghouse performance. For opacity reading, the absence of visible emissions demonstrates compliance. The key elements of the monitoring approach are presented in Table IV-E-2.

**Table IV-E-2: Monitoring Approach**

CAM Element	Indicator 1	Indicator 2
Indicator	Pressure differential ( $\Delta p$ ) for PM <sub>10</sub>	Visual emissions for opacity
Measurement Approach	The $\Delta p$ will be measured daily; the time of reading and the $\Delta p$ will be recorded.	Visible emission (VE) from the baghouse exhaust will be monitored and documented on a daily basis during routine conditions.
Indicator Range: Excursion	An excursion is defined as a pressure drop less than ½ inches and greater than 6 inches of water for EUs: A03, B01-B04, C01-C05, D17, E101, E102, E105, E106, E110, E111, E142-E144, E149-E151, E164, E174-178, F01-F03, G02-G04, & G24. Excursions trigger an inspection, correction action, and a reporting requirement.	An excursion is defined as the presence of visible emissions. Excursions trigger an inspection, corrective action, and a reporting requirement. In addition, if VE's are observed, the equipment will be shut down.
Action Threshold	The action threshold for $\Delta p$ is between 1-5 inches of water. Action thresholds trigger an inspection and corrective action, or documentation that the system is operating normally	Not applicable
QIP Thresholds	None selected	More than three (3) excursions within a quarterly reporting period
Performance Criteria Data Representativeness	Pressure taps are located on the high pressure and low pressure sides of the bag filters. A differential pressure gauge measures and displays the $\Delta p$ with a minimum accuracy of $\pm 0.25$ inches of water column.	Observations are made at the baghouse exhaust.
Verification of Operational Status	Not applicable	Not applicable
QA/QC Practices and Criteria	The $\Delta p$ gauge will be calibrated or replaced annually	The VE observer will be familiar with baghouse operations and visible emissions
Monitoring Frequency	Daily	Daily
Data Collection Procedures	$\Delta p$ is manually recorded daily	The VE observation is documented by the observer and recorded daily.
Averaging Period	Not applicable	Not applicable

## V. REGULATORY REVIEW

### A. Local Regulatory Requirements

DAQEM has determined that the following public law, statues, and associated regulations are applicable:

1. Nevada Revised Statutes (NRS), Chapter 445B;
2. Portions of the AQR included in the State Implementation Plan (SIP) for Clark County, Nevada. SIP requirements are federally enforceable. All requirements from Authority to Construct permits and Section 16 Operation Permits issued by DAQEM are federally enforceable because these permits were issued pursuant to SIP-included sections of this AQR: and
3. Portions of the AQR not included in the SIP. These locally applicable requirements are locally enforceable only.

The Nevada Revised Statutes (NRS) and the Clean Air Act Amendments (CAAA) are public laws that establish the general authority for the Regulations mentioned.

The DAQEM Part 70 (Title V) Program received Final Approval on November 30, 2001 with publication of that approval appearing in the Federal Register December 5, 2001 Vol. 66, No. 234. AQR Section 19 – Part 70 Operation Permit [Amended 07/01/04] details the Clark County Part 70 Operation Permit Program. These regulations may be accessed on the Internet at: <http://www.accessclarkcounty.com/depts/daqem/aq/rules/pages/regs.aspx>

Local regulations contain sections that are federally enforceable and sections that are locally enforceable only. Locally enforceable only rules have not been approved by EPA for inclusion into the State Implementation Plan (SIP). Requirements and conditions that appear in the Part 70 OP which are related only to non-SIP rules notated as locally enforceable only.

**Table V-A-1: AQR Section 12 and 55 Summary Table for This Source**

	<b>PM<sub>10</sub></b>	<b>NO<sub>x</sub></b>	<b>CO</b>	<b>SO<sub>x</sub></b>	<b>VOC</b>	<b>HAP</b>
<b>Air Quality Area</b>	PSD	Unclassified nonattainment (ozone)	PSD	PSD	Unclassified nonattainment (ozone)	N/A
<b>Source PTE (tpy)</b>	61.11	99.87	256.37	2.52	30.72	2.64
<b>Major Source</b>	≥ 100 tpy	≥ 100 tpy	≥ 100 tpy	≥ 100 tpy	≥ 100 tpy	≥ 10 tpy for each HAP, or ≥ 25 tpy for combined HAPs

**Discussion:** G-P is a major source of CO and NO<sub>x</sub> and minor for all the other regulated pollutants.

**Table V-A-2: DAQEM – AQR with Source Compliance or Requirement**

Applicable Section – Title	Applicable Subsection – Title	SIP	Affected Emission Unit
0. Definitions	applicable definitions	yes	entire source
1. Definitions	applicable definitions – “Affected Facility”, “Air Contaminant”, “Air Pollution Control Committee”, “Area Source”, “Atmosphere”, “Board”, “Commercial Off-Road Vehicle Racing”, “Dust”, “Existing Facility”, “Existing Gasoline Stations”, “Fixed Capital Cost”, “Fumes”, “Health District”, “Hearing Board”, “Integrated Sampling”, “Minor Source”, “Mist”, New Gasoline Stations“, New Source”, “NIC”, “Point Source”, “Shutdown”, “Significant”, “Single Source”, “Source of Air Contaminant”, “Special Mobile Equipment”, “Standard Commercial Equipment”, “Standard Conditions”, “Start Up”, “Stop Order”, “Uncombined Water”, and “Vapor Disposal System”	yes	entire source
2. Air Pollution Control Board	all subsections	yes	entire source
4. Control Officer	all subsections	yes	entire source
5. Interference with Control Officer	all subsections	yes	entire source
6. Injunctive Relief	all subsections	yes	entire source
7. Hearing Board and Hearing Officer	all subsections	no	entire source
8. Persons Liable for Penalties - Punishment: Defense	all subsections	yes	entire source
9. Civil Penalties	all subsections	yes	entire source
10. Compliance Schedule	when applicable; applicable subsections	yes	entire source
11. Ambient Air Quality Standards	applicable subsections	yes	entire source
12. Preconstruction Review for New or Modified Stationary Sources	Applicable subsections  SIP Exceptions: § 12.2.18 HAP Sources in Clark County. § 12.2.20 Additional Requirements for STATIONARY SOURCES with Beryllium, Mercury, Vinyl Chloride, or Asbestos EMISSIONS in Clark County	yes	entire source
13. Emission Standards for Hazardous Pollutants	Condition A-37 is the EPA-required standard condition concerning asbestos.	no	entire source
14. New Source Performance Standards	CCAQR Section 14.1.1: Subpart A - General Provisions CCAQR Section 14.1.38: Subpart OOO - Standards of Performance for Nonmetallic Minerals Processing Plants CCAQR Section 14.1.41: Subpart UUU - Standards of Performance for Calciners and Dryers in Mineral Industries	yes	entire source

