

Technical Support Document

Clark County Department of Air Quality



Technical Support Document

This TSD establishes the methodology related to the terms and conditions of its Minor Source Permit issued pursuant to AQR 12.1. The TSD shall not serve as the operating authority.

Preparer: Eugen Avram
Action Received: February 3, 2015
TSD Date: June 11, 2015
Company: PABCO Building Products, LLC
Submitter: Emil Kopilovich
Consultant: N/A
Source: 11
Source Name: PABCO Gypsum
Source Address: 4001 State Route 147
Las Vegas, Nevada 89124
T20S, R64E, Section 7

Hydrographic Area: 215

Source Description

PABCO Building Products, LLC owns and operates PABCO Gypsum (PABCO), a wallboard manufacturing operation and Sandia Aggregates (Sandia), a sand and gravel processing operation located on the PABCO property. PABCO Gypsum is located about 15 miles northeast of Las Vegas. The source operations are classified by SIC Code 3275: Gypsum Products and SIC Code 1442: Construction Sand and Gravel and NAICS Code 327420: Gypsum Product Manufacturing and NAICS Code 212321: Construction Sand and Gravel Mining.

PABCO Gypsum is a non-categorical source located in a PSD area for all criteria pollutants and is classified as a major stationary (NSR) source of NO_x and CO and a major Title V source of NO_x, CO and VOC.

Permitting Action

This permitting action is categorized as an "Open for Cause" and it questions the reasons Condition III-B-3(b) was inserted in the Title V Operating Permit in its current form.

Specifically, PABCO requests to revise Condition III-B-3(b) of the air permit to better reflect the original intent of the source and eliminate language not proposed by the source that was added to the permit without justification. The permitting action that was initiated via application submitted 9/6/2012 was focused on the wallboard reclaim/reuse process, not the Beneficiation Operations (Group #2).

The Condition III-B-3(b) in its contested form reads as follows:

“The Permittee shall apply wet suppression to control PM emissions within allowable opacity limits. Each mineral processing emission unit that is not connected to baghouse controls, binvents, enclosed, partially enclosed or part of a wet process shall incorporate an effective water spray system that is maintained in good operating condition and used at all times during the processing of materials. [AQR 12.5.2.6(a)]”

The source proposes that Condition III-B-3(b) should be revised to read:

“The Permittee shall monitor moisture content of the gypsum raw material and apply wet suppression, if needed, to emissions unit B02 to control PM emissions within allowable opacity limits during processing of material. [AQR 12.5.2.6(a)]”

The source also requests that all other permit conditions associated with the use of spray bars be revised as well (i.e. monitoring and reporting conditions).

In support of its claim, the source states that it “never proposed water spray controls for gypsum mining because added water was not necessary to achieve BACT and is detrimental to the process equipment”. The source enclosed historical and current data indicating that the mined raw gypsum has inherent moisture content in excess of 4 percent.

Discussion:

DAQ researched all available historical documents beginning with the year 1980 and was not able to identify any document where the current Condition III-B-3(b) could have originated from (i.e. requiring the source to install water sprays for its gypsum mining operation).

The only instance where a condition requiring the source to install water sprays was in effect was when Sandia Division became operational (ATC/OP Mod 6 – March 26, 2004 - Condition III-B-3(h)) and it was applicable only to Sandia Division. No similar condition could be found for PABCO Division.

Conclusion:

DAQ agrees with PABCO that Condition III-B-3(b) should not have been inserted into the Title V Operating Permit in its current form. DAQ finds the proposed language for this condition acceptable and revises it to read as proposed.

Conditions III-C-6, III-C-7 and III-E-2(c) of the Title V Operating Permit were also revised to reflect changes in Condition III-B-3(b).

Permitting History

1. The last permit was issued on February 18, 2015.
2. An application was received on February 3, 2015.
3. The draft permit and TSD was sent for review on June 11, 2015.

TECHNICAL SUPPORT DOCUMENT

TECHNICAL INFORMATION PRESENTED IN REVIEW OF AN
APPLICATION FOR A SIGNIFICANT REVISION
TO A MAJOR PART 70 PERMIT

APPLICATION SUBMITTED BY

SWCA Environmental Consultants
on behalf of:

PABCO Building Products, LLC
P.O. Box 364329
North Las Vegas, Nevada 89036

For

PABCO Gypsum
4001 State Route 147
Las Vegas, Nevada 89124

**Part 70 Operating Permit Number: 11
(Revision)**

SIC Code 3275: Gypsum Products
SIC Code 1442: Construction Sand and Gravel
NAICS: 327420: Gypsum Product Manufacturing
NAICS: 212321: Construction Sand and Gravel Mining



Clark County
Department of Air Quality and Environmental Management
Permitting Section

February 2015

Table 1: List of Acronyms and Abbreviations

Acronym	Term
AQR	Clark County Air Quality Regulations
CFR	United States Code of Federal Regulations
CO	Carbon Monoxide
CO ₂ e	CO ₂ Equivalent
EF	Emission Factor
EU	Emissions Unit
M/N	Model Number
NAICS	North American Industry Classification System
NO _x	Nitrogen Oxides
PM _{2.5}	Particulate Matter less than 2.5 microns
PM ₁₀	Particulate Matter less than 10 microns
PTE	Potential to Emit
SCC	Source Classification Codes
SIC	Standard Industrial Classification
S/N	Serial Number
SO _x	Sulfur Oxides
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound

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Source Description

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The source operations are classified under SIC Code 3275: Gypsum Products, SIC Code 1442: Construction Sand and Gravel, NAICS Code 327420: Gypsum Product Manufacturing, and NAICS Code 212321: Construction Sand and Gravel Mining.

PABCO Gypsum is a non-categorical source located in an attainment area for all criteria pollutants and is classified as a major stationary (NSR) source of NO_x and CO, a major Title V source of NO_x, CO, VOC and PM₁₀ and a minor source of PM_{2.5}, SO₂ and HAP.

This TSD addresses two permitting actions consecutively. Section I refers to the permitting action with application date December 10, 2013 and Section II details the permitting action with application date January 9, 2014.

I. Permitting Action of December 10, 2013

A. Permitting Action – Description

The current permitting action addresses the deficiencies indicated in Notice of Violation #8373 dated March 21, 2013, issued by DAQ's Compliance Division. Subsequently, PABCO is requesting to add the following emissions units (previously unpermitted and in operation at the time of the compliance inspection conducted in 2010) to the Title V Operating Permit emissions unit list:

1. End saw bunker and disposal process (including haul trip);
2. Wet waste board disposal process haul trip;
3. Dunnage/slutter system;
4. Cutback saw process;

5. Line #1 and Line #2 Dry additive dextrose bin/feeder processes; and
6. Line #1 and Line #2 paper heaters.

In accordance with AQR Section 12.5.2.14(a), this permitting action is classified as a significant revision to the Part 70 Operating Permit as it requires a case by case determination to establish associated emissions, as well as the applicable requirements and the corresponding permit conditions, pertinent to the proposed changes.

Additionally, this permitting action will correct the PTE of emissions units D11, D14, D17, D20, D23, D26, D29, D32 and D35 listed in Table III-B-1 of the Operating Permit to reflect the values listed in the calculation sheet prepared for the permit renewal action issued in 09/19/2013. The total source-wide PTE is not impacted by this update in the emissions of individual units.

The issuance of an ATC is not required for this permitting action as it constitutes a Part 70 Operating Permit revision by way of AQR 12.4.3.2(b).

B. Emissions Units

A list of the affected emissions units that are subject to this permitting action is presented in Table 2:

Table 2: New and Modified Emissions Units List

EU	Rating	Description	Make	M/N	S/N	SCC
E37a		End saw bunker and disposal	FOS ¹			30501504
E41		Dunnage/slutter system	Sweetwater Machine and Welding			30501521
E42		Cutback saw process	FOS ¹			30501521
E43		End Saw/Wet Waste Haul Trip				30501508
E27a		Line #1 Dry Additive Bin/Feeder	Acrision	BDF1.5-GG/2		30501504
H11a		Line #2 Dry Additive Bin/Feeder	Acrision	BDF1.5-GG/2		30501504
E23a	4.625 MMBtu/hr	Line #1 Paper Heater, Natural Gas	Style B Linoflame burners		60693	30501502
H20a	5.25 MMBtu/hr	Line #2 Paper Heater, Natural Gas	Style B Linoflame burners		51838	30501502

¹FOS = Fabricated Onsite

C. Process Descriptions and Emissions Factors Considerations

1. End Saw Baghouse Material Recycle Process

The end saw dust is discarded into the bunker by a screw conveyor drop; from the bunker it is transported to the recycle stockpile by a front-end loader. Fugitive emissions are being released while conveying material to the recycle stockpile and during batch drop disposal.

Representative emissions factors for the conveyor drop points into the end saw bunker were taken from AP-42, Section 11.19 (crushed stone and pulverized mineral processing EF were used as they are physically similar to gypsum). Therefore, an emission factor of 0.023 lbs/ton for PM₁₀ was used for conveyor drop and batch drop

emission points, and an emission factor of 0.0011 lbs/ton PM₁₀ was used for conveyor transfers.

2. Wet Waste Board Bunker and Recycle Process

The wet waste board bunker receives wet waste from the wet reject board chopper; from there the waste is transported to the recycle area by a front-end loader. Because the moisture content of the wet waste is greater than 10 percent there are no PM₁₀ emissions associated with this process.

3. Dunnage / Slutter System

Due to a lack of resource availability to calculate emissions for this process, a technical approach was developed by PABCO in June 2013. The 5.7 lb/10⁶ft² controlled PM₁₀ emission factor for end saw #1 from AP-42, Table 11.16-2 (Gypsum Manufacturing), was used as a basis to determine the emission factor of the dunnage process. The end saw #1 process is considered representative for the dunnage process and PABCO developed an uncontrolled emission factor for the dunnage process by determining first the uncontrolled emission factor for the end saw #1 (1,140 lb/10⁶ft²) and multiplying it by 6 (12 blades for the dunnage process vs. 2 blades for the end saw). The resulting emission factor for the dunnage process is 6,840 lb/10⁶ft².

4. Cutback Saw Process

Due to the unique nature of the cutback saw process and lack of resources available to accurately calculate emissions, a basis for determining the emissions from the cutback saw process was developed by PABCO in June 2013. To develop an emission factor for the cutback saw process the thickness of the saw cuts of the end saw process was scaled to obtain the cutback saw process emission factor. The cutback saw thickness is 0.375 inch and the end saw thickness is 0.240 inch. Both machines make the same number of cuts per board. Based on the thickness of the saws the cutback saw blade cuts 56.25 percent more than the end saw per board. The resulting scaled emission factor for the cutback saw is 7,781.25 lb/10⁶ft².

5. Line #1 and Line #2 Dry Additive Dextrose Feeder Processes

The dry additive bins are manually filled by staff via 50 pound sacks and each have covers that remain in place when the bins are not being filled. The dextrose feeders are situated in series with emissions units E27 through E34 and H11 through H20, which feed into the mixing screws that are baghouse controlled. A PM₁₀ emission factor of 0.023 lb/ton is used to estimate emissions from the dry additive feeders (emission factor taken from similar gypsum manufacturing facility).

6. Line #1 and Line #2 Heaters

The two industrial paper heaters are modular units and are specifically designed for direct fired applications where a uniform flame or heat source is required over a set width. Each board line uses natural gas paper heaters equipped with Style B Linoflame burners.

The emissions factors for the paper heaters were obtained from AP-42 Tables 1.4-1, 1.4-2 and 1.4-3 – Natural Gas Combustion.

D. Calculation of Source PTE

1. New Emissions Units/Processes Uncontrolled Emissions

A summary of the uncontrolled emissions from the new emissions units/processes are summarized in Table 3. A detailed calculation sheet is attached at the end of this document.

Table 3: New Emissions Units Uncontrolled Emissions - (tons/year)

EU	Process	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC	HAP
E37a	End saw bunker and disposal process	0.62	0.00	0.00	0.00	0.00	0.00	0.00
E41	Dunnage/slutter system	123.12	0.00	0.00	0.00	0.00	0.00	0.00
E42	Cutback saw process	2.45	0.00	0.00	0.00	0.00	0.00	0.00
E43	End Saw Haul Trip	1.17	0.00	0.00	0.00	0.00	0.00	0.00
	Wet Waste Haul Trip	1.30	0.00	0.00	0.00	0.00	0.00	0.00
E27a	Line #1 Dry Additive Dextrose Bin/Feeder	0.20	0.00	0.00	0.00	0.00	0.00	0.00
H11a	Line #2 Dry Additive Dextrose Bin/Feeder	2.74	0.00	0.00	0.00	0.00	0.00	0.00
E23a	Line #1 Paper Heater	0.16	0.16	2.47	3.01	0.01	0.11	0.04
H20a	Line #2 Paper Heater	0.17	0.17	2.80	3.41	0.01	0.12	0.04
Uncontrolled Emissions Total		131.93	0.33	5.27	6.42	0.02	0.23	0.08

2. New Emissions Units/Processes PTE

A summary of the new emissions units/processes PTE is presented in Table 4. A detailed calculation sheet is attached at the end of this document.