<b>Applicable Section – Title</b>	<b>Applicable Subsection – Title</b>	<b>SIP</b>	<b>Affected Emission Unit</b>
13. Emission Standards for Hazardous Pollutants	all subsections	no	none
16. Operating Permits	all subsections	yes	entire source
18. Permit and Technical Service Fees	§ 18.1 Operating Permit Fees § 18.2 Annual Emission Unit Fees § 18.4 New Source Review Application Review Fee § 18.5 Part 70 Application Review Fee § 18.6 Annual Part 70 Emission Fee § 18.14 Billing Procedures	yes	entire source
19. Part 70 Operating Permit Federal Approval (11/25/01)	§ 19.2 Applicability § 19.3 Part 70 Permit Applications § 19.4 Part 70 Permit Content § 19.5 Permit Issuance, Renewal, Re-openings, and Revisions § 19.6 Permit Renewal by the EPA and Affected States § 19.7 Fee Determination and Certification	N/A	entire source
20. Emission Standards for Hazardous Air Pollutants for Source Categories	all subsections	no	none
21. Acid Rain Permits	all subsections	no	none
22. Acid Rain Continuous Emissions Monitoring	all subsections	no	none
24. Sampling and Testing - Records and Reports	§ 24.1 Requirements for installation and maintenance of sampling and testing facilities § 24.2 Requirements for emissions record keeping § 24.3 Requirements for the record format § 24.4 Requirements for the retention of records by the emission sources	yes	entire source
25.1 Upset/Breakdown, Malfunctions	§ 25.1 Requirements for the excess emissions caused by upset/breakdown and malfunctions	no	entire source
25.2 Upset/Breakdown, Malfunctions	§ 25.2 Reporting and Consultation	yes	entire source
26. Emission of Visible Air Contaminants	§ 26.1 Limit on opacity ( $\leq$ 20 percent for 3 minutes in a 60-minute period)	yes	entire source
27. Particulate Matter from Process Weight Rate	all subsections	no	entire source
28. Fuel Burning Equipment	all subsections	yes	entire source
29. Sulfur Contents of Fuel Oil	Sulfur content shall be equal to or less than 0.05 percent sulfur by weight	no	Generator and Fire Pump
30. Incinerators	all subsections	yes	none
33. Chlorine in Chemical Processes	all subsections	yes	none
34. Performance Standards for Metallic and/or Nonmetallic Mineral Mining and Processing	all subsections	no	entire source

Applicable Section – Title	Applicable Subsection – Title	SIP	Affected Emission Unit
35. Diesel Engine Powered Electrical Generating Equipment	all subsections	no	none
40. Prohibitions of Nuisance Conditions	§ 40.1 Prohibitions	no	entire source
41. Fugitive Dust	§ 41.1 Prohibitions	yes	entire source
42. Open Burning	§ 42.2	no	entire source
43. Odors In the Ambient Air	§ 43.1 Prohibitions coded as Section 29	no	entire source
45. Idling of Diesel Powered Motor Vehicles	§ 45.1 Diesel Powered Motor Vehicles Idling	no	Diesel Powered Motor Vehicles
49. Emission Standards for Boilers and Steam Generators Burning Fossil Fuels	Local enforcement only all subsections	no	Alpha boiler
50. Storage of Petroleum Products	all subsections	yes	none
51. Petroleum Product Loading into Tanks, Trucks And Trailers	all subsections	yes	none
52. Gasoline Dispensing Facilities	§ 52.3 Registration and Permitting § 52.4 Specification of Vapor Control Systems § 52.7 Recordkeeping, Recording and Notifications § 52.10 Motor Vehicle Refueling	no	none
53. Oxygenated Gasoline Program	all subsections	yes	none
54. Cleaner Burning Gasoline (CBG): Wintertime Program	all subsections	yes	none
55. Preconstruction Review for New or Modified Stationary Sources in the 8-hour Ozone Nonattainment Area	all subsections	no	entire source
58. Emission Reduction Credits	all subsections	yes	entire source
59. Emission Offsets	all subsections	yes	entire source
60. Evaporation and Leakage	all subsections	yes	entire source
70. Emergency Procedures	all subsections	yes	entire source
80. Circumvention	all subsections	yes	entire source
81. Provisions of Regulations Severable	all subsections	yes	entire source

AQR Section 11 – Ambient Air Quality Standards [Amended 07/01/04] (*in part*)

**Discussion:** The PSD Class II increment consumption as a result of this modification is listed below is outlined in Table V-A-3.

**Table V-A-3: PSD Increment Consumption**

Pollutant	Averaging Period	PSD Increment Consumption by the Source ( $\mu\text{g}/\text{m}^3$ )	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
SO <sub>2</sub>	3-hour	2.42 <sup>1</sup>	686818	4024218
SO <sub>2</sub>	24-hour	1.12 <sup>1</sup>	686818	4024218
SO <sub>2</sub>	Annual	0.38	686818	4024218

Pollutant	Averaging Period	PSD Increment Consumption by the Source ( $\mu\text{g}/\text{m}^3$ )	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
PM <sub>10</sub>	24-hour	14.08 <sup>2</sup>	686718	4024408
PM <sub>10</sub>	Annual	4.70	686634	4024408
NO <sub>x</sub>	Annual	11.69	686818	4024218

<sup>1</sup>Modeled 2<sup>nd</sup> High Concentration

<sup>2</sup>Modeled 6<sup>th</sup> High Concentration

Table V-A-3 shows the location of the maximum impact and the potential PSD increment consumed by the source at that location. The impacts are below the PSD increment limits.

## B. Federally Applicable Regulations

DAQEM has determined that the following federal regulations are applicable:

1. Clean Air Act, as amended (CAAA), Authority: 42 U.S.C. § 7401, et seq
2. Title 40 of the Code of Federal Regulations (CFR)

### 40 CFR PART 60-STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES:

#### Subpart A – General Provisions

##### 40 CFR § 60.7 – Notification and record keeping

**Discussion:** This regulation requires notification to DAQEM of modifications, opacity testing, records of malfunctions of process equipment and/or continuous monitoring devices, CEMS data, and performance test data. These requirements are found in the Part 70 OP. DAQEM requires records to be maintained for five years, a more stringent requirement than the two (2) years required by § 60.7.

##### 40 CFR § 60.8 – Performance test

**Discussion:** These requirements are found in the Part 70 OP. Notice of intent to test, the applicable test methods, acceptable test method operating conditions, and the requirement for three runs are outlined in this regulation. DAQEM requirements for initial performance testing are identical to § 60.8. DAQEM also requires periodic performance testing on emission units based upon throughput or usage. More discussion is in this document under the compliance section.

##### 40 CFR § 60.11 – Compliance with standards and maintenance requirements

**Discussion:** G-P is subject to three NSPS standards: Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants and Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries. Compliance requirements for these standards are discussed in corresponding sections.

##### 40 CFR § 60.12 – Circumvention

**Discussion:** These requirements are found in the Part 70 OP. This is also SIP-approved local rule § 80.1.

#### **40 CFR § 60.13 – Monitoring requirement**

**Discussion:** The Part 70 OP contains the monitoring conditions. In addition, the CAM plan approved for the monitoring procedures follows the requirements outlined, including the span time and recording time.

### **Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units**

#### **40 CFR § 60.40c – Applicability and Delegation of Authority**

**Discussion:** The Alpha boiler (EU: E145) is rated at 12.0 MMBtu per hour; therefore, Subpart Dc is applicable to this emission unit.

#### **40 CFR § 60.42c – Standard for Sulfur Dioxide**

**Discussion:** This section does not pertain to boilers that exclusively fire natural gas.

#### **40 CFR § 60.43c – Standard for Particulate Matter**

**Discussion:** This section does not pertain to boilers that exclusively fire natural gas.

#### **40 CFR § 60.48c – Reporting and Recordkeeping Requirements**

**Discussion:** These are addressed in the Part 70 Operating Permit.

### **Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants**

#### **40 CFR § 60.670 – Applicability and designation of affected facility**

**Discussion:** The facility is currently subject to the standards based on 60.670(a)(1), which became effective on August 1, 1985.

#### **40 CFR § 60.672 – Standard for Particulate Matter**

**Discussion:** These requirements are addressed in the Part 70 operating permit.

#### **40 CFR § 60.675 – Test Methods and Procedures**

**Discussion:** The source is subject to the requirements of particulate matter standards and emissions limits, including PM limit and opacity limits, as described in Tables 2 and 3 of the Subpart. These requirements are found in the Part 70 OP.

#### **40 CFR § 60.676 – Reporting and Recordkeeping**

**Discussion:** The Permittee shall submit to the Administrator and to the Control Officer information required by this subsection. Specific record keeping and reporting requirements are identified in the Part 70 OP.

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

#### **40 CFR § 60.730 – Applicability and Designation of Affected Facility**

**Discussion:** The facility is currently subject to the standards based on 60.730(a), which became effective on September 28, 1992.

#### **40 CFR § 60.732 – Standards for Particulate Matter**

**Discussion:** No emissions shall be discharged into the atmosphere from any affected facility that (a) Contains particulate matter in excess of 0.092 grams per day standard cubic meter (g/dscm) [0.040 grains per dry standard cubic foot (gr/dscm)] for calciners and for calciners and dryers installed in series and particulate matter in excess of 0.057 g/dscm (0.025 gr/dscf) for dryers; and (b) Exhibits greater than ten percent opacity, unless the emissions are discharged from an affected facility using a wet scrubber control device. These requirements are identified in the Part 70 OP.

#### **40 CFR § 60.734 – Monitoring of Emissions and Operations**

**Discussion:** Daily opacity observation is required as per this subpart. The requirement is found in the OP.

#### **40 CFR § 60.735 – Recordkeeping and Reporting Requirements**

**Discussion:** Recordkeeping of daily opacity observations is required. These requirements are found in the Part 70 OP.

#### **40 CFR § 60.736 – Test Methods and Procedures**

**Discussion:** The Permittee shall determine compliance with the PM standards using test methods described in this subsection. Opacity standards shall be demonstrated using Method 9 and the PM emission standards shall be demonstrated using Method 5. These requirements are found in the Part 70 OP.

### **40 CFR PART 64 – COMPLIANCE ASSURANCE MONITORING**

#### **40 CFR § 64.2 – Applicability**

**Discussion:** G-P currently has several emission units that are subject to an emission limitation or standard that uses a control device to achieve compliance. Such emission units process with PM<sub>10</sub> emissions as none of the combustion emission units are required to have a control device. Therefore, only emission units with pre-control emissions exceeding 100 tons per year for PM<sub>10</sub> are subject to the CAM rule. Based on the applicability criteria outlined in 40 CFR 64.2(a), the CAM Rule is applicable to EUs: A03, B01 through B04, D17, F01 through F03, G02 through G04, G24, C01 through C05, E101, E102, E105, E106, E110, E111, E142 through E144, E149 through E151, and E174 through E178. These units are controlled by baghouses and the pre-controlled emissions exceed the major source threshold. The Board Dryer (EU: E03) has a PTE of more than 100 tons per of CO, but does not have a CO control device and therefore CAM is not applicable.

Daily measurements of pressure differential between inlet and outlet of the baghouse ( $\Delta p$ ) for PM<sub>10</sub> and visible emission for opacity were selected as CAM indicators. For opacity readings, the absence of visible emissions demonstrates compliance. The key elements of the monitoring approach are presented in Section IV-E of this TSD.

### **40 CFR PART 72 – ACID RAIN PERMITS REGULATIONS**

#### **Subpart A – Acid Rain Program General Provisions**

#### **40 CFR § 72.6 – Applicability**

**Discussion:** The provisions of this regulation do not apply to the source because the source has no affected units per the applicability criteria listed in 40 CFR 72.6.