Table 4: New Emissions Units PTE - (tons/year)

EU	Process	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC	HAP
E37a	End saw bunker and disposal process	0.62	0.00	0.00	0.00	0.00	0.00	0.00
E41	Dunnage/slutter system ¹	0.62	0.00	0.00	0.00	0.00	0.00	0.00
E42	Cutback saw process ¹	0.01	0.00	0.00	0.00	0.00	0.00	0.00
E43	End Saw Haul Trip	1.17	0.00	0.00	0.00	0.00	0.00	0.00
	Wet Waste Haul Trip	1.30	0.00	0.00	0.00	0.00	0.00	0.00
E27a	Line #1 Dry Additive Dextrose Bin/Feeder ²	0.11	0.00	0.00	0.00	0.00	0.00	0.00
H11a	Line #2 Dry Additive Dextrose Bin/Feeder ²	1.38	0.00	0.00	0.00	0.00	0.00	0.00
E23a	Line #1 Paper Heater	0.16	0.16	2.47	3.01	0.01	0.11	0.04
H20a	Line #2 Paper Heater	0.17	0.17	2.80	3.41	0.01	0.12	0.04
New Emissions Units PTE Total		5.54	0.33	5.27	6.42	0.02	0.23	0.08
New EU PTE Fugitive (Haul Trips)		2.47	0.00	0.00	0.00	0.00	0.00	0.00
New EU PTE Point Sources (non-fugitive)		3.07	0.33	5.27	6.42	0.02	0.23	0.08

¹ Emissions from this process are controlled by a baghouse with a control efficiency of 99.5 percent

² Emissions from this process are controlled by an enclosure and a baghouse with a control efficiency of 99.5 percent

3. Source New PTE

Project PTE (fugitive and non-fugitive) is added to the Title V Operating Permit PTE (issued on 02/06/2014). The new Title V PTE is presented in Table 5:

Table 5: Source-Wide PTE (tons per year) ¹

Pollutants	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAP	CO _{2e}
Point Source Emissions	100.21	23.66	390.08	486.13	7.22	109.35	7.81	334,277
Fugitive Emissions	96.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Source-wide Emissions	196.37	23.66	390.08	486.13	7.22	109.35	7.81	334,277
Major Stationary Source Thresholds	250	250	250	250	250	250	10/25 ¹	100,000

¹Ten (10) tons for any individual HAP or 25 tons for combination of all HAPs

E. Operational Limits

Table 6 summarizes the production limits, as proposed by the source:

Table 6: Production Limitations

EU	Process/Emissions Unit Description	Throughput
E37a	End saw bunker and disposal process	10,000 tons per year
E41	Dunnage / slutter system	36,000,000 board feet per year
E42	Cutback saw process	2,750,000 board feet per year
E43	End Saw Haul Trip / Wet Waste Haul Trip (paved and unpaved)	4,161 VMT per year
E27a	Line #1 Dry Additive Dextrose Bin/Feeder	8,346 tons per year
H11a	Line #2 Dry Additive Dextrose Bin/Feeder	119,500 tons per year

F. Review of Applicable Regulations

Table 7: Summary of Requirements (tons/year)

	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC
New Source Title V PTE	196.37	23.66	390.08	486.13	7.22	109.35
12.2 Major Source PSD Non-Categorical Sources	250	N/A	250	250	250	250
12.4 Minor NSR Significant Levels	7.5	5	20	50	20	20
Current Modification PTE	5.54	0.33	5.27	6.42	0.02	0.23
Applicable Control Technology	N/A	N/A	N/A	N/A	N/A	N/A

G. Control Technology

The PTE associated with this permitting action is below the minor NSR significant levels (as presented in Table 7) for all regulated pollutants and subsequently a control technology analysis is not required. The source will be required to control emissions from the proposed emissions units to adhere to the opacity limitations in the permit.

H. Monitoring

The Permittee shall perform at least one visual emissions observation on each proposed emissions unit each day while operating, to demonstrate compliance with the

opacity limits.

The source shall monitor production throughput and associated haulage, as applicable.

I. Testing

Compliance with the opacity standards of this permit shall be demonstrated, in part, through performance testing in accordance with 40 CFR 60 Reference Method 9 (Standards for Opacity).

The proposed operation does not impose additional testing requirements.

J. Mitigation

The source has no federal offset requirements.

K. Increment

PABCO is a major source in Hydrographic Area 215 (Black Mountains Area). Since minor source baseline dates for NO_x (July 19, 1989) and PM₁₀ (June 18, 1993) have been triggered, Prevention of Significant Deterioration (PSD) increment analysis is required. Air Quality modeled the source using AERMOD to track the increment consumption.

The source was modeled for the NO_x and PM₁₀ increment consumption. Stack data submitted by the applicant were supplemented with information available for similar emission units. Five years (1999 to 2003) of meteorological data from the McCarran Station and Desert Rock Station were used in the model. United States Geological Survey (USGS) National Elevation Data (NED) terrain data was used to calculate elevations. Table 8 presents the results of the modeling.

Table 8: PSD Increment Consumption

Pollutant	Averaging Period	PSD Increment Consumption by the Source (µg/m ³)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
PM ₁₀	24-hour	14.79 ¹	693429	4010793
PM ₁₀	Annual	2.27	693435	4010493
NO _x	Annual	11.72	693092	4005938

¹ Second High Concentration

Table 8 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.

L. Public Notice

Public participation under AQR 12.5.2.17 is required because this permitting action is classified as a significant revision to the Part 70 Operating Permit.

M. Permitting History

1. An application was received on December 10, 2013.
2. The application was deemed complete on February 18, 2014.

N. Attachments

Table 9: Project PM₁₀ Emissions Calculation Uncontrolled - tons/year

EU	Description	Throughput	EF	PTE
E37a	End saw bunker and disposal process			
	Saw to Conveyor	10,000 tons/year	0.023 lb/ton	0.12
	Conveyor to Bunker	10,000 tons/year	0.023 lb/ton	0.12
	Wind Erosion	10,000 tons/year	0.051 lb/ton	0.26
	Loader to Recycle Stockpile	10,000 tons/year	0.023 lb/ton	0.12
E41	Dunnage/slutter system	36,000,000 ft ² /year	6,840 lb/10 ⁶ ft ²	123.12
E42	Cutback saw process	2,750,000 ft ² /year	1,781.25 lb/10 ⁶ ft ²	2.45
E43	End Saw Haul Trip			0
	Unpaved Road	1,314 miles/year	1.74 lbs/VMT	1.14
	Paved Road	657 miles/year	0.00842 lbs/VMT	0.03
	Wet Waste Haul Trip			0
	Unpaved Road	1,460 miles/year	1.74 lbs/VMT	1.27
	Paved Road	730 miles/year	0.00842 lbs/VMT	0.03
E27a	Line #1 Dry Additive Dextrose Bin/Feeder	8,346 tons/year	2 x 0.023 lb/ton	0.20
H11a	Line #2 Dry Additive Dextrose Bin/Feeder	119,500 tons/year	2 x 0.023 lb/ton	2.74
E23a	Line #1 Paper Heater	8,760 hrs/year	0.0075 lb/MMBtu	0.16
H20a	Line #2 Paper Heater	8,760 hrs/year	0.0075 lb/MMBtu	0.17
	Subtotal			131.93

Table 10: Process PM₁₀ PTE (except paper heaters) – tons per year

EU	Description	Throughput	EF	CE	PTE
E37a	End saw bunker and disposal process				
	Saw to Conveyor	10,000 tons/year	0.023 lb/ton		0.12
	Conveyor to Bunker	10,000 tons/year	0.023 lb/ton		0.12
	Wind Erosion	10,000 tons/year	0.051 lb/ton		0.26
	Loader to Recycle Stockpile	10,000 tons/year	0.023 lb/ton		0.12
E41	Dunnage/slutter system	36,000,000 ft ² /year	6,840 lb/10 ⁶ ft ²	99.5%	0.62
E42	Cutback saw process	2,750,000 ft ² /year	1,781.25 lb/10 ⁶ ft ²	99.5%	0.01
E43	End Saw Haul Trip				0
	Unpaved Road	1,314 VMT/year	1.74 lbs/VMT		1.14
	Paved Road	657 VMT/year	0.00842 lbs/VMT		0.03
	Wet Waste Haul Trip				0
	Unpaved Road	1,460 VMT/year	1.74 lbs/VMT		1.27
	Paved Road	730 VMT/year	0.00842 lbs/VMT		0.03
E27a	Line #1 Dry Additive Dextrose Bin/Feeder				0
	Additive Bin Loading (Line #1)	8,346 tons/year	0.023 lb/ton	0%	0.10

EU	Description	Throughput	EF	CE	PTE
	Additive Bin to Feeder (Line #1)	8,346 tons/year	0.023 lb/ton	99.5%	0.01
H11a	Line #2 Dry Additive Dextrose Bin/Feeder				0
	Additive Bin Loading (Line #2)	119,500 tons/year	0.023 lb/ton	0%	1.37
	Additive Bin to Feeder (Line #2)	119,500 tons/year	0.023 lb/ton	99.5%	0.01
	Subtotal				5.21

Table 11: Paper Heaters PTE (tons per year)

EU	Rating	Conditions	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC
E23a	4.6 MMBtu/hr	8,760 hrs/yr	0.16	0.16	2.47	3.01	0.01	0.11
H20a	5.25 MMBtu/hr	8,760 hrs/yr	0.17	0.17	2.80	3.41	0.01	0.12
	Subtotal		0.33	0.33	5.27	6.42	0.02	0.23

II. Application date January 9, 2014

A. Permitting Action - Description

The source proposes to address the following through the current permitting actions:

- Update permit Condition III-D-4 to correct erroneous references to affected emission units;
- Remove emission unit EU: B24;
- Correcting the PTE of EUs: D11, D14, D17, D20, D23, D26, D29, D32 and D35 in the Part 70 Operating Permit; the change in PTE of these emissions units was already reflected in the source total PTE in a previous permitting action.
- Performance testing frequency restructuring of the NCA #2 exhaust gas; and
- Updating the testing schedule for all of the source's baghouses on the basis of identical emission units.

In accordance with AQR Section 12.5.2.14(a), this permitting action is classified as a significant revision to the Part 70 Operating Permit as it requires a case by case determination to establish associated emissions, as well as the applicable requirements and the corresponding permit conditions, pertinent to the proposed changes.

B. Emissions Units

A list of the affected emissions units that are subject to this permitting action is presented in Table 12:

Table 12: Removed Emissions Unit - Summary

EU	Rating	Description	Make	Model Nr.	Serial Nr.
B24	615 tph, 70 MMBtu/hr	Rotary Dryer #1	Gencor	UFII-70	140005

C. Calculation of Source PTE

Table 13: Removed Emissions Unit PTE (tons per year)

EU	Rating	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAP	CO _{2e}
B24	615 tph, 70 MMBtu/hr	11.52	0.02	36.79	10.73	0.18	0.85	0.58	36,145

Source New PTE

The removed EU: B24 PTE is deducted from the Title V Operating Permit PTE. The new Title V PTE is presented in Table 14:

Table 14: Source-Wide PTE (tons per year)

Pollutants	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAP	CO _{2e}
Current Title V PTE	196.37 ¹	23.66	390.08	486.13	7.22	109.35	7.81	334,277
Removed EU: B24 PTE	-11.52	-0.02	-36.79	-10.73	-0.18	-0.85	-0.58	-36,145
New Title V PTE	184.85	23.64	353.29	475.40	7.04	108.50	7.23	298,132

¹Includes fugitive emissions

D. Operational Limits

The current permitting action does not affect any of the source's operational limitations or requirements.

E. Review of Applicable Regulations

The removal of EU: B24 and the proposed update and revision of specific permit conditions does not trigger a review of applicable regulations.

F. Control Technology

A control technology analysis is not triggered by this permitting action.

G. Monitoring

No changes in monitoring requirements are requested in this permitting action.

H. Testing

Several changes to the performance testing conditions were proposed by the source. The revisions to the affected conditions are indicated below:

1. Condition III-D-2 has been revised to change the NCA #2 exhaust gas performance testing frequency from annual to every five years;
2. Condition III-D-4 has been revised to exclude EU: B24 as this EU is being removed; and
3. The source proposed that the baghouse performance testing schedule be updated by grouping the identical baghouses that control comparable emission units so that only one baghouse within the group is required to be tested at one testing event.

The grouping is solely based on the baghouses with the same manufacturers, model numbers and type of operation being controlled.

The source proposed the grouping methodology outlined in Table 15 to be submitted with the performance test protocol for the Control Officer's approval:

Table 15: Proposed Performance Testing Schedule

Test Schedule	Last Test	Equipment Description	EU	Baghouse			
				ID	Make	Model	Capacity
Test within 180 days of Mod issuance		Recycle Unit (pending Mod issuance)	Pending	BH 1	General Combustion	UFI-70	
Test in 2019	2014	Classifier	B31-B33, D43-D44	BH 2	SLY	STJ-5617-12	
Test in 2017	2012	New Gencor Dryer	B36	BH 3	Gencor	CFS225	
Test in 2019	2014	Transfer Station	D1-D4	BH 4	Mikropul	121S-8-20-TR"C"	
Test in 2015	2010	Tripper	D7-D10, D13, D16, D18, D19, D22, D25, D27, D28, D31, D34, G2, G7, G13, G18	BH 5	Buell Norblo	NA	
Test 1 Baghouse in 2015 from BH 6 - 14	1998	#1 Mill	D11	BH 6	Pulse Air	Ultra Jet #50	10 tph
	1998	#2 Mill	D14	BH 7	Pulse Air	Ultra Jet #50	10 tph
	2005	#3 Mill	D17	BH 8	Pulse Air	Ultra Jet #50	10 tph
	2010	#4 Mill	D20	BH 9	Pulse Air	Ultra Jet #50	10 tph
	1998	#5 Mill	D23	BH 10	Pulse Air	Ultra Jet #50	10 tph
	1998	#6 Mill	D26	BH 11	Pulse Air	Ultra Jet #50	10 tph
	2010	#7 Mill	D29	BH 12	Mikro Pulsaire	Ultra Jet #50	10 tph
	1998	#8 Mill	D32	BH 13	Mikro Pulsaire	Ultra Jet #50	10 tph
	1998	#9 Mill	D35	BH 14	Mikro Pulsaire	Ultra Jet #50	10 tph
No test required		Stucco Bin #1 Line 1 Stucco Transfer from Mills to Elevator	D36-D41	BH 15	Rayjet	6T-100-46T	
Test in 2019	2014	Stucco Bin #2 Line 1 Stucco System from Elevator to Metering Screw	E1-E20	BH 16	Wheelabrator-Frye	84	
Group with BH 24 - 25		End Saw #1	E21-E37, E37a, E41, E42	BH 17	Hosokawa Mikropul	25S8-20	
Group with BH23		Line 2 Stucco System (South Stucco Bin)	G1, G6, G11, G12, G17, G22	BH 18	Mikro Pulsaire	255-8-30	
Test 1 Baghouse in 2015		#10 Mill	G3-G5	BH 19	CP Environmental	144TNFW465C	19 MMBtu/hr
		#11 Mill	G8-G10	BH 20	CP Environmental	144TNFW465C	19 MMBtu/hr

Test Schedule	Last Test	Equipment Description	EU	Baghouse			
				ID	Make	Model	Capacity
	2010	#12 Mill	G14-G16	BH 21	CP Environmental	144TNFW465C	22.5 MMBtu/hr
	2005	#13 Mill	G19-G21	BH 22	CP Environmental	144TNFW465C	22.5 MMBtu/hr
Test in 2019	2014	Line 2 Stucco System (North Stucco Bin)	H1-H5, H7, H8, H27-H29	BH 23	Mikro Pulsaire	255-8-30	
Test in 2019	2014	End Saw #2	H6, H10-H20, H22, H24	BH 24	Hosokawa Mikropul	25S8-20	
	2014	End Saw #3		BH 25	Hosokawa Mikropul	25S8-20	
Test 1 dryer in 2015		Flakt Dryer H26				ABB Flakt	107 MMBtu/hr
	2010	Flakt Dryer H32				ABB Flakt	120 MMBtu/hr
Test in 2015	2010	Coe Dryer E39					
Test in 2017	2013	NCA Duct					

I. Mitigation

The source has no federal offset requirements.