#### **40 CFR PART 73 – SULFUR DIOXIDE ALLOWANCE SYSTEM**

##### **40 CFR § 73.2 – Applicability**

**Discussion:** The provisions of this regulation do not apply to the source based on 40 CFR Part 73.6.

#### **40 CFR PART 75 – CONTINUOUS EMISSIONS MONITORING**

**Discussion:** G-P is not subject to the Acid Rain emission limitations of 40 CFR Part 72; therefore, the facility is not subject to the monitoring requirements 40 CFR Part 75.

## VI. COMPLIANCE

### A. Compliance Certification

19.3.3.9 Requirement for compliance certification:

- (a) Regardless of the date of issuance of this Part 70 OP, the schedule for the submittal of reports to the DAQEM Compliance Reporting Supervisor shall be as follows:

Required Report	Applicable Period	Due Date <sup>1</sup>
Quarterly Report for 1 <sup>st</sup> Calendar Quarter	January, February, March	April 30 each year
Quarterly Report for 2 <sup>nd</sup> Calendar Quarter	April, May, June	July 30 each year
Quarterly Report for 3 <sup>rd</sup> Calendar Quarter	July, August, September	October 30 each year
Quarterly Report for 4 <sup>th</sup> Calendar Quarter, any additional annual records required.	October, November, December	January 30 each year
Annual Compliance Certification Report	12 Months	30 days after the Operating Permit issuance anniversary date
Annual Emission Inventory Report	Calendar Year	March 31 each year
Deviation Report	As Required	As soon as practicable but not to exceed ten (10) calendar days from discovery of the deviation
Upset, Breakdown, Malfunction	As Required	Within 72 hours of the onset of the event
Performance Testing	As Required	Within 60 days from the end of the test

<sup>1</sup>Each report shall be received by DAQEM on or before the due date listed. If the due date falls on a Saturday, Sunday or a Federal or Nevada holiday, then the submittal is due on the next regularly scheduled business day..

- (b) A statement of methods used for determining compliance, including a description of monitoring, recordkeeping, and reporting requirements and test methods.
- (c) A schedule for submission of compliance certifications during the permit term.
- (d) A statement indicating the source's compliance status with any applicable enhanced monitoring and compliance certification requirements of the Act.

## B. Compliance Summary

**Table VI-B-1: AQR Applicable to Georgia-Pacific Gypsum LLC**

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 0	Definitions	Applicable – G-P will comply with all applicable definitions.	G-P will meet all applicable test methods should new definitions apply.	G-P complies with applicable requires.
AQR Section 4	Control Officer	Applicable – The Control Officer or his representative may enter into G-P property, with or without prior notice, at any reasonable time for purpose of establishing compliance.	G-P will allow the Control Officer to enter the property as required.	G-P complies with applicable requirements.
AQR Section 11	Ambient Air Quality Standards.	Applicable – G-P is a source of air pollutants.	G-P demonstrated compliance in the ATC permit application with air dispersion modeling.	G-P complies with applicable requirements.
AQR Section 12.1	General application requirements for construction of new and modified sources of air pollution.	Applicable – G-P applied for and the ATC certificate was issued before commencing construction.	G-P received the ATC permit to construct.	G-P complies with applicable requirements
AQR Section 12.2.5	Requirements for specific air pollutants: PM <sub>10</sub> emission source located in the PSD area.	Applicable – G-P has PM <sub>10</sub> PTE > 100 TPY.	All new or modified units at G-P will meet the BACT requirement.	G-P complies with applicable requirements.
AQR Section 12.2.10	Requirements for specific air pollutants: CO sources located in the PSD Area.	Applicable – G-P has CO PTE > 100 TPY.	All new or modified emission units at G-P will meet the BACT requirement.	G-P complies with applicable requirements.
AQR Section 12.2.13	Requirements for specific air pollutants: VOC sources located the PSD Area.	Applicable – G-P has VOC < 100 TPY.	All new or modified emission units at G-P will meet the BACT requirement.	G-P complies with applicable requirements.
AQR Section 12.2.15	Requirements for specific air pollutants: NO <sub>x</sub> sources located in the PSD Area.	Applicable – G-P has NO <sub>x</sub> > 100 TPY.	All new or modified emission units at G-P will meet the BACT requirement	G-P complies with applicable requirements.
AQR Section 12.2.16	Requirements for specific air pollutants: SO <sub>x</sub> sources located in the PSD Area	Applicable – G-P has SO <sub>x</sub> < 100 TPY.	All new or modified emission units at G-P will meet the BACT requirements.	G-P complies with applicable requirements.
AQR Section	Requirements for	Not Applicable – G-P does not	Not Applicable.	Not Applicable.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
12.2.19	specific air pollutants: TCS sources in Clark County	have any TCS emissions.		
AQR Section 12.2.5	Air Quality Models	Applicable – dispersion modeling performed will be performed as required for any future major modifications.	As applicable, future dispersion modeling will be performed in ATC permit modifications will be in accordance with provisions of 40 CFR Part 51, Appendix W.	G-P complies with applicable requirements.
AQR Section 14.1.1 Subpart A	New Source Performance Standards (NSPS) General Provisions	Applicable – G-P is an affected facility under the regulations. Section 14 is locally enforceable; however, the NSPS standards referenced are federally enforceable.	Applicable monitoring, recordkeeping and reporting requirements.	G-P complies with applicable requirements.
AQR Section 14.1.15 Subpart Dc	Standards of Performance for New Stationary Sources – Standards of Performance for Small Industrial – Commercial – Institutional Steam Generating Units	Applicable – G-P has an emission unit that a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.	Applicable performance test, opacity tests, monitoring, recordkeeping and reporting requirements.	G-P complies with applicable requirements.
AQR Section 14.1.94: Subpart OOO	Standards of Performance for New Stationary Sources – Standards of Performance for Nonmetallic Mineral Processing Plants	Applicable – G-P operates emission units processing more than 25 tons per hour of the nonmetallic mineral material.	Applicable performance tests, opacity tests, monitoring, recordkeeping, and reporting requirement.	G-P complies with applicable requirements.
AQR Section 14.1.101: Subpart UUU	Standards of Performance for New Stationary Sources – Standards of Performance for Calciners and Dryers in Mineral Industries	Applicable – G-P operates calciners and dryers.	Applicable performance tests, opacity tests, monitoring, recordkeeping, and reporting requirement.	G-P complies with applicable requirements.
AQR Section 16	DAQEM Operating Permits	Applicable – Any emission unit of a stationary source must apply for and obtain a DAQEM operating permit, G-P applied for the operating permit from DAQEM.	G-P applied for and received the operating permit from DAQEM prior to commercial operation.	G-P complies with applicable requirements.
AQR Section 18	Permit and Technical	Applicable – G-P will be required to	G-P is required to pay all	G-P complies with applicable

Citation	Title	Applicability	Applicable Test Method	Compliance Status
	Service Fees	pay all required/applicable permit and technical service fees.	required/applicable permit and technical service fees.	requirements.
AQR Section 19	PART 70 Operating Permits	Applicable – G-P is a major stationary source and under Part 70 the initial Title V permit application was submitted as required. Renewal applications are due 6 to 18 months prior to expiration. Section 19 is both federally and locally enforceable.	G-P first renewal was issued October 2003. This renewal application was submitted to DAQEM on February 26, 2008.	G-P complies with applicable requirements.
AQR Section 25	Upset/Breakdown, Malfunctions	Applicable – Any upset, breakdown, emergency condition, or malfunction which causes emissions of regulated air pollutants in excess of any permit limits shall be reported to the Control Officer. Section 12.1 is locally and federally enforceable.	Any upset, breakdown, emergency condition, or malfunction in which emissions exceed any permit limit shall be reported to the Control Officer within one (1) hour of onset of such event.	G-P complies with applicable requirements.
AQR Section 26	Emission of Visible Air Contaminants	Applicable – Opacity for the G-P combustion units shall not exceed 20 percent for more than three (3) minutes in any 60-minute period.	Compliance determined by EPA Method 9.	G-P complies with applicable requirements.
AQR Section 27	Particulate Matter from Process Weight Rate	Applicable – The PM <sub>10</sub> hourly emission rate for the fuel burning equipment is below the thresholds established in Section 28 requirements.	Applicable, monitoring, recordkeeping and reporting requirements.	G-P complies with applicable requirements.
AQR Section 28	Fuel Burning Equipment	Applicable – The PM emission rate for the fuel burning equipment is below those established based on Section 28 requirements.	Maximum allowable PM emission rate determined from determined from equation in Section 28.	G-P complies with applicable requirements.
AQR Section 29	Sulfur Contents of Fuel Oil	Applicable – The diesel fuel that will be burned at the facility will require low sulfur fuel with sulfur content less than 0.05 percent by weight. Section 29 is locally enforceable only.	Fuel sulfur content verification obtained from fuel oil supplier.	G-P complies with applicable requirements.
AQR Section 34	Performance Standards for Metallic and/or Nonmetallic Mineral Mining and Processing	Applicable – The fugitive emissions from storage piles shall not exceed 10 percent opacity and emissions from a control device shall not exceed 7 percent opacity	Compliance determined by EPA Method 9.	G-P complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
		respectively, for more than three (3) minutes in any 60-minute period.		
AQR Section 40	Prohibitions of Nuisance Conditions	Applicable – No person shall cause, suffer or allow the discharge from any source whatsoever such quantities of air contaminants or other materials which cause a nuisance.	G-P air contaminant emissions are controlled by pollution control devices or good combustion in order not to cause a nuisance.	G-P complies with applicable requirements.
AQR Section 41	Fugitive Dust	Applicable – G-P shall take necessary actions to abate fugitive dust from becoming airborne.	G-P utilizes appropriate best practices to not allow airborne fugitive dust.	G-P complies with applicable requirements.
AQR Section 42	Open Burning	Applicable – In event G-P burns combustible material in any open areas, such burning activity will have been approved by the Control Officer in advance. Section 42 is a locally enforceable rule only.	G-P will contact DAQEM and obtain approval of the Control Officer in advance for applicable burning activities as identified in the rule.	G-P complies with applicable requirements.
AQR Section 43	Odors in the Ambient Air	Applicable – An odor occurrence is a violation if the Control Officer is able to detect the odor twice within a period of an hour, if the odor causes a nuisance, and if the detection of odors is separated by at least 15 minutes. Section 43 is a local enforceable rule only.	G-P is a predominantly mineral processing facility and is not expected to cause odors.	G-P complies with applicable requirements.
AQR Section 45	Idling of Diesel Powered Motor Vehicles	Applicable – a person shall not idle the engine of a diesel truck or diesel bus for more than 15 consecutive minutes.	G-P will utilize appropriate best practices to not allow the idling of an engine of a diesel truck or diesel bus for more than 15 consecutive minutes.	G-P complies with applicable requirements.
AQR Section 49	Compliance Requirements for Boilers and Steam Generators	Applicable – G-P's Alpha boiler (EU: E145) is subject to performance testing and burner efficiency testing requirements.	G-P submitted required test protocols prior to initial performance testing. Tests reported within 60 days. DAQEM approves test reports.	G-P complies with applicable requirements.
AQR Section 55	Preconstruction Review for New or Modified Stationary Sources in the 8-Hour Ozone Nonattainment Area	Applicable – G-P is located in Garnet Valley (also known as Apex Valley) and will need to meet the applicable emission control requirements in the event the net emission increase is greater than	In the event G-P undertakes a major modification, the facility will have to apply BACT or LAER control requirements.	G-P complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
		40 TPY.		
AQR Section 70.4	Emergency Procedures	Applicable – G-P submitted an emergency standby plan for reducing or eliminating air pollutant emissions in the Section 16 Operating Permit Application.	G-P submitted an emergency standby plan and received the Section 16 Operating Permit.	G-P complies with applicable requirements.