J. Increment

PABCO is a major source in Hydrographic Area 215 (Black Mountains Area). Since minor source baseline dates for NO_x (July 19, 1989) and PM₁₀ (June 18, 1993) have been triggered, Prevention of Significant Deterioration (PSD) increment analysis is required. Air Quality modeled the source using AERMOD to track the increment consumption.

The source was modeled for the NO_x and PM₁₀ increment consumption. Stack data submitted by the applicant were supplemented with information available for similar emission units. Five years (1999 to 2003) of meteorological data from the McCarran Station and Desert Rock Station were used in the model. United States Geological Survey (USGS) National Elevation Data (NED) terrain data was used to calculate elevations. Table 16 presents the results of the modeling.

Table 16: PSD Increment Consumption

Pollutant	Averaging Period	PSD Increment Consumption by the Source (µg/m ³)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
PM ₁₀	24-hour	14.32 ¹	693429	4010793
PM ₁₀	Annual	2.21	693435	4010493
NO _x	Annual	11.71	693092	4005938

¹ Second High Concentration

Table 16 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.

K. Public Notice

Public participation under AQR 12.5.2.17 is required because this permitting action is categorized as a significant revision to the Part 70 Operating Permit.

L. Permitting History

3. An application was received on December 10, 2013.
4. The application was deemed complete on February 18, 2014.
5. The draft permit and TSD were sent for senior review on June 6, 2014.

TECHNICAL SUPPORT DOCUMENT

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

SUBMITTED BY

PABCO Building Products, LLC

For

PABCO Gypsum

**Part 70 Operating Permit Number: 11
(Renewal)**

SIC Code - 3275: Gypsum Products
SIC Code - 1442: Construction Sand and Gravel



Clark County
Department of Air Quality
Permitting Section

September 2013

This Technical Support Document (TSD) accompanies the proposed Part 70 Operating Permit for PABCO Gypsum

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I. ACRONYMS

Table I-1: List of Acronyms

Acronym	Term
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct
bhp	Brake Horse Power
CAAA	Clean Air Act, as amended
CARB	California Air Resources Board
CFR	United States Code of Federal Regulations
CO	Carbon Monoxide
CO _{2e}	Carbon Dioxide Equivalent
CTG	Combustion Turbine Generator
EPA	United States Environmental Protection Agency
EF	Emission Factor
EO	Executive Order
EU	Emission Unit
GDO	Gasoline Dispensing Operation
GHG	Greenhouse Gas
GPM	Gallons per Minute
HAP	Hazardous Air Pollutant
HP	Horse Power
H ₂ S	Hydrogen Sulfide
kW	kilowatt
m ³ /yr	Cubic meter per year
MMBtu	Millions of British Thermal Units
MMscf	Million Standard Cubic Foot
M/N	Model Number
MSWL	Municipal Solid Waste Landfill
NAC #2	Nevada Cogeneration Associates #2
NAICS	North American Industry Classification System
NMOC	Non-Methane Organic Compounds
NO _x	Nitrogen Oxides
NRS	Nevada Revised Statutes
OP	Operating Permit
PABCO	PABCO Building Products, LLC
PM _{2.5}	Particulate Matter less than 2.5 microns
PM ₁₀	Particulate Matter less than 10 microns
ppm	Parts per Million
ppmvd	Parts per Million, Volumetric Dry
PTE	Potential to Emit
QA/AC	Quality Assurance/Quality Control
SCC	Source Classification Codes
scf	Standard Cubic Feet
scfm	Standard Cubic Feet per minute
SIC	Standard Industrial Classification
SIP	State Implementation Plan
S/N	Serial Number
SO ₂	Sulfur Oxides
SSM	Startup, Shutdown, and Malfunction
TCS	Toxic Chemical Substance
tpy	Tons per Year
TRS	Total Reduced Sulfur

Acronym	Term
VEE	Visible Emission Evaluation
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound

II. EXECUTIVE SUMMARY

PABCO Gypsum, a division of PABCO Building Products, LLC (PABCO) operates a wallboard manufacturing facility and Sandia aggregate processing plant located in Clark County, Nevada. PABCO processes gypsum ore which is used to manufacture wallboard. Sandia is PABCO's sand and gravel plant. The sand and gravel that is processed at the plant is sold for other uses. The source operates under SIC Code 3275: Gypsum Products and 1442: Construction Sand and Gravel (NAICS Code 327420: Gypsum Product Manufacturing and 212321: Construction Sand and Gravel Mining). PABCO is located on Lake Mead Boulevard, approximately 12 miles east of the North Las Vegas City Hall, Clark County, Nevada 89124 (T20S, R64E, Section 7) in the Black Mountains Area, Hydrographic area 215. The Black Mountains Area is classified as PSD for all regulated air pollutants.

Under the primary operating scenario, PABCO receives exhaust gas from the co-located cogeneration facility owned and operated by Nevada Cogeneration Associates #2 (NCA #2) to operate their Impeller Mills (in Boardline #1 Calcining) and Coe board dryer (in Boardline #1 Wallboard). The alternative operating scenario, in which the Impeller mills and Coe board dryer use their own burners, is triggered when NCA #2 turbine exhaust gas is unavailable or not utilized.

The following table summarizes the source PTE for each regulated air pollutant for all emission units addressed by this Part 70 Operating Permit (OP):

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

Pollutants	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAP
Non-fugitive Emissions	92.30	23.33	384.81	479.71	7.20	109.12	7.73
Fugitive Emissions	86.15	0.00	0.00	0.00	0.00	0.00	0.00
Major Source Thresholds	250	250	250	250	250	250	10/25²

¹Not a source-wide emission limit; values are used for determining the major source status.

²Ten (10) tons for any individual HAP or 25 tons for combination of all HAPs.

PABCO is a major source for NO_x and CO and is a minor source for PM₁₀, PM_{2.5}, SO₂, VOC and HAP. The source is also a major source of GHG and has a PTE in excess of 300,000 TPY CO_{2e}.

Based on the information submitted by the applicant and a technical review performed by the Air Quality staff, Air Quality proposes the renewal of a Part 70 OP to PABCO Gypsum, a division of PABCO Building Products, LLC.

III. SOURCE INFORMATION

A. General

Table III-A-1: General Permittee Information

Permittee	PABCO Gypsum, a division of PABCO Building Products, LLC
Mailing Address	P.O. Box 364329 North Las Vegas, Nevada 89036
Contacts	Emil Kopilovich Richard Snyder Sergio Mazzocato
Phone Number	(702) 643-1016
Fax Number	(702) 643-6249
Source Location	4001 State Route 147 Las Vegas, Nevada 89124
Hydrographic Area	215
Township, Range, Section	T20S, R64E, Section 7
SIC Codes	3275 – Gypsum Products 1442 – Construction Sand and Gravel
NAICS Codes	327420 – Gypsum Product Manufacturing 212321 – Construction Sand and Gravel Mining

B. Description of Process

PABCO & Nevada Cogeneration Associates #2 Relationship

Under the primary operating scenario, PABCO acts as the host facility to the co-located cogeneration facility owned and operated by Nevada Cogeneration Associates #2 (NCA #2). NCA #2 is permitted to operate three 29,500 hp combustion turbine generators (CTGs). The exhaust gas from the CTGs is transported to PABCO and the thermal energy is utilized by the Impeller mills in Boardline #1 (Group 4) and Coe board dryer (Group 5). The primary operating scenario utilizes both the exhaust gas from NCA #2 and the Impeller mills' own burners. The alternative operating scenario is triggered when NCA #2 turbine exhaust gas is unavailable or is not utilized. Under this operating scenario, the Impeller mills and Coe board dryer use only their own burners. The turbine exhaust gas allotment from NCA #2 is shown in Table III-B-1.

Table III-B-1: Turbine Exhaust Gas Allotment

Cogen Exhaust Gas	Percentage	Exhaust Gas	
		lbs/hr	tons/yr
Total Cogen Exhaust Gas	100.00%	520,000	2,277,600
Total Exhaust Gas Used in Coe Dryer	85.63%	445,290	1,950,370
Coe Dryer Zone 1	24.671%	128,288	561,902
Coe Dryer Zone 2	27.788%	144,497	632,895
Coe Dryer Zone 3	19.105%	99,344	435,128
Coe Dryer Zone 4	7.390%	38,429	168,317
Coe Dryer Zone 5	6.679%	34,733	152,129
Total for All IMP Mills (#1 - #9)	14.37%	74,710	327,230
% for each IMP Mill (#1 - #9)	1.60%	8,301	36,359

PABCO and Sandia Process Operations

Source operations are separated out into groups as shown below.

Group 1 – Quarry Operations

Gypsum ore is blasted and mined in a quarry located next to the manufacturing plant and stockpiled for future use.

Group 2 – Beneficiation Operations

The ore is transferred via conveyor belts to the beneficiation equipment located close to the wallboard manufacturing plant. The gypsum is separated from clays and other impurities found in the ore and then dried.

Group 3 – Railroad Loading

A portion of the beneficiated gypsum is sold without further processing and is conveyed and loaded into railcars or bulk delivery trucks for transport to other facilities.

Group 4 – Calcining Operations

Impeller (IMP) mills are used to calcine the gypsum into stucco. From the IMP mills, the stucco is conveyed into two storage bins controlled with baghouses.

Under the primary operating scenario, the IMP mills use their individual burners and heat from the cogen gas. Under the alternative operating scenario, the individual burners are the only source of heat. The IMP mills get 14.37 percent of the total turbine exhaust gas received. Each of the nine IMP mills gets an equal amount or 1.6 percent of the total turbine exhaust gas received.

Group 5 – Wallboard Manufacturing

Stucco and additives are fed from the storage silos into the wallboard manufacturing section. The board drying equipment consists of the Coe dryer with five zones and eight decks. Air flow is created in the upper level of each zone by circulating fans. Each zone is equipped with a natural gas-fired burner, which is used under the alternative scenario, and a duct to receive cogen gas under the primary scenario. A series of vanes and nozzles distribute the hot air through the board drying decks. Wallboard is conveyed continuously through the dryer with the speed and air temperatures continuously adjusted to maintain optimum board drying conditions. After passing across the board surfaces, the air is recirculated back to the burners where the cycle starts over. Each zone has an exhaust stack which vents a portion of the circulating air. Identification numbers are then printed onto the wallboard with foamer, ink and make-up.

Group 6 – Accelerator System

Accelerator is a small portion of gypsum coming out of a rock bin which is further ground in small ball mills and then fed into the mixing screw in small amounts. Accelerator acts as an accelerating agent in wallboard manufacturing. The emission units in this group include conveyors, storage bins, a crusher and a ball mill.

Group 7 – Boardline #2 Calcining Operations

This group of emission units consists of four IMP mills and associated equipment and operates as the previously described Group 4.

Group 8 – Boardline #2 Wallboard Manufacturing

This group operates as the previously described Group 5, but uses two Flakt board dryers with three zones each instead of a Coe board dryer.

Group 9 – Cooling Towers

This group consists of two 1,200 gpm cooling towers.

Group 10 – Tanks

This group consists of five diesel storage tanks categorized as insignificant emission units and one aboveground gasoline storage tank.

Group 12 – Diesel Fire & Water Pumps

This group consists of two fire pumps and a water pump.

Sandia A – Sand and Gravel Mining/Handling Sources

This group consists of mining, conveyor belts, screens and a crusher.

Sandia B – Stockpiles, Haul Roads

This group consists of stockpiles and haul roads.

Sandia C – Diesel Water Pump

This group consists of one 250 kW diesel well pump.

C. Permitting History

The initial Part 70 OP was issued May 13, 1999. The Part 70 OPs and ATC permits issued to PABCO are described in Table III-C-1.

Table III-C-1: PABCO Permits

Date Issued	Permit Number	Description
04/19/84	AQR 16 Operating Permit	Agreement to Permit Conditions – Dome operation
02/24/87	AQR 16 Operating Permit	Agreement to Permit Conditions – Stack for added calciner
12/04/92	ATC	New equipment
06/18/93	ATC Modification	Increase production
11/31/93	ATC Modification	Replace equipment
12/19/94	ATC Modification	Revise emission factors and remove diesel generator
10/30/95	AQR 16 Operating Permit	Operating authority for previous modifications
05/13/96	ATC/OP Modification	Incorporate applicable previous ATC information into one document
05/20/97	ATC/OP Modification 3	Administrative Changes
12/16/97	ATC/OP Modification 4	New equipment and increase production
05/13/99	Part 70 Operating Permit	Part 70 Operating Authority
03/26/04	ATC/OP Modification 6	Expansion of plant and change of ownership
08/13/04	ATC/OP Modification 6, Revision 1	Minor corrections from previous ATC/OP
04/27/05	Part 70 Operating Permit Renewal	Incorporate applicable previous ATC modification into Operating Authority
05/25/05	ATC/OP Modification 7	Increase heat input rate for dryer (burner replacement)
02/26/07	ATC/OP Modification 8	Add equipment and increase emissions

Date Issued	Permit Number	Description
11/07/07	ATC/OP Modification 9	New wash plant and vapor recovery conditions
NA	ATC/OP Modification 10	Application cancelled by source – permit not issued
12/18/09	ATC/OP Modification 11	New emergency diesel fire pumps and water pump

D. Permitting Action

This permitting action serves to update the Part 70 OP with all requested changes and updates since the previous permit issuance date (April 27, 2005). This includes all the changes requested in ATC/OP Modifications 7, 8, 9 and 11 as well as the changes and revisions requested in the Part 70 OP renewal application and subsequent supplemental information submittals. Note: The Modification 10 application, an application to install Stage I vapor recovery, was cancelled as a result of the Stage I vapor recovery system being approved as part of Modification 9.

The following changes are being made to the Part 70 OP issued April 27, 2005:

Modification 7 Authority to Construct/Operating Permit issued on May 25, 2005

1. Dryer rating of EU B24 increased from 25.4 MMBtu/hr to 70 MMBtu/hr, thereby increasing the annual throughput from 222,504 MMBtu/yr to 613,200 MMBtu/yr.

Modification 8 Authority to Construct/Operating Permit issued February 26, 2007 (ATC Application submitted August 1, 2006, Additional Information submitted November 6, 2006)

2. Gencor 90 MMBtu/hr Rotary Dryer #2 added (EU: B36).
3. TDS limit of cooling towers increased (EU: I01 and I02).
4. Make-up product added to printing for Boardline #1, Boardline #2 and Boardline #2 expansion processes.
5. NO_x, CO and SO₂ emissions for blasting added to Group 1.
6. Sandia emission units were renamed from "A" group to "S" group and EUs S02-S09, S13, S16, S26, S27 and S28 were relocated from the Sandia process to the Beneficiation process.
7. Sandia EUs B01, B02 and D03 were renamed to T01, T02 and U03, respectively.
8. Fuel dispensing activities added as Group 11.

Modification 9 Authority to Construct/Operating Permit issued November 7, 2007 (ATC Application submitted July 26, 2007)

9. Install new wash plant (EUs: B37-B46, S02, S07, S13, S26 and S27).
10. Remove emission units in Beneficiation process (EUs: S03-S06, S08, S09 and S16).
11. Install Phase I vapor recovery system on GDO.

Title V Operating Permit renewal application submitted on December 8, 2008

12. Renew Title V OP including incorporation of all previously issued ATC permits (as outlined above).
13. Remove facility-wide PTE limit.
14. Add EUs B29-B35, D43, D44, G12-G22, H27-H35 and I02. These emission units were included in ATC Modification 6 (March 26, 2004) issued before the current Title V OP. They were also included in each ATC issued after the current Title V OP. The record is unclear as to why these emission units were left out of the current Title V OP issued April 27, 2005. These emission units will be included in the Title V OP renewal.

Supplemental Information submitted September 4, 2009

15. Revise haul road silt content analyses in ATC and carry over changes into Title V renewal. Source requests change from requiring haul road silt analysis every calendar quarter to only during calendar quarters in which operations were active.

Modification 11 Authority to Construct issued December 18, 2009 (ATC Application submitted May 15, 2009, Supplemental Information submitted May 28, 2009)

16. Two emergency fire pumps and one water pump engine added (EUs: U04-U06).

Supplemental Information submitted July 19, 2010

This information, submitted as supplemental to the Title V revision, requested the inclusion of various new emission units and the removal of an engine. The submittal included an incorrect evaluation of determining whether significance levels were exceeded and contained no netting evaluation. A preliminary analysis done by Air Quality staff indicated that the changes requested by this submittal may exceed significance thresholds for the project itself as well as the netting analysis; therefore making the permitting action a major modification. As such, the request cannot be completed as submitted and will not be included as part of this Title V renewal.

Supplemental Information submitted February 22, 2011

17. Response to Air Quality's request for information regarding specifications for emission unit controls (specifically baghouses). Clarifies which emission units are controlled by which baghouse, including make, model and serial number and pressure drop.

Supplemental Information submitted February 23, 2011

18. Response to Air Quality's request for specific emission unit information (model and serial numbers of major equipment) and ratings in tons per hour. Tons per day ratings will be removed from permit and replaced with hourly ratings.

Supplemental Information submitted March 25, 2011

19. Clarification from source on blasting PM₁₀ emissions. Source outlined how PM₁₀ emissions from blasting were quantified. The estimated NO_x, CO and SO_x emissions for blasting were previously included in the source PTE; however, blasting was not assigned an individual emission unit number. Also, the PM₁₀ emissions associated with blasting were assumed to be included in mining (EU: A1). Blasting is a standalone emission source and should be calculated as such. As part of this Title V renewal, blasting will be assigned an emission unit number (EU: A5) and the associated PM₁₀ (calculated out separately from mining), NO_x, CO and SO_x emissions were calculated and presented appropriately.
20. Replaced Air Quality PM₁₀ default emission factors for aggregate processing with EPA AP-42, Chapter 11.19-2 emission factors for crushed stone processing where appropriate. The source requested to use uncontrolled emission factors with an additional 90 percent standard moisture control. Air Quality concluded that it would be more appropriate to use controlled (wet suppression) emission factors for the appropriate aggregate processing transfer points. Note as well that the emission factor for mining was assumed to be the summation of two controlled conveyor transfer points.
21. Inclusion of PM_{2.5} emissions for combustion sources (PM_{2.5} emissions were assumed to be 99 percent of PM₁₀ emissions).

12.4 ATC – Significant Revision Application submitted April 8, 2011

This information, submitted as an AQR Section 12.4 ATC – Significant Revision, requested increased throughputs for various emission units, decreased throughputs, revised VOC content, emission unit reconfiguration and the addition of various new emission units. The submittal included an incomplete evaluation of determining whether significance levels were exceeded and contained no netting evaluation. A preliminary analysis done by Air Quality staff indicated that the changes requested by this submittal may exceed significance thresholds for the project itself as well as the netting analysis; therefore making the permitting action a major modification. As such, the request cannot be completed as submitted and will not be included as part of this Title V renewal.

Supplemental Information submitted June 16, 2011

22. Response to Air Quality's request for MSDS on printing products. Clarified VOC content of materials used.

Supplemental Information submitted November 1, 2011

23. Hourly ratings clarified and added for emission units (replaces daily ratings in permit).
24. Emission unit specifications (make/model and serial numbers) clarified for all emission units and added to permit.
25. Greenhouse gas emissions quantified (see Greenhouse Gas Emissions Section of this TSD).

Supplemental Information submitted February 28, 2012

26. Control methods of various emission units were clarified and requests were made to consider several emission units insignificant. A formal response to this supplemental information was made by Air Quality and issued to PABCO on August 15, 2012. All requests made by PABCO in this supplemental information were denied as part of this Title V renewal with two exceptions. Emission units E36, H21 and H23 were updated from their permitted control (enclosed+baghouse or moisture control) to an inherently wet process with no associated emissions. Also, the initial control requirement for EU: D7 was determined to be partially enclosed. PABCO subsequently identified EU: D7 as being controlled by a baghouse in addition to being partially enclosed. The addition of a baghouse is more stringent than otherwise required by previous control analyses and results in a decrease in emissions. Therefore, it can be addressed as part of this Title V renewal by way of AQR 12.4.3.2(b). See letter issued by Air Quality on August 15, 2012 for a detailed explanation.

The following additional changes were made to the Part 70 Operating Permit as part of the renewal process and revised local and federal air quality regulations:

27. Group 10 is described as Fuel Storage Tanks. Since Group 10 and Group 11 speak to the same emission unit (one aboveground gasoline storage tank) they should not be listed as separate groups, but combined into one Group (Group 10). As part of this permitting action, Group 11 will be removed (see ATC Modification 8) and its emissions included in Group 10.
28. The estimated emissions from the diesel storage tanks (standing/working losses and dispensing) were previously included in the source PTE under Group 10 - Tanks. Since these emission units are deemed insignificant activities they should be considered for source status, but should not be included in the source PTE. The contribution of emissions from insignificant activities was removed from the allowable PTE of the source.
29. It is against standard practice to include additional moisture control in stockpiles since the emission factor already assumes the materials are in a stabilized state. A default emission factor without any additional control is Air Quality's standard method of calculating emissions from stockpiles. The additional moisture control factor was removed from the stockpiles in PABCO EUs A3, A4 and B12 and Sandia emission unit T01. The increase in emissions will not be counted towards the change in PTE for the significance evaluation as no real change was made to the method of operation.
30. The current Title V OP (issued 4/27/05) shows the throughput of EUs D4-D8 as 820,000 tons/year. All ATC permits issued both before and after the issuance of the current Title V OP show a throughput of 2,300,000 tons per year for these units. Due to the conflicting information, it has been determined that the ATC permits shall be the dominating reference and the Title V OP will be revised to show a throughput of 2,300,000 tons per year.

31. The current Title V OP (issued 4/27/05) shows the emission factor of EUs E1 through E6 and E8 as 0.02 lb/ton of PM₁₀. All ATC permits issued both before and after the issuance of the current Title V OP show an emission factor of 0.023 lbs/ton for these units. Due to the conflicting information, it has been determined that the ATC permits shall be the dominating reference and the Title V OP will be revised to show an emission factor of 0.023 lb/ton of PM₁₀.
32. The Title V OP shows the emission factor of EUs F4, F6 and F8 as 0.023 lb/ton of PM₁₀. All ATC permits issued both before and after the issuance of the current Title V OP show an emission factor of 0.02 lbs/ton for these units. Due to the conflicting information, it has been determined that the ATC permits shall be the dominating reference and the Title V OP will be revised to show an emission factor of 0.02 lb/ton of PM₁₀.
33. The emission factor of the aggregate stacker and the course aggregate stacker at the Sandia plant was updated from 0.01 to 0.04 (EUs: S23 and S25) per standard Air Quality default emission factors. The increase in emissions will not be counted towards the change in PTE for the significance evaluation as no real change was made to the method of operation.
34. The haul road at Sandia is unpaved, but the emissions were calculated with a control factor for a paved road. The emission calculations were updated accordingly.
35. The production limitation in Table II-8 of the previous Title V OP incorrectly listed a turbine gas from NCA limitation of 2,777,600 tons per year (this error was perpetuated in subsequent ATC/OP permits). It should be 2,277,600 tons per year.
36. The VOC emissions associated with printing were previously lumped into Wallboard Manufacturing (without a designated emission unit number). This is a standalone emission unit and its emissions should be calculated as such. Printing operations were assigned their own emission unit numbers (EUs: E40 and H36).
37. Feed Screw Conveyor Drops G6, G11, G17 and G22 are all located at the end of the Impeller Mill processes, these emission units were grouped into a system and relocated to the end of the G - Boardline #2 Calcining -7 process to be more representative of the actual process (coincides with how the screw conveyors in Boardline #1 – Calcining – 4 are represented).
38. The requirement to perform periodic moisture testing was removed since the source has requested to update emission factors for moisture controlled emission units to EPA AP-42 emission factors with a standard 90 percent particulate control. The 90 percent control is Air Quality standard methodology for moisture control that is demonstrated through opacity rather than moisture testing. The 90 percent particulate control is being added to the uncontrolled AP-42 emission factors as applicable.
39. Emission limitations for the Coe board dryer and Flakt dryers (EUs: E39, H26 and H32) with references to 40 CFR 60, Subpart UUU were removed from the Title V OP. These are tunnel dryers and not subject to the provisions of this Subpart in accordance with 40 CFR 60.730(b).
40. Condition A-11 of the previous Title V OP limits visible emissions from conveyor drop points, storage piles of gypsum rocks or the area where gypsum rocks are crushed, screened, milled and conveyed to 10 percent opacity. This condition is incorrect as the current and previous limitations in accordance with 40 CFR 60, Subpart OOO allow crushers at which a capture system is not used up to 15 percent opacity. The condition for crushers without a capture system was revised accordingly.
41. Condition A-12 of the previous Title V OP limits visible emissions from any stack exhaust, such as those for the Gencor dryer, stucco storage area, calciners, end saw and board dryers to 7 percent opacity. This condition is incorrect. The Gencor dryer EU B24 and the subsequent Gencor dryer added in ATC/OP Modification 8 EU B36 are

regulated under 40 CFR 60, Subpart UUU which allows up to 10 percent opacity. The calciners are subject to 40 CFR 60, Subpart OOO so the reference to 40 CFR 60, Subpart UUU is not correct. Also, the board dryers (EUs: E39, H26 and H32) are tunnel dryers. They are not subject to the requirements of 40 CFR 60, Subpart OOO or Subpart UUU. The opacity limit for these emission units is regulated under AQR Section 26 (20 percent opacity). The conditions were updated appropriately in this permitting action.