### C. Compliance Summary: Federal Air Quality Regulations

**Table VI-C-1: Federal Air Quality Regulations Applicable to Georgia-Pacific Gypsum LLC**

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR 52.21	Approval and Promulgation of Implementation Plans: Subpart A – General Provision	Applicable – G-P will comply with all applicable definitions.	G-P has and will continue to meet BACT AQIA and Additional impact analysis through applicable monitoring and record keeping of emission data.	G-P is in compliance with applicable state SIP requirements including monitoring and record keeping of emissions data.
40 CFR 52.1470	Approval and Promulgation of Implementation Plans: Subpart DD – Nevada [SIP Rules]	Applicable – G-P is classified as a Title V source, and SIP rules apply.	Applicable monitoring and record keeping of emissions data.	G-P is in compliance with applicable state SIP requirements including monitoring and recordkeeping of emission data.
40 CFR 60, Subpart A	Standards of Performance for New Stationary Sources – General Provisions	Applicable – G-P is an affected facility under this regulation.	Applicable monitoring, recordkeeping, and reporting requirements.	G-P complies with applicable requirements.
40 CFR 60, Subpart Dc	New Source Performance Standards – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generation Units	Applicable- G-P Alpha boiler (EU: E145) is applicable to this regulation, therefore; it is an affected facility under this regulation.	Applicable monitoring, recordkeeping, and reporting requirements are applicable for the Alpha boiler.	G-P complies with applicable requirements.
40 CFR 60, 000	New Source Performance Standards – Standards of Performance for Nonmetallic Mineral Processing Plants	Applicable – G-P is an affected facility under this regulation.	Applicable monitoring, recordkeeping, and reporting requirements.	G-P complies with applicable requirements.
40 CFR 60, Subpart UUU	New Source Performance Standards	Applicable – G-P is an affected facility under this regulation.	Applicable monitoring, recordkeeping, and reporting	G-P complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
	– Standards of Performance for Calciners and Dryers in Mineral Industries		requirements.	
40 CFR 60	Appendix A, Method 5 or equivalent, (Particulate Matter)	Applicable – Emissions from stacks are subject to particulate matter standards.	Particulate matter is determined by EPA Method 5.	G-P complies with applicable requirements.
40 CFR 60	Appendix A, Method 9 or equivalent, (Opacity)	Applicable – Emissions from stacks are subject to opacity standards.	Opacity determined by EPA Method 9.	G-P complies with applicable requirements.
40 CFR 64	Compliance Assurance Monitoring	Applicable – G-P has PM <sub>10</sub> emissions that have an emission standard and use an active control device.	G-P monitors pressure differential and opacity to demonstrate compliance with PM <sub>10</sub> emission limitations.	G-P complies with applicable requirements.
40 CFR 68	Chemical Accident Prevention Provisions	Not Applicable – G-P does not store or handle any chemicals that are subject to 40 CFR Part 68.	G-P adheres to source management programs.	G-P complies with applicable requirements.
40 CFR 70	Federally Mandated Operating Permits	Applicable – G-P is a major stationary source and under Part 70. The initial Title V permit application was submitted as required. Renewal applications are due between 6 and 18 months prior to expiration. Revision applications will be submitted within 12 months or commencing operation of any new emission units.	G-P reviewed the renewal to the initial permit dated October 24, 2003. This renewal application was submitted prior to the April 24, 2008. Applications for new units will be submitted within 12 months of startup.	G-P complies with applicable requirements.
40 CFR 72	Acid Rain Permits Regulations	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR 73	Acid Rain Sulfur Dioxide Allowance System	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR 75	Acid Rain CEMS	Not Applicable.	Not Applicable.	Not Applicable.

## D. Summary of Monitoring for Compliance

**Table VI-D-1: Summary of Monitoring for Compliance**

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
A03, B01-B04, D17, F01-F03, & G02-G04	Primary and Secondary Crusher, End Trim Bundler, and Re-cut Machine (BH-W01)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	<p>Baghouse shall have 99.0 percent control efficiency.</p> <p>Less than seven percent opacity except for three minutes in any 60-minute period.</p> <p>Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)</p>	<p>Daily monitoring of pressure drop across baghouse with the pressure differential gauge.</p> <p>Daily visual observations (Method 22) of baghouse or stack discharge.</p> <p>Annual Method 9 on stack of control device for opacity.</p> <p>Annual Method 5 or Method 17 for particulate concentration.</p> <p>Weekly moisture testing with ASTM Method C 566-97.</p> <p>Recording is required for compliance demonstration.</p>
C01, C02, C03, C04, & C05	Impact Mills No. 1 through No. 5 (Baghouses BH-W02 through BH-W06)	PM <sub>10</sub> , CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC, HAPs	AQR Sections 12, 19, 34, and 55  40 CFR 60, Subpart OOO	<p>Baghouses shall have 99.9 percent control efficiency.</p> <p>Less than seven percent opacity except for three minutes in any 60-minute period.</p> <p>Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)</p> <p>Heated by NCA #1 exhaust emissions or natural gas only.</p>	<p>Daily monitoring of pressure drop across baghouse with the pressure differential gauge.</p> <p>Daily visual observations (Method 22) of baghouses or stacks discharge.</p> <p>Annual Method 9 on stack of control device for opacity.</p> <p>Annual Method 5 or Method 17 for particulate concentration.</p> <p>Compliance for PM<sub>10</sub>, SO<sub>2</sub>, VOC and HAPs shall be based on sole use of natural gas as fuel and emission</p>

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
					factors.  Recording is required for compliance demonstration.
D01a, D01b, D01c, D01d, & G05	Conveyor Systems (BH-W07 through BH-W10)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  No visible fugitive emissions from a building shall be discharged except emissions from a vent as defined in §60.671	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Annual visual observations (Method 22) emissions from building.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration.
D01e, D06, D18, & G06-G08	Hammermill & conveyor system (BH-W13)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-minute period.  Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations (Method 22) of baghouse or stack discharge.  Annual Method 9 on stack of control device for opacity.  Annual Method 5 or Method 17 for particulate concentration.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration.
D03 & D04	Stucco Storage Bin (BH-W11 & BH-W12)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  No visible fugitive emissions from a building shall be discharged except	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Annual visual observations