42. Condition C-15 of the previous Title V OP requiring the source to maintain at least 10 percent moisture content in all wet processes was removed since there are no emission units at the Sandia plant claiming a control efficiency of 100 percent.
43. Condition D-6 of the previous Title V OP requiring monthly testing to verify compliance with the opacity standards was revised to require initial testing and subsequent testing every five (5) years. This coincides with the applicable federal requirement (40 CFR 60, Subpart OOO) as well as the current Air Quality Guidelines for Source Testing.
44. In the previous Title V OP performance testing was not required on each baghouse. Of the 25 baghouses located onsite, PABCO was required to do performance testing on a total of six (6) baghouse stacks. In accordance with initial performance testing requirements of 40 CFR 60, Subparts OOO and UUU, performance testing conditions and emission limits were added for each baghouse. Subsequent performance testing requirements are based on Air Quality's most recent practices. In order to differentiate between baghouses that warrant subsequent PM concentration testing and those that do not, Air Quality implemented a determination process based on uncontrolled emissions directed to the baghouse (see the Testing section below). Baghouse #15 that serves EUs: D36 through D41 will not be required to undergo subsequent EPA Method 5 testing. Additionally, subsequent EPA Method 9 testing for opacity will not be required for any baghouse unless notified by Air Quality in writing.
45. Various new conditions were added throughout the permit that were not in the previous Title V OP. These conditions were added in order to ensure the enforceability of OP requirements. AQR Section 12 references were used in these cases where new conditions were added (conditions which had no prior ATC/OP reference).
46. Changes were made to Table III-B-6: Summary of Add-On Control Devices. The control devices associated with these units were incorrectly listed for EU: D10, D13, D16 D19, D22, D25, D28, D31, D34, G2, G7, G13 and G18. All of these emission units are controlled by Baghouse 5, which is the Tripper Baghouse. The justification for this change can be found in the supplemental application dated February 27, 2012.
47. Changes were made to the NSPS applicability for EU: D11, D14, D17, D20, D23, D26, D29, D32, D35, G3, G8, G14 and G19. The NSPS changed from 40 CFR 60 Subpart OOO to 40 CFR 60 Subpart UUU. The record indicates these units are calciners (Impeller Mills) and, as such, are subject to Subpart UUU. The associated grain loading standards were changed where applicable in both the TSD and the operating permit. The grain loading standard used is 0.090 g/dscm, this assumes that the calciners are not in series with a dryer.

E. Operating Scenario

PABCO

- a. Production is limited to the throughputs shown in Table III-E-1, based on the rated capacities of primary emission units.

Table III-E-1: Operations Limitations

Operation	EU	Description	Annual Throughput
Exhaust Gas Received from NCA			2,277,600 tons
Quarry – Group 1	A1	Mining	2,300,000 tons
	A5	Blasting	746,352 ft ² (aggregate)
			750 tons (ANFO)
			45 tons (Emulsion)
			14 tons (High Explosive)
		0.90 tons (Cast TNT Booster)	
Beneficiation – Group 2	B2	Primary Crusher	2,300,000 tons
Railroad Loading – Group 3	C1	Railroad Loading	250,000 tons
Calcining Line #1 – Group 4	D1, D2, D3	Belt Feeder Drops	766,667 tons (each)
	D11, D14, D17, D20, D23, D26, D29, D32, D35	Impeller Mills #1-#9	40,889 tons aggregate (each), 36,359 tons exhaust gas from NCA (each)
	D36, D37, D38, D39, D40, D41	Screw Conveyors	55,200 tons (each)
	D42	Screw Conveyor	331,200 tons
Wallboard Line #1 – Group 5	E3	Stucco Bin #1	331,200 tons
	E12	Stucco Bin #2	397,440 tons
	E17	Scale (Transfer Point)	66,240 tons
	E22	Live Bottom Bin	397,440 tons
	E25	Accelerator Bin	1,197 tons
	E27, E29, E31, E33	Additive Bins	8,346 tons (each)
	E35	Mixer	450,000 tons
	E37	End Saw	450,000,000 ft ²
	E39	Coe Board Dryer	1,950,370 tons exhaust gas from NCA
E40	Printing	400 pounds Black Ink	
		500 pounds of Make-Up	
Alpha Foamer		Raw Material Additive	270,000 pounds Alpha Foamer
Accelerator – Group 6	F3, F4	Storage Bins	5,000 tons (each)
	F5	Crusher	10,000 tons
Calcining Line #2 – Group 7	G1	Screw Conveyor	452,000 tons
	G12	Screw Conveyor	580,000 tons
	G3, G8	Impeller Mills #10-#11	226,000 tons

	G14, G19	Impeller Mills #12-#13	290,000 tons
Wallboard Line #2 – Group 8	H1, H2	Stucco Bins #3 and #4	226,000 tons (each)
	H6	Stucco Surge Bin	452,000 tons
	H11, H13, H15, H19	Additive Bins	119,500 tons (each)
	H17	Accelerator Bin	8,803 tons
	H22	Pin Mixer	606,303 tons
	H24, H30	End Saws	650,000,000 ft ² (each)
	H27	Stucco Storage Bin #5	580,000 tons
	H33	Stucco Cooler	1,032,000 tons
	H36	Printing Boardline 2 and Boardline 2 Expansion	500 pounds Black Ink (each) 625 pounds Make-up (each)
Alpha Foamer		Raw Material Additive	390,000 pounds Alpha Foamer (each)
Storage Tanks – Group 10	J01	GDO	22,000 gallons

- b. The Permittee shall limit the total area of stockpiles throughout PABCO (EUs: A3, B12 and B28) to 6.68 acres.
- c. The Permittee shall limit the total VMT on roads throughout PABCO (EUs: A2, E38, H25 and H31) to 112,139 miles in any consecutive 12-month period.
- d. The Permittee shall limit the operation of the emergency generators (EUs: U04 and U05) for testing and maintenance purposes to 100 hours per year. The Permittee may operate the emergency generator up to 50 hours per year for nonemergency situations, but those hours count towards the 100 hours provided for testing and maintenance. The 50 hours per year for nonemergency situations cannot be used for peak shavings or to generate income for the facility.
- e. The Permittee shall limit the operation of the water pump (EU: U06) to not more than 400 hours per consecutive 12-month period.

Sandia

- f. The Permittee shall limit the amount of material processed in the aggregate plant to 2,500,000 tons per consecutive 12-month period.
- g. The Permittee shall limit the operation of each emission unit in the plant (EUs: S01, S10, S14, S17, S18, S21, S23, S25 and U03) to up to 6,200 hours per consecutive 12-month period.
- h. The Permittee shall limit the total area of stockpiles and disturbed surfaces (EU: T01) to 12.0 acres.
- i. The Permittee shall limit the total VMT on roads (EU: T02) to 31,250 miles in any consecutive 12-month period.

F. Proposed Exemptions

Exemptions have not been proposed by the source.

IV. EMISSIONS INFORMATION

A. Source-Wide Potential to Emit

The source is major source for NO_x and CO and minor source for PM₁₀, PM_{2.5}, SO_x, VOC and HAP.

Table IV-A-1: Total Source PTE (tons per rolling 12-months)¹

	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC	HAP
Non-fugitive PTE	92.30	23.33	384.81	479.71	7.20	109.12	7.73
Fugitive PTE	86.15	0.00	0.00	0.00	0.00	0.00	0.00
Major Source Thresholds	250	250	250	250	250	250	10/25²

¹Not a source-wide emission limit; values are used for determining the major source status.

²Ten (10) tons for any individual HAP or 25 tons for combination of all HAPs.

B. Emission Units, Emission Limitations and PTE

The stationary source is defined to consist of the emission units summarized in Tables IV-B-1 and IV-B-2.

Table IV-B-1: List of Emission Units for PABCO

EU	Description	Rating	Make	Model #	Serial #
A	Quarry Operations [Group #1]				
A1	Mining				
A2	Pit Haulage to Plant Feed (Front End Loader in Pit)				
A3	Mined Rock Pile	3.0 Acres			
A4	Disturbed Surfaces				
A5	Blasting				
B	Beneficiation Operations [Group #2]				
B1	Hopper Feeder				
B2	Primary Crusher	615 tph	Pioneer	VS4248	403750
B3	Conveyor Belt Drop				
B4	Conveyor Belt Drop				
B5	Conveyor Belt Drop				
B6	Conveyor Belt Drop				
B7	Conveyor Belt Drop				
B8	Conveyor Belt Drop				
B9	Conveyor Belt Drop				
B10	Conveyor Belt Drop				
S02	Ore Transfer Belt				

EU	Description	Rating	Make	Model #	Serial #
B11	Radial Stacker Drop				
B12	#1 Plant Rock Pile	2.55 Acres			
B13	Belt Feeder Drop				
B14	Belt Feeder Drop				
B15	Belt Feeder Drop				
B16	Conveyor Belt Drop				
B17	Screen	615 tph	MFC Corp.	CS2412	826611-8
B18	Hammermill Crusher	615 tph	Svedala	306-606	H-03-NC
B19	Fines Sump				
B20	Classifier				
B21	Humbolt De-Waterer				
B22	Wet Conveyor Belt				
B23	Conveyor Belt Drop				
B37	Apron Feeder Drop				
B38	Apron Feeder Drop				
B39	Apron Feeder Drop				
S07	Ore Reclaim Belt				
B40	Screen	615 tph	JCI	6202-32LP	S071888
B42	Screen Collection Belt				
B41	Hammermill	615 tph	Universal Engineering	HM-05-NC	306X615
S13	Recycle Belt				
B43	Blade Mill	615 tph	Kolberg/ Pioneer	6536-19T	407227
S26	Twin Screw Classifier				
B44	De-Waterer 1 South		CMI Humbolt	MPC480105 R	06-101R
B45	De-Waterer 2 North		CMI Humbolt	MPC0480	01-104
B46	Centrifuge Collection Tank				
B24	Rotary Dryer #1	615 tph, 70 MMBtu/hr	Gencor	UFII-70	140005
B25	Conveyor Belt Drop				
B26	Conveyor Belt Drop				
B27	Conveyor Belt Drop				
B28	Dome Stockpile	1.13 acres			
B29	Conveyor Belt Drop				
B30	Conveyor Belt Drop				
B34	Hopper Feeder				
B35	Hopper Bin				
B31	Mechanical Separator	20 MMBtu/hr	Sturtevant	60-180	400205
B32	Conveyor Belt Drop				

EU	Description	Rating	Make	Model #	Serial #
B33	Conveyor Belt Drop				
S27	Dryer Feed Belt				
B36	Rotary Dryer #2	615 tph, 90 MMBtu/hr	Gencor	70x10/8"	M37.11.7001
C	Railroad Loading [Group #3]				
C1	Variable Splitter				
C2	Conveyor Belt Drop				
C3	Storage Bin				
C4	Batch Drop				
D	Boardline #1 Calcining Operation [Group #4]				
D1	Belt Feeder Drop				
D2	Belt Feeder Drop				
D3	Belt Feeder Drop				
D4	Conveyor Belt Drop				
D5	Variable Splitter				
D6	Bypass Conveyor				
D7	Conveyor Belt Drop				
D8	Tripper Station				
D9	Screw Conveyor				
D18	Screw Conveyor				
D27	Screw Conveyor				
D10	Rock Bin #1				
D11	Impeller Mill #1	10 tph, 8,301.1 lbs/hr, 5 MMBtu/hr	CE Raymond	50	Unknown
D13	Rock Bin #2				
D14	Impeller Mill #2	10 tph, 8,301.1 lbs/hr, 5 MMBtu/hr	CE Raymond	50	64017
D16	Rock Bin #3				
D17	Impeller Mill #3	10 tph, 8,301.1 lbs/hr, 5 MMBtu/hr	CE Raymond	50	Unknown
D19	Rock Bin #4				
D20	Impeller Mill #4	10 tph, 8,301.1 lbs/hr, 5 MMBtu/hr	CE Raymond	50	84021
D22	Rock Bin #5				
D23	Impeller Mill #5	10 tph, 8,301.1 lbs/hr, 5 MMBtu/hr	CE Raymond	50	Unknown
D25	Rock Bin #6				
D26	Impeller Mill #6	10 tph, 8,301.1 lbs/hr, 5 MMBtu/hr	CE Raymond	50	Unknown

EU	Description	Rating	Make	Model #	Serial #
D28	Rock Bin #7				
D29	Impeller Mill #7	10 tph, 8,301.1 lbs/hr, 5 MMBtu/hr	CE Raymond	50	86003
D31	Rock Bin #8				
D32	Impeller Mill #8	10 tph, 8,301.1 lbs/hr, 5 MMBtu/hr	CE Raymond	50	86002
D34	Rock Bin #9				
D35	Impeller Mill #9	10 tph, 8,301.1 lbs/hr, 5 MMBtu/hr	CE Raymond	50	86054
D36	Screw Conveyor				
D37	Screw Conveyor				
D38	Screw Conveyor				
D39	Screw Conveyor				
D40	Screw Conveyor				
D41	Screw Conveyor				
D42	Screw Conveyor				
D43	Transfer Station Screen	180 tph	FMC	65	D-801401
D44	Transfer Station Crusher	30 tph	American Pulverizer	18x18	8133
E	Boardline #1 Wallboard Manufacturing [Group #5]				
E1	Stucco Elevator #1A				
E2	Transfer Point				
E3	Stucco Bin #1				
E4	Screw Conveyor				
E5	Entoleter Elevator				
E6	Transfer Point				
E7	Entolater (Mill)	45 tph	Entoleter, Inc	Series 27/40	5129
E8	Screw Conveyor				
E9	Transfer Point				
E10	Stucco Elevator #1				
E11	Screw Conveyor				
E12	Stucco Bin #2				
E13	Rotary Valve				
E14	Bin Discharge Screw #2				
E15	Transfer Point				
E16	Scalping Screw				
E17	Scale (Transfer Point)				
E18	Return Screw				
E19	Stucco Recirculating Elevator				

EU	Description	Rating	Make	Model #	Serial #
E20	Bin Recirculation Screw				
E21	Rotary Valve				
E22	Live Bottom Bin				
E23	Metering Screw Conveyor				
E25	Accelerator Bin				
E26	Feeder				
E27	Additive Bin				
E29	Additive Bin				
E31	Additive Bin				
E33	Additive Bin				
E28	Feeder				
E30	Feeder				
E32	Feeder				
E34	Feeder				
E24	Mixing Screw Conveyor				
E35	Mixer	90 tph	Broder Machine	5750	8150
E36	Transfer Point				
E37	End Saw				
E38	Product Haul Trucks				
E39	Coe Board Dryer	110 MMBtu/hr			
E40	Printing				
F	Accelerator System [Group #6]				
F1	Screw Conveyor				
F2	Vacuum Feed				
F3	Storage Bin				
F4	Storage Bin				
F5	Crusher	6 tph	Mikropulverizer	44	
F6	Screw Conveyor				
F7	Ball Mill	1 tph	Service Welding and Machine	3x19	
F8	Elevator Conveyor				
G	Boardline #2 Calcining Operations [Group #7]				
G1	Screw Conveyor Drop				
G12	Screw Conveyor Drop				
G2	Rock Bin #10				
G3	Impeller Mill #10 - Aggregate	19 MMBtu/hr	Alston	83	97036
G4	Double Cone Classifier				

EU	Description	Rating	Make	Model #	Serial #
G5	Cyclone Collector				
G7	Rock Bin #11				
G8	Impeller Mill #11	19 MMBtu/hr	Alston	83	97037
G9	Double Cone Classifier				
G10	Cyclone Collector				
G13	Rock Bin #12				
G14	Impeller Mill #12	22.5 MMBtu/hr	Alston	83	93019
G15	Double Cone Classifier				
G16	Cyclone Collector				
G18	Rock Bin #13				
G19	Impeller Mill #13	22.5 MMBtu/hr	Alston	83	93020
G20	Double Cone Classifier				
G21	Cyclone Collector				
G6	Feed Screw Conveyor Drop				
G11	Feed Screw Conveyor Drop				
G17	Feed Screw Conveyor Drop				
G22	Feed Screw Conveyor Drop				
H	Boardline #2 Wallboard Manufacturing [Group #8]				
H1	Stucco Storage Bin #3				
H2	Stucco Storage Bin #4				
H3	Stucco Screw Conveyor				
H4	Stucco Bucket Elevator				
H5	Recirculating Screw Conveyor				
H7	Stucco Feed Elevator				
H8	Stucco Metering				
H6	Stucco Surge Bin				
H11	Additive Bin				
H13	Additive Bin				
H15	Additive Bin				
H19	Additive Bin				
H17	Accelerator Bin				
H12	Feeder				
H14	Feeder				
H16	Feeder				
H18	Feeder				
H20	Feeder				
H21	Wet Additives Feeder				

EU	Description	Rating	Make	Model #	Serial #
H10	Mixing Screw Conveyor				
H22	Pin Mixer		Broeder Machine Works	8600	
H23	Transfer Point				
H24	End Saw				
H25	Product Haul Trucks				
H26	Flakt Board Dryer Combustion Zone 1	50 MMBtu/hr	ABB Flakt		
	Flakt Board Dryer Combustion Zone 2	39 MMBtu/hr			
	Flakt Board Dryer Combustion Zone 3	18 MMBtu/hr			
H27	Stucco Storage Bin #5				
H28	Stucco Screw Conveyor				
H29	Recirculating Screw Conveyor				
H30	End Saw				
H31	Product Haul Trucks				
H32	Flakt Board Dryer Combustion Zone 1	45 MMBtu/hr	ABB Flakt		
	Flakt Board Dryer Combustion Zone 2	45 MMBtu/hr			
	Flakt Board Dryer Combustion Zone 3	30 MMBtu/hr			
H33	Stucco Cooler		Gyptech	GKL52690	PALV-0940-ER6565
H34	Stucco Screw Conveyor				
H35	Stucco Screw Conveyor				
H36	Printing				
I	Cooling Towers [Group #9]				
I01	Cooling Tower	1200 gpm	Evapco	ATW207C	988659W
I02	Cooling Tower	1200 gpm	Evapco	ATW207C	988659W
J	Storage Tank/GDO [Group #10]				
J01	Aboveground Gasoline Storage Tank (10,000 gallons)	10,000 gallons			
U	Fire & Water Pumps [Group #12]				
U04	Diesel Engine for Emergency Fire Pump; DOM: 2007	240 hp	John Deere	6068HF120	PE60684683402
U05	Diesel Engine for Emergency Fire Pump; DOM: 2007	240 hp	John Deere	6068HF120	CD6068B020341
U06	Diesel Engine for Water Pump; DOM: 2002	85 hp	Perkins	1004-42	AR36677

Table IV-B-2: List of Emission Units for Sandia

EU	Description	Rating	Make	Model #	Serial #
S	Sandia Mineral Processing				
S01	Mining (Overburden & Aggregate)				
S10	Course Recirc. #1				
S11	Course Recirc. #2				
S12	Course Recirc. #3				
S14	Course Discharge Belt 1				
S15	Course Discharge Belt 2				
S17	West Screen	300 tph			
S18	East Screen	200 tph			
S19	Screen Recirc. Belt				
S20	T/C Discharge Belt				
S21	T/C Crusher	300 tph			
S22	Aggregate Discharge Belt				
S23	Aggregate Stacker				
S24	Course Aggregate Discharge Belt				
S25	Course Aggregate Stacker				
T	Stockpiles & Haul Road				
T01	Disturbed Surfaces & Stockpiles				
T02	Haul Road (0.50 RT), 40 tons/load				
U	Water Pump				
U03	Diesel Engine for Water Pump	250 kW	Cummins	NTA855-G2	1050827929

The following units or activities are present at this source, but are insignificant. The emissions from these units or activities, when added to the PTE of the source will not make the source major for any additional pollutant not already considered major.

Table IV-B-3: Insignificant Units or Activities

Description
Diesel Storage Tank (Shop-1: 10,575 gallons)
Diesel Storage Tank (Pump-1: 115 gallons)
Diesel Storage Tank (Port-1: 75 gallons)
Diesel Storage Tank (Pit-1: 1,000 gallons)
Diesel Storage Tank (Pit-2: 1,000 gallons)

The PTE for each emission unit was calculated using the emission factor methodology described in Table IV-B-4.

Table IV-B-4: Emission Factor References

Description	EU	Emission Factor Reference
Quarry – Group #1	A1 - Mining	EPA AP-42 Table 11.19.2-2 (2 controlled conveyor transfer points for mining)
	A2 – Pit Haulage to Plant Feed (Front End Loader in Pit)	Air Quality default emission factors multiplied by a 0.10 control factor for 90 percent moisture control
	A3, A4 – Mined Rock Pile and Disturbed Surfaces	Air Quality default emission factor.
	A5 - Blasting	EPA AP-42 Table 11.9-1 for PM ₁₀ , NO _x , CO and SO _x emission factors for blasting provided by source.
Beneficiation – Group #2	Multiple – Aggregate Processing (not otherwise specified)	EPA AP-42, Table 11.19.2-2 controlled emission factors.
	B12 – Plant Rock Pile	Air Quality default emission factors.
	B24 – Rotary Dryer Aggregate Processing	EPA AP-42, Table 11.16-2 (2.00 lb/ton*0.005 CF = 0.01 lb/ton)
	B24 – Rotary Dryer #1 Combustion	Manufacturer’s specifications for NO _x and EPA AP-42 Tables 1.4-1, -2 and -3 (10/92) for all other pollutants.
	B28 – Dome Stockpile	Air Quality default emission factors.
	B31 – Mechanical Separator – Aggregate Processing	Emission factor provided by source.
	B31 – Mechanical Separator - Combustion	EPA AP-42 Tables 1.4-1, 1.4-2 and 1.4-3.
	B36 – Rotary Dryer #2 – Aggregate Processing	EPA AP-42, Table 11.16-2 (2.00 lb/ton*0.005 CF = 0.01 lb/ton)
B36 – Rotary Dryer #2 Combustion	Burner Manufacturer specifications for NO _x and CO. EPA AP-42 Tables 1.4-1, -2 and -3 (10/92) for all other pollutants.	
Railcar Loading – Group #3	C1	EPA AP-42, Table 11.19.2-2 uncontrolled emission factor with 90 percent control for partial enclosure and EPA AP-42, Table 11.19.2-2 controlled emission factor.
Boardline #1 Calcining – Group #4	Multiple – Aggregate Processing (not otherwise specified)	EPA AP42, Table 11.19.2-2 uncontrolled emission factors for aggregate processing or provided by source.
	Screw Conveyors, Rock Bins, Stucco Screen and Bucket Elevator	Air Quality default emission factors for aggregate processing or provided by source.
	Impeller Mills - Aggregate Processing	EPA Table 11.16-2 (average of the emission factor for impact mill and for flash calciner).

Description	EU	Emission Factor Reference
	Impeller Mills Burner Combustion (D11, D14, D17, D20, D23, D26, D29, D32, D35)	Manufacturer's specifications for NO _x and CO and EPA AP-42 Table 1.4-2 (01/95) for all other pollutants.
	Impeller Mills Turbine Exhaust (D11, D14, D17, D20, D23, D26, D29, D32, D35)	Emission factors come from turbine exhaust flue gas values.
Wallboard Manufacturing – Group #5	Multiple – Aggregate Processing (not otherwise specified)	Air Quality default emission factors for aggregate processing or provided by source.
	Haul Roads	Air Quality default emission factors.
	End Saw E37	EPA AP-42 Table 11.16-2 (1,140 lb/10 ⁶ ft ² *0.005 CF = 5.7 lb/10 ⁶ ft ²)
	Stockpiles	Air Quality default emission factors
	Coe Board Dryer E39 – Turbine Exhaust	Emission factors come from turbine exhaust flue gas values.
	Coe Board Dryer E39 – Alternate Operating Scenario	EPA AP-42 Table 1.4-1, 1.4-2 and 1.4-3
	Printing E40	Manufacturer's Specifications for VOC content (MSDS)
Accelerator – Group #6	F1 – F8	EPA AP-42, Table 11.19.2-2 uncontrolled emission factors or provided by source.
Boardline #2 Calcining – Group #7	Multiple – Aggregate Processing	Air Quality default emission factors for aggregate processing or provided by source.
	Impeller Mills – Aggregate Processing	EPA Table 11.16-2 (average of the emission factor for impact mill and for flash calciner).
	Impeller Mills – Burner Combustion	Manufacturer's specifications for NO _x and CO and EPA AP-42 Table 1.4-2 for all other pollutants.
Boardline #2 Wallboard – Group #8	Multiple – Aggregate Processing	Air Quality default emission factors for aggregate processing or provided by source.
	End Saws H24, H30	EPA AP-42 Table 11.16-2 (1,140 lb/10 ⁶ ft ² *0.005 CF = 5.7 lb/10 ⁶ ft ²)
	Flakt Board Dryers H26, H32	Manufacturer's Specifications for all pollutants
	Printing H36	Manufacturer's Specifications for VOC content (MSDS)
Cooling Towers	I01, I02	Manufacturer's Specifications and Air Quality default emission factors
Tanks	J01	Standing and Working Losses from TANKS, Dispensing and Spillage emission factors from Table EPA AP-42 Table 5.2-7
Diesel Fire & Water Pumps	U04, U05, U06	Manufacturer's Specifications for all pollutants.
Sandia	Multiple – Aggregate	Air Quality default emission factors.

Description	EU	Emission Factor Reference
	Processing	
	Diesel Water Pump U03	Manufacturer's Specifications for all pollutants except HAP (AP-42 Chapter 3 for HAP)

Table IV-B-5: PABCO PTE (tons per year)¹

EU	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC	HAP
A	Quarry Operations [Group #1]						
A1	0.11	0.00	0.00	0.00	0.00	0.00	0.00
A2	25.89	0.00	0.00	0.00	0.00	0.00	0.00
A3	0.91	0.00	0.00	0.00	0.00	0.00	0.00
A4	27.27	0.00	0.00	0.00	0.00	0.00	0.00
A5	2.35	0.00	4.45	15.71	0.80	0.00	0.00
B	Beneficiation Operations [Group #2]						
B1	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B2	0.62	0.00	0.00	0.00	0.00	0.00	0.00
B3							
B4	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B5	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B6	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B7	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B8	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B9	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B10	0.05	0.00	0.00	0.00	0.00	0.00	0.00
S02	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B11	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B12	0.77	0.00	0.00	0.00	0.00	0.00	0.00
B13	0.02	0.00	0.00	0.00	0.00	0.00	0.00
B14	0.02	0.00	0.00	0.00	0.00	0.00	0.00
B15	0.02	0.00	0.00	0.00	0.00	0.00	0.00
B16	2.53	0.00	0.00	0.00	0.00	0.00	0.00
B17		0.00	0.00	0.00	0.00	0.00	0.00
B18	0.62	0.00	0.00	0.00	0.00	0.00	0.00
B19	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B20		0.00	0.00	0.00	0.00	0.00	0.00
B21	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B22	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B23	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B37	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B38	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B39	0.05	0.00	0.00	0.00	0.00	0.00	0.00
S07	2.53	0.00	0.00	0.00	0.00	0.00	0.00
B40							
B42							
B41	0.62	0.00	0.00	0.00	0.00	0.00	0.00
S13	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B43	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S26	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B44	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B45	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B46	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B24	11.52	0.02	36.79	10.73	0.18	0.85	0.58

EU	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC	HAP
B25	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B26	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B27	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B28	0.03	0.00	0.00	0.00	0.00	0.00	0.00
B29	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B30	0.05	0.00	0.00	0.00	0.00	0.00	0.00
B34	1.27	0.00	0.00	0.00	0.00	0.00	0.00
B35	0.01	0.00	0.00	0.00	0.00	0.00	0.00
B31	1.08	0.66	12.26	7.36	0.05	0.48	0.17
B32	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B33	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S27	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B36	11.53	0.03	15.77	60.71	0.24	1.10	0.75
C	Railroad Loading [Group #3]						
C1	0.01	0.00	0.00	0.00	0.00	0.00	0.00
C2							
C3							
C4	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D	Boardline #1 Calcining Operation [Group #4]						
D1	0.02	0.00	0.00	0.00	0.00	0.00	0.00
D2	0.02	0.00	0.00	0.00	0.00	0.00	0.00
D3	0.02	0.00	0.00	0.00	0.00	0.00	0.00
D4	0.06	0.00	0.00	0.00	0.00	0.00	0.00
D5	0.13	0.00	0.00	0.00	0.00	0.00	0.00
D6	0.13	0.00	0.00	0.00	0.00	0.00	0.00
D7	0.07	0.00	0.00	0.00	0.00	0.00	0.00
D8	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D9	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D18	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D27	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D10	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D11	0.57	0.01	1.43	4.73	0.05	0.14	0.04
D13	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D14	0.57	0.01	1.43	4.73	0.05	0.14	0.04
D16	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D17	0.57	0.01	1.43	4.73	0.05	0.14	0.04
D19	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D20	0.57	0.01	1.43	4.73	0.05	0.14	0.04
D22	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D23	0.57	0.01	1.43	4.73	0.05	0.14	0.04
D25	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D26	0.57	0.01	1.43	4.73	0.05	0.14	0.04
D28	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D29	0.57	0.01	1.43	4.73	0.05	0.14	0.04
D31	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D32	0.57	0.01	1.43	4.73	0.05	0.14	0.04
D34	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D35	0.57	0.01	1.43	4.73	0.05	0.14	0.04
D36	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D37	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D38	0.01	0.00	0.00	0.00	0.00	0.00	0.00
D39	0.01	0.00	0.00	0.00	0.00	0.00	0.00