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
				emissions from a vent as defined in §60.671	(Method 22) emissions from building.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration.
D07-D16, G09, & G10	Landplaster Blending, Landplaster storage, and Ball Mills (BH-W14)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  No visible fugitive emissions from a building shall be discharged except emissions from a vent as defined in §60.671	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Annual visual observations (Method 22) emissions from building.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration.
E01	Paper Heaters	PM <sub>10</sub> ,	AQR Sections 12, 19, and 34	Less than 20 percent opacity except for three minutes in any 60-minute period.	Daily visual observations (Method 22) of baghouse or stack discharge.
E02 & E03	Wall Board Dryer	PM <sub>10</sub> , CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC, HAPs	AQR Sections 12, 19, 26, and 55	Less than 20 percent opacity except for three (3) minutes in any 60-minute period.  Heated by NCA #1 exhaust emissions or natural gas only.	Daily visual observations (Method 22) of stack discharge.  Every three years the NCA #1 shall be tested for NO <sub>x</sub> , CO, and flow.  Recording is required for compliance demonstration
E101, W102, E164, E174, & E175	Roll Crusher, Screens, & Conveyors (BH-01)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-minute period.	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations (Method 22) of baghouse or stack discharge.

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
				Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)	Annual Method 9 on stack of control device for opacity.  Annual Method 5 or Method 17 for particulate concentration.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration
E103 & E104	Beta Rock Bins (BH-02 & BH-03)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-minute period.  Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations (Method 22) of baghouse or stack discharge.  Annual Method 9 on stack of control device for opacity.  Annual Method 5 or Method 17 for particulate concentration.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration
E105 & E106	Roller Mills (BH-04 & BH-05)	PM <sub>10</sub> , CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC, HAPs	AQR Sections 12, 19, 26, and 55  40 CFR 60, Subpart OOO	Baghouses shall have 99.5 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-minute period.  Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations (Method 22) of baghouses or stacks discharge.  Annual Method 9 on stack of control device for opacity.

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
				Heated by natural gas only.	<p>Annual Method 5 or Method 17 for particulate concentration.</p> <p>Compliance for PM<sub>10</sub>, SO<sub>2</sub>, VOC and HAPs shall be based on sole use of natural gas as fuel and emission factors.</p> <p>Recording is required for compliance demonstration.</p>
E108 & E109	LP Bins (BH-06 & BH-07)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	<p>Baghouse shall have 99.0 percent control efficiency.</p> <p>No visible fugitive emissions from a building shall be discharged except emissions from a vent as defined in §60.671</p>	<p>Daily monitoring of pressure drop across baghouse with the pressure differential gauge.</p> <p>Annual visual observations (Method 22) emissions from building.</p> <p>Weekly moisture testing with ASTM Method C 566-97.</p> <p>Recording is required for compliance demonstration.</p>
E110 & E111	Kettles (BH-08 & BH-09)	PM <sub>10</sub> , CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC, HAPs	AQR Sections 12, 19, and 55  40 CFR 60, Subpart UUU	<p>Baghouses shall have 99.9 percent control efficiency.</p> <p>Less than ten percent opacity except for three minutes in any 60-minute period.</p> <p>Stack emissions less than 0.092 g/dscm (0.040 gr/dscf)</p> <p>Heated by natural gas only.</p>	<p>Daily monitoring of pressure drop across baghouse with the pressure differential gauge.</p> <p>Daily visual observations (Method 22) of baghouses or stacks discharge.</p> <p>Annual Method 5 or Method 17 for particulate concentration.</p> <p>Compliance for PM<sub>10</sub>, SO<sub>2</sub>, VOC and HAPs shall be based on sole use of natural gas as fuel and emission factors.</p>

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
					Recording is required for compliance demonstration.
E142-E144, E149-E151, E176-E178, & G24	Pan Dryers, Screens, Bins, and Conveyor System (BH-13)	PM <sub>10</sub>	AQR Sections 12, 19, and 55  40 CFR 60, Subpart OOO  40 CFR 60, Subpart UUU	Baghouses shall have 99.9 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-minute period.  Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)  Less than ten percent opacity except for three minutes in any 60-minute period.  Stack emissions less than 0.092 g/dscm (0.040 gr/dscf)  Heated by natural gas only.	Recording is required for compliance demonstration.  Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations (Method 22) of baghouses or stacks discharge.  Annual Method 9 on stack of control device for opacity.  Annual Method 5 or Method 17 for particulate concentration.  Recording is required for compliance demonstration.
E179-E186	Autoclaves	PM <sub>10</sub>	AQR Sections 12 and 19  40 CFR 60, Subpart UUU	The autoclaves shall exhibit no visible emissions based on the permit. However, Subpart UUU has a less stringent limit of 10% opacity.	Annual Method 9 for opacity.  Recording is required for compliance demonstration.
E152, E154, E155, E157, E158, E160-E162, G11, & G25-G28	Alpha Impact Mill, Alpha Crushers, Alpha Hammermill, Screen, and Storage Bins (BH-14)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-minute period.  Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations (Method 22) of baghouse or stack discharge.  Annual Method 9 on stack of control device for opacity.  Annual Method 5 or Method 17 for particulate concentration.

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
					Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration
E107, E156, E165, E173, & G12	Loadout, Alpha Reject Screens, LP Bin Airvy System, & Ag. Gyp. Packer (BH-10 & BH-33)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  No visible fugitive emissions from a building shall be discharged except emissions from a vent as defined in §60.671	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Annual visual observations (Method 22) emissions from building.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration.
E113 & G13	LP Bulk Bagging & Reject Bin (BH-11)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  No visible fugitive emissions from a building shall be discharged except emissions from a vent as defined in §60.671	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Annual visual observations (Method 22) emissions from building.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration.
E114, E166, & E167	Stucco Sweeco Screen, Stucco Loadout Bin, & Bulk Loadout (BH-12)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  No visible fugitive emissions from a building shall be discharged except emissions from a vent as defined in §60.671	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Annual visual observations (Method 22) emissions from building.  Weekly moisture testing with