EU	PM₁₀	PM_{2.5}	NO_x	CO	SO_x	VOC	HAP
F6	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F7	0.00	0.00	0.00	0.00	0.00	0.00	0.00
F8	0.00	0.00	0.00	0.00	0.00	0.00	0.00
G	Boardline #2 Calcining Operations [Group #7]						
G1	0.02	0.00	0.00	0.00	0.00	0.00	0.00
G12	0.03	0.00	0.00	0.00	0.00	0.00	0.00
G2	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G3	4.08	0.99	8.32	1.75	0.05	0.44	0.15
G4	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G5	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G7	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G8	4.08	0.99	8.32	1.75	0.05	0.44	0.15
G9	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G10	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G13	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G14	4.70	0.74	13.80	8.28	0.06	0.54	0.20
G15	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G16	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G18	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G19	4.70	0.74	13.80	8.28	0.06	0.54	0.20
G20	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G21	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G6	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G11	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G17	0.01	0.00	0.00	0.00	0.00	0.00	0.00
G22	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H	Boardline #2 Wallboard Manufacturing [Group #8]						
H1	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H2	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H3	0.02	0.00	0.00	0.00	0.00	0.00	0.00
H4	0.02	0.00	0.00	0.00	0.00	0.00	0.00
H5	0.02	0.00	0.00	0.00	0.00	0.00	0.00
H7	0.02	0.00	0.00	0.00	0.00	0.00	0.00
H8	0.02	0.00	0.00	0.00	0.00	0.00	0.00
H6	0.02	0.00	0.00	0.00	0.00	0.00	0.00
H11	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H13	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H15	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H19	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H17	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H12	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H14	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H16	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H18	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H20	0.01	0.00	0.00	0.00	0.00	0.00	0.00
H21	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H10	0.03	0.00	0.00	0.00	0.00	0.00	0.00
H22	0.03	0.00	0.00	0.00	0.00	0.00	0.00
H23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
H24	1.85	0.00	0.00	0.00	0.00	0.00	0.00
H25	1.23	0.00	0.00	0.00	0.00	0.00	0.00
H26	6.47	6.40	65.61	16.41	0.28	1.31	0.93

EU	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC	HAP
H27	0.03	0.00	0.00	0.00	0.00	0.00	0.00
H28	0.03	0.00	0.00	0.00	0.00	0.00	0.00
H29	0.03	0.00	0.00	0.00	0.00	0.00	0.00
H30	1.85	0.00	0.00	0.00	0.00	0.00	0.00
H31	1.23	0.00	0.00	0.00	0.00	0.00	0.00
H32	4.00	3.95	73.58	44.16	0.32	2.88	1.04
H33	0.05	0.00	0.00	0.00	0.00	0.00	0.00
H34	0.03	0.00	0.00	0.00	0.00	0.00	0.00
H35	0.03	0.00	0.00	0.00	0.00	0.00	0.00
H36	0.00	0.00	0.00	0.00	0.00	63.48	0.00
I	Cooling Towers [Group #9]						
I01	0.16	0.00	0.00	0.00	0.00	0.00	0.00
I02	0.16	0.00	0.00	0.00	0.00	0.00	0.00
J	Storage Tank/GDO [Group #10]						
J01	0.00	0.00	0.00	0.00	0.00	2.77	0.78
U	Engines [Group #12]						
U04	0.03	0.03	0.43	0.08	0.02	0.03	0.01
U05	0.03	0.03	0.43	0.08	0.02	0.03	0.01
U06	0.04	0.04	0.24	0.11	0.01	0.01	0.01

1) Worst case emissions are shown for emission units with multiple operating scenarios.

Table IV-B-6: Sandia PTE (tons per year)

EU	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC	HAP
S	Sandia Mineral Processing						
S01	12.40	0.00	0.00	0.00	0.00	0.00	0.00
S10	0.62	0.00	0.00	0.00	0.00	0.00	0.00
S11	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S12	0.00	0.00	0.00	0.00	0.00	0.00	0.00
S14	0.62	0.00	0.00	0.00	0.00	0.00	0.00
S15	0.62	0.00	0.00	0.00	0.00	0.00	0.00
S17	1.12	0.00	0.00	0.00	0.00	0.00	0.00
S18	0.74	0.00	0.00	0.00	0.00	0.00	0.00
S19	0.05	0.00	0.00	0.00	0.00	0.00	0.00
S20	0.14	0.00	0.00	0.00	0.00	0.00	0.00
S21	1.81	0.00	0.00	0.00	0.00	0.00	0.00
S22	0.03	0.00	0.00	0.00	0.00	0.00	0.00
S23	0.14	0.00	0.00	0.00	0.00	0.00	0.00
S24	0.03	0.00	0.00	0.00	0.00	0.00	0.00
S25	0.14	0.00	0.00	0.00	0.00	0.00	0.00
T	Stockpiles & Haul Road						
T01	3.64	0.00	0.00	0.00	0.00	0.00	0.00
T02	11.83	0.00	0.00	0.00	0.00	0.00	0.00
U	Engine						
U03	2.02	2.00	28.71	6.20	1.89	2.36	0.12

Table IV-B-7: PABCO Emission Rates and Concentration Limits¹

EU	PM (gr/dscf)	NO _x (lbs/hr)	CO (lbs/hr)	VOC (lbs/hr)
B24	0.025	8.40	2.45	
B35	0.022			
B31	0.022			
B36	0.025	3.60	13.86	

EU	PM (gr/dscf)	NO _x (lbs/hr)	CO (lbs/hr)	VOC (lbs/hr)
D1 – D4, D7- D10, D13. D16, D18, D19, D22, D25,D27, D28, D31, D34, D36-D41, D43, D44	0.022			
D11, D14, D17, D20, D23, D26, D29, D32. D35	0.040			
E1 – E20	0.022			
E21 – E37	0.022			
E39		17.50	57.89	1.71
G1, G6, G11, G12, G17, G22	0.022			
G3, G8, G14, G19	0.040			
G2, G4,G5	0.022			
G7 – G10	0.022			
G13 – G16	0.022			
G18 – G21	0.022			
H1 – H5, H7, H8, H27 – H29, H33 – H35	0.022			
H6, H10 – H20, H22, H24	0.022			
H26 Zone 1		7.00	1.75	0.14
H26 Zone 2		5.46	1.37	0.11
H26 Zone 3		2.52	0.63	0.05
H30	0.022			
H32 Zone 1		6.30	3.78	0.25
H32 Zone 2		6.30	3.78	0.25
H32 Zone 3		4.20	2.52	0.17

1) Line items with multiple emission units are controlled by one control device (one stack) with one emission limitation.

Table IV-B-8: Sandia Emission Rates

EU	CO (lbs/hr)
U03	2.00

The changes in PTE from the previous Title V OP issued on April 27, 2005 are the result of the changes requested in ATC/OP Modifications 7, 8 and 9 and ATC Modification 11 (with operating authority requested on May 28, 2009). These projects underwent appropriate new source review at that time. Modification 10 was cancelled by the source. No new emission units were added as part of this Title V renewal. Clarifications on blasting and printing emissions and the correction of emission factors did contribute to a change in PTE. However, these differences will not be considered in an evaluation for significance because they are based on calculation methodology rather than physical operational changes. This permitting action does not trigger any significance thresholds.

C. Testing

Performance testing is subject to 40 CFR 60 Subpart A, 40 CFR 60 Subpart OOO, 40 CFR 60 Subpart UUU, 40 CFR 63, Subpart ZZZZ, 40 CFR 63, Subpart CCCCCC and Air Quality's Guideline for Source Testing.

Air Quality re-established the frequency by which sources are to demonstrate compliance with opacity standards through performance testing. As daily opacity observations are introduced into the permit for demonstration with opacity limits, the requirement to perform subsequent Method 9 performance tests has been changed to be necessary only when required by the

Control Officer. Initial Method 9 performance tests are required as specified by any other applicable federal requirement.

In order to differentiate between baghouses that warrant subsequent PM concentration testing and those that do not, Air Quality implemented a determination process based on uncontrolled emissions directed to the baghouse. Air Quality established the major source significance level for PM₁₀ as the threshold by which subsequent PM concentration testing would be required for a baghouse. Required testing will be performed as follows:

Table IV-C-1: Performance Testing Requirements

EU	Control	Description	Applicable ¹ Regulation	Pollutant	Frequency
PABCO					
		NCA #2 Exhaust Gas Fed to PABCO		NO _x , CO, O ₂ , flow rate	Initial and annually
B1 – B10, S02, B11 – B18, B21 – B23, B37 – B39, S07, B40, B42, B41, S13, B44, B45, B25 – B27, B29, B30, B34, B32, B33, S27	Moisture	Beneficiation Process	40 CFR 60, Subpart 000	Opacity	Initial
C1 – C4	Moisture	Railroad Loading	40 CFR 60, Subpart 000	Opacity	Initial
B24	Baghouse 1	Rotary Dryer	40 CFR 60, Subpart 000	PM, NO _x , CO	Initial and every 5 years
				Opacity	Initial
B35, B31, D43, D44	Baghouse 2	Hopper Bin, Mechanical Separator, Transfer Station Screen and Crusher	40 CFR 60, Subpart 000	PM	Initial and every 5 years
				Opacity	Initial
B36	Baghouse 3	Rotary Dryer	40 CFR 60, Subpart 000	PM, NO _x , CO	Initial and every 5 years
				Opacity	Initial
D1 – D4	Baghouse 4	3 Belt Feeders and Conveyor	40 CFR 60, Subpart 000	PM	Initial and every 5 years
				Opacity	Initial
D7- D10, D13, D16, D18, D19, D22, D25, D27 D28, D31, D34, G2, G7, G13 and G18	Baghouse 5	Tripper Station, Screw Conveyors and Rock Bin #1 through #9	40 CFR 60, Subpart 000	PM	Initial and every 5 years
				Opacity	Initial
D11	Baghouse 6	Impeller Mill #1	40 CFR 60, Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
D14	Baghouse 7	Impeller Mill #2	40 CFR 60, Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
D17	Baghouse 8	Impeller Mill #3	40 CFR 60, Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
D20	Baghouse 9	Impeller Mill #4	40 CFR 60, Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
D23	Baghouse 10	Impeller Mill #5	40 CFR 60, Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
D26	Baghouse 11	Impeller Mill #6	40 CFR 60, Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
D29	Baghouse 12	Impeller Mill #7	40 CFR 60, Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
D32	Baghouse 13	Impeller Mill #8	40 CFR 60, Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial

EU	Control	Description	Applicable ¹ Regulation	Pollutant	Frequency
D35	Baghouse 14	Impeller Mill #9	40 CFR 60, Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
D36 – D41	Baghouse 15	Screw Conveyors	40 CFR 60, Subpart OOO	PM	Initial
				Opacity	Initial
E1 – E20	Baghouse 16	Stucco Elevators, Transfer Points, Stucco Bins, Screw Conveyors, Entolater	40 CFR 60, Subpart OOO	PM	Initial and every 5 years
				Opacity	Initial
E21 – E37	Baghouse 17	Rotary Valve, Live Bottom Bin, Screw Conveyors, Bins, Feeders, End Saw	40 CFR 60, Subpart OOO	PM	Initial and every 5 years
				Opacity	Initial
E39		Coe Board Dryer		NO _x , CO, VOC	Initial and every 5 years
G1, G6, G11, G12, G17, G22	Baghouse 18	Screw Conveyors	40 CFR 60, Subpart OOO	PM	Initial and every 5 years
				Opacity	Initial
G3	Baghouse 19	Impeller Mill #10	40 CFR 60 Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
G8	Baghouse 20	Impeller Mill #11	40 CFR 60 Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
G14	Baghouse 21	Impeller Mill #12	40 CFR 60 Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
G19	Baghouse 22	Impeller Mill #13	40 CFR 60 Subpart UUU	PM	Initial and every 5 years
				Opacity	Initial
G4 – G5	Baghouse 19	Rock Bin #10, Double Cone Classifier, Cyclone	40 CFR 60, Subpart OOO	PM	Initial and every 5 years
				Opacity	Initial
G9 – G10	Baghouse 20	Rock Bin #11, Double Cone Classifier, Cyclone	40 CFR 60, Subpart OOO	PM	Initial and every 5 years
				Opacity	Initial
G15 – G16	Baghouse 21	Rock Bin #12, Double Cone Classifier, Cyclone	40 CFR 60, Subpart OOO	PM	Initial and every 5 years
				Opacity	Initial
G20 – G21	Baghouse 22	Rock Bin #13, Double Cone Classifier, Cyclone	40 CFR 60, Subpart OOO	PM	Initial and every 5 years
				Opacity	Initial
H1 – H5, H7, H8, H27 – H29, H33 – H35	Baghouse 23	Bins, Screw Conveyors, Elevators, Stucco Cooler	40 CFR 60, Subpart OOO	PM	Initial and every 5 years
				Opacity	Initial
H6, H10 – H20, H22, H24	Baghouse 24	Bins, Non-wet feeders, Screw Conveyors, Pin Mixer, Transfer Points, End Saw	40 CFR 60, Subpart OOO	PM	Initial and every 5 years
				Opacity	Initial
H26, H32		Flakt Board Dryers		NO _x , CO, VOC	Initial and every 5 years
H30	Baghouse 25	End Saw	40 CFR 60, Subpart OOO	PM	Initial and every 5 years
				Opacity	Initial
J01	Phase I Vapor Balance System	Aboveground Gasoline Storage Tank	40 CFR 63, Subpart CCCCC	HAP	Initial and every 3 years
Sandia					
S10, S14, S17, S18, S21, S23, S25	Moisture	Mineral Processing	40 CFR 60, Subpart OOO	Opacity	Initial

EU	Control	Description	Applicable ¹ Regulation	Pollutant	Frequency
U03 (beginning May 3, 2013)	Closed crankcase ventilation system or open crankcase filtration system	Diesel Water Pump Engine	40 CFR 63, Subpart ZZZZ	CO	None Identified

¹The regulation specified may not apply to all pollutants listed for the emission unit in this table

The performance tests shall use the standard methods outline in Table IV-C-2

Table IV-C-2: Performance Testing Methods

Pollutant	Test Method
Opacity	EPA Method 9
PM	EPA Method 5
NO _x	EPA Method 7E
CO	EPA Method 10
VOC	EPA Method 25A
O ₂ and flow rate (Stack Gas Parameters)	EPA Methods 1, 2, 3 or 4
Pressure Decay/Leak test	CARB Procedure TP201.3A
Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves	CARB Procedure TP-201.1E

D. Monitoring

PABCO

PABCO is required to comply with local monitoring requirements and the monitoring requirements in 40 CFR 60, Subparts OOO, UUU and IIII and 40 CFR 63, Subparts ZZZZ and CCCCCC.