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
					ASTM Method C 566-97.  Recording is required for compliance demonstration.
E115-E121, G14, G16, G29, & G30	East & West Hummer Screens, Stucco Bins, Beta Impact Mills, and Bucket Elevators (BH-15 & BH-16)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart 000	Baghouse shall have 99.0 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-minute period.  Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations (Method 22) of baghouse or stack discharge.  Annual Method 9 on stack of control device for opacity.  Annual Method 5 or Method 17 for particulate concentration.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration
E122-E130, E139, & E172	South & North Split Finish Bins, Alpha Bins, & Cement Bin, and HiVAC Vacuum System, & FP Bulk Loadout Bin (BH-17, BH-18, BH-19, BH-20, BH-21, BH-22, BH-23, BH-24, BH-25, BH-29, & BH-32)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart 000	Baghouse shall have 99.0 percent control efficiency.  No visible fugitive emissions from a building shall be discharged except emissions from a vent as defined in §60.671	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Annual visual observations (Method 22) emissions from building.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration.
E140 & E169	MP Bulk Bagging & Load Out Bin (BH-28)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart 000	Baghouse shall have 99.0 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
				minute period.  Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)	(Method 22) of baghouse or stack discharge.  Annual Method 9 on stack of control device for opacity.  Annual Method 5 or Method 17 for particulate concentration.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration
E112, E168, G15, G17, G22, & G23	FP Bulk Bagging, Stucco Conveyors, East & West Impact Mill #3, & East & West Hot Pit Bucket Elevators (BH-30)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-minute period.  Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations (Method 22) of baghouse or stack discharge.  Annual Method 9 on stack of control device for opacity.  Annual Method 5 or Method 17 for particulate concentration.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration
E131-E138, E170, E171, & G31	North & South Packers, Weigh Hoppers, Mixers, MP Bulk Loadouts, & Bag Packer Feed Hoppers (BH-31)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-minute period.  Stack emissions less than 0.05	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations (Method 22) of baghouse or stack discharge.

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
				g/dscm (0.022 gr/dscf)	Annual Method 9 on stack of control device for opacity.  Annual Method 5 or Method 17 for particulate concentration.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration
G18-G21	Hamilton System (BH-34)	PM <sub>10</sub>	AQR Sections 12, 19, and 34  40 CFR 60, Subpart OOO	Baghouse shall have 99.0 percent control efficiency.  Less than seven percent opacity except for three minutes in any 60-minute period.  Stack emissions less than 0.05 g/dscm (0.022 gr/dscf)	Daily monitoring of pressure drop across baghouse with the pressure differential gauge.  Daily visual observations (Method 22) of baghouse or stack discharge.  Annual Method 9 on stack of control device for opacity.  Annual Method 5 or Method 17 for particulate concentration.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration
E145	Alpha Boiler	PM <sub>10</sub> , CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC, HAPs	AQR Sections 12, 19, 49, and 55,  40 CFR 60, Subpart Dc	Annual and short-term emission limits.  Less than 20 percent opacity except for three (3) minutes in any 60-minute period.  Heated by natural gas only.	Daily visual observations (Method 22) of stack discharge.  Two times each year a burner efficiency test shall be performed.  Annual Method 9 for particulate concentration.  Every five years stack testing

EU	Process Description	Monitored Pollutants	Applicable Subsection Title	Requirements	Compliance Monitoring
					for NO <sub>x</sub> and CO by EPA Methods as outlined in Part 70 Permit.  Compliance for PM <sub>10</sub> , SO <sub>2</sub> , VOC and HAPs shall be based on sole use of natural gas as fuel and emission factors.  Recording is required for compliance demonstration.
E146-E148, E153, & E159	Paratherm Boilers, Alpha Multiscrew Heater, & Alpha Duct Burner	PM <sub>10</sub> , CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC, HAPs	AQR Sections 12, 26, 19, and 55,	Less than 20 percent opacity except for three (3) minutes in any 60-minute period.  Heated by natural gas only.	Daily visual observations (Method 22) of stack discharge.  Recording is required for compliance demonstration.
G33 & G34	Diesel Emergency Generator & Diesel Fire Pump	PM <sub>10</sub> , CO, NO <sub>x</sub> , SO <sub>2</sub> , VOC, HAPs	AQR Sections 12, 19, and 26	Less than 20 percent opacity except for three (3) minutes in any 60-minute period.  Sole use of low-sulfur (<0.05 percent) diesel fuel.	Recording is required for compliance demonstration.
A01, FE100, And FE200,	Haul Roads: Paved and Unpaved	PM <sub>10</sub>	AQR Sections 12, 91, and 93	Less than 20 percent opacity except for three (3) minutes in any 60-minute period.  Treated with chemical or organic dust suppressant and watered.  Sweeping with certified PM10-efficient equipment.	Recording is required for compliance demonstration.
A02, FE141, FE200a, FE200b, & FE300	Batch Dumping & Stockpile Area	PM <sub>10</sub>	AQR Sections 12 and 34	Less than ten percent opacity except for three minutes in any 60-minute period.  Treated with moisture to suppressant fugitive emissions.	Annual Method 9 for particulate concentration.  Weekly moisture testing with ASTM Method C 566-97.  Recording is required for compliance demonstration.

## **VII. EMISSION REDUCTION CREDITS (OFFSETS)**

The source is subject to offset requirements in accordance with AQR Section 59. Offset requirements and associated mitigation are pollutant-specific.

## **VIII. ADMINSTRATIVE REQUIREMENTS**

AQR Section 19 requires that DAQEM identify the original authority for each term or condition in the Part 70 Operating Permit. Such reference of origin or citation is denoted by [italic test in brackets] after each Part 70 Permit condition.

DAQEM proposes to issue the Part 70 Operating Permit conditions on the following basis:

### **Legal:**

On December 5, 2001 in Federal Register Volume 66, Number 234 FR30097 the EPA fully approved the Title Operating Permit Program submitted for the purpose of complying with the Title V requirements of the 1990 CAAA and implementing 40 CFR 70.

### **Factual:**

Georgia-Pacific Gypsum LLC has supplied all the necessary information for DAQEM to draft Part 70 Operating Permit conditions encompassing all applicable requirements and corresponding compliance.

### **Conclusion:**

DAQEM has determined that Georgia-Pacific Gypsum LLC will continue to determine compliance through the use of performance testing, quarterly reporting, daily recordkeeping, coupled with annual certifications of compliance. DAQEM proceeds with the preliminary decision that a Part 70 Operating Permit should be issued as drafted to Georgia-Pacific Gypsum LLC for a period not to exceed five years.