Daily visual opacity observations shall be made source-wide including the control device stacks (baghouses). The water spray system will be inspected daily. The operating parameters of baghouses will be monitored daily and their interior will be inspected at least monthly.

Sandia

Sandia is required to comply with local monitoring requirements and the monitoring requirements of 40 CFR 60, Subpart OOO and 40 CFR 63, Subpart ZZZZ.

Daily visual observations shall be made on the aggregate plant and the water spray system shall be inspected daily.

E. Greenhouse Gas (GHG) Emissions

PABCO submitted the estimate of greenhouse gas (GHG) emissions. The GHG PTE is summarized in Table IV-E-1. The GHG emissions will be addressed in the operating permit, consistent with the GHG Tailoring Rule, because the source's PTE is at least 100,000 TPY of CO₂e.

Table IV-E-1: Source GHG PTE

EU	Description	Throughput		Emission Factor (lb/ton)			PTE (tpy)			PTE (tpy)
		tons/hr	tons/yr	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O	CO _{2e}
A5	Blasting (ANFO)	28.85	750							
	Blasting (Emulsion)	1.73	45							
	Blasting (High Explosive)	0.54	14		1.3			0.01		0.19
	Blasting (Cast TNT Boosters)	0.04	1		14.3			0.01		0.14
EU	Description	Throughput		Emission Factor (lb/10 ⁶ scf)			PTE (tpy)			PTE (tpy)
		MMBtu/hr	MMBtu/year	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O	CO _{2e}
B24	Rotary Dryer #1	70	613,200	120,000	2.30	0.64	36,071	0.69	0.19	36,145
B31	Mechanical Separator - Combustion	20.00	175,200	120,000	2.30	0.64	10,306	0.20	0.05	10,327
B36	Rotary Dryer #2	90	788,400	120,000	2.30	0.64	46,376	0.89	0.25	46,472
D11	IMP Mill #1	5.00	43,800	120,000	2.30	0.64	2,576	0.05	0.01	2,582
D14	IMP Mill #2	5.00	43,800	120,000	2.30	0.64	2,576	0.05	0.01	2,582
D17	IMP Mill #3	5.00	43,800	120,000	2.30	0.64	2,576	0.05	0.01	2,582
D20	IMP Mill #4	5.00	43,800	120,000	2.30	0.64	2,576	0.05	0.01	2,582
D23	IMP Mill #5	5.00	43,800	120,000	2.30	0.64	2,576	0.05	0.01	2,582
D26	IMP Mill #6	5.00	43,800	120,000	2.30	0.64	2,576	0.05	0.01	2,582
D29	IMP Mill #7	5.00	43,800	120,000	2.30	0.64	2,576	0.05	0.01	2,582
D32	IMP Mill #8	5.00	43,800	120,000	2.30	0.64	2,576	0.05	0.01	2,582
D35	IMP Mill #9	5.00	43,800	120,000	2.30	0.64	2,576	0.05	0.01	2,582
E39	Coe Dryer	110.0	963,600	120,000	2.30	0.64	56,682	1.09	0.30	56,799
G3	IMP Mill #10	19.00	166,440	120,000	2.30	0.64	9,791	0.19	0.05	9,811
G8	IMP Mill #11	19.00	166,440	120,000	2.30	0.64	9,791	0.19	0.05	9,811
G14	IMP Mill #12	22.50	197,100	120,000	2.30	0.64	11,594	0.22	0.06	11,618
G19	IMP Mill #13	22.50	197,100	120,000	2.30	0.64	11,594	0.22	0.06	11,618
H26	Flakt Board Dryer Combustion Zone 1	50.00	438,000	120,000	2.30	0.64	25,765	0.49	0.14	25,818
	Flakt Board Dryer Combustion Zone 2	39.00	341,640	120,000	2.30	0.64	20,096	0.39	0.11	20,138
	Flakt Board Dryer Combustion Zone 3	18.00	157,680	120,000	2.30	0.64	9,275	0.18	0.05	9,294
H32	Flakt Board Dryer Combustion Zone 1	45.00	394,200	120,000	2.30	0.64	23,188	0.44	0.12	23,236
	Flakt Board Dryer Combustion Zone 2	45.00	394,200	120,000	2.30	0.64	23,188	0.44	0.12	23,236
	Flakt Board Dryer Combustion Zone 3	30.00	262,800	120,000	2.30	0.64	15,459	0.30	0.08	15,491
EU	Description	Throughput		Emission Factor (lb/hp-hr)			PTE (tpy)			PTE (tpy)
		hp	hrs/yr	CO ₂	CH ₄	N ₂ O	CO ₂	CH ₄	N ₂ O	CO _{2e}
U04	Diesel Emergency Fire Pump	240	500	1.15	1.68E-05	3.36E-06	69	0.00	0.00	69
U05	Diesel Emergency Fire Pump	240	500	1.15	1.68E-05	3.36E-06	69	0.00	0.00	69
U06	Diesel Water Pump	85	400	1.15	1.68E-05	3.36E-06	20	0.00	0.00	20
U03	Diesel Water Pump	300	6,200	1.15	1.68E-05	3.36E-06	1,070	0.02	0.00	1,071
									Total CO_{2e} (tpy)	334,277

V. REGULATORY REVIEW

A. Local Regulatory Requirements

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

1. NRS, Chapter 445; Sections 401 through 601;
2. Portions of the AQR included in the SIP for Clark County, Nevada. SIP requirements are federally enforceable. All requirements from ATC permits issued by Air Quality are federally enforceable because these permits were issued pursuant to SIP-included sections of the AQR; and
3. Portions of the AQR not included in the SIP. These locally applicable requirements are locally enforceable only.

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

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 SIP. Requirements and conditions that appear in the Part 70 OP which are related only to non-SIP rules are notated below as locally enforceable only. All Air Quality's regulations may be accessed on the Internet at:

http://www.clarkcountynv.gov/depts/dagem/Pages/Rules_CurrentRulesandRegulations.aspx

Table V-A-1: Source PTE¹

	PM ₁₀	PM _{2.5}	NO _x	CO	SO _x	VOC	HAP
Non-fugitive PTE	92.30	23.33	384.81	479.71	7.20	109.12	7.73
Fugitive PTE	86.15	0.00	0.00	0.00	0.00	0.00	0.00
Major Source Thresholds	250	250	250	250	250	250	10/25²

¹Not a source-wide emission limit; values are used for determining the major source status.

²Ten (10) tons for any individual HAP or 25 tons for combination of all HAPs.

Discussion: PABCO is a major source of NO_x and CO. As part of the original NSR Analysis all of these emissions triggered public notice. The proposed permit renewal of the existing Part 70 OP will be subject to EPA and public review and comment period before issuance.

Table V-A-2 Air Quality – AQR and State Implementation Plan

Applicable Clark County AQR Section – Title	Applicable Subsection – Title	SIP	Affected Emission Unit
0. Definitions	applicable definitions	yes	entire source
2. Air Pollution Control Board	all subsections	yes	entire source
4. Control Officer	all subsections	yes	entire source

Applicable Clark County AQR Section – Title	Applicable Subsection – Title	SIP	Affected Emission Unit
5. Interference with Control Officer	all subsections	yes	entire source
6. Injunctive Relief	all subsections	yes	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
Beginning July 1, 2010 12.5. Part 70 Operating Permit Requirements	applicable subsections	yes	entire source
12.6. Confidentiality	all subsections	yes	entire source
12.7. Emission Reduction Credits	all subsections	yes	entire source
12.9 Annual Emission Inventory Requirement	all subsections	yes	entire source
12.10 Continuous Monitoring Requirements for Stationary Sources	applicable subsections	yes	entire source
12.12 Transfer of Permit	all subsections	yes	entire source
12.13 Posting of Permit	all subsections	yes	entire source
13. National Emission Standards for Hazardous Air Pollutants	CCAQR Section 13.2.85: Subpart ZZZZ Stationary Reciprocating Internal Combustion Engines CCAQR Section 13.2.109: Subpart CCCCC Gasoline Dispensing Facilities	no	Diesel engines and gasoline storage tank (EUs: J01, U06 and U03)
14. New Source Performance Standards	CCAQR Section 14.1.74: Subpart OOO Standards of Performance for Nonmetallic Mineral Processing Plants CCAQR Section 14.1.80: Subpart UUU Standards of Performance for Calciners and Dryers in Mineral Industries CCAQR Section 14.1.90: Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	no	Various mineral processing emission units, dryers, calciners and diesel engines (Including but not limited to EUs: U06 and U03)
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
24. Sampling and Testing - Records and Reports (Through June 30, 2010)	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

Applicable Clark County AQR Section – Title	Applicable Subsection – Title	SIP	Affected Emission Unit
25. Affirmative Defense for Excess Emissions due to Malfunctions, Startup and Shutdown	applicable subsections	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
28. Fuel Burning Equipment	Emission Limitations for PM	yes	entire source
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
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

B. Federally Applicable Regulations

1. CAAA, Authority: 42 U.S.C. § 7401, et seq.;
2. Title 40 of the CFR; including Part 70 and others.

40 CFR 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 Air Quality of modifications, opacity testing, records of malfunctions of process equipment and/or continuous monitoring device, CEMS data, and performance test data. These requirements are found in the Part 70 OP. Air Quality requires records to be maintained for five years, a more stringent requirement than the two years required by 40 CFR 60.7.

40 CFR 60.8 – Performance tests

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. Air Quality requirements for initial performance testing are identical to AQR Section 60.8. Air Quality also requires periodic performance testing on emission units based upon throughput or usage.

40 CFR 60.11 – Compliance with standards and maintenance requirements

Discussion: Compliance with various applicable standards will be demonstrated by performance tests unless otherwise specified in the standard.

40 CFR 60.12 – Circumvention

Discussion: This prohibition is addressed in the Part 70 OP. This is also local rule AQR 80.1.

Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants

40 CFR 60.670 – Applicability

Discussion: Each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin and enclosed truck or railcar loading station is applicable to this Subpart.

40 CFR 60.672 – Standard for Particulate Matter

Discussion: The Permittee is subject to the requirements of particulate matter standards and emission limits, including the PM limit and opacity limits, as described in Tables 2 and 3 of the Subpart. These requirements are found in the Part 70 OP. The emission units subject to 40 CFR 60, Subpart OOO have not been modified or reconstructed since April 22, 2008. As such, the units are subject to the pre-April 22, 2008 standards.

40 CFR 60.675 – Test Methods and Procedures

Discussion: The Permittee shall determine compliance with the PM standards using test methods described in this subsection. Opacity standards are to be demonstrated using Method 9, and the PM emission standards are to be demonstrated using Method 5. 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 affected facility to which the provisions of this subpart apply is each calciner and dryer at a mineral processing plant. A calciner as defined in this subpart, means the equipment used to remove combined (chemically bound) water and/or gases from mineral material through direct or indirect heating. For the purposes of this discussion a calciner is an impeller mill without a dryer. A “dryer”, as defined in this subpart, “means the equipment used to remove uncombined (free) water from mineral material through direct or indirect heating.” Therefore, only the impeller mills are subject to this rule. Also note that the Coe board dryer and the Flakt board dryers are not subject to this subpart since they are operating as tunnel dryers

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 visual emissions observations are required to determine compliance with opacity requirements. The requirement is found in the OP.

40 CFR 60.735 – Recordkeeping and Reporting Requirements

Discussion: Recordkeeping of daily visual emissions observations is required. These requirements are found in the 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.

Subpart III – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

40 CFR 60.4200 – Applicability Determination

Discussion: The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) with a displacement less than 30 liters per cylinder where the model year is 2007 or later, for engines that are not fire pumps, and July 1, 2006, for ICE certified by National Fire Protection Association as fire pump engines. EUs: U04 and U05 are subject to this Subpart.

40 CFR 60.4202 and 40 CFR 60.4205 – Emission Standards for Owners and Operators

Discussion: The operator of the stationary CI ICE must provide the manufacturer certification of the emission standard specified in this subpart. These requirements are addressed in the Part 70 OP.

40 CFR 60.4206 and 40 CFR 60.4211 – Compliance Requirements

Discussion: The operator of the stationary CI ICE must operate and maintain CI ICE that achieve the emission standards according to the manufacturer's written instructions and procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. These requirements are addressed in the Part 70 OP.

40 CFR 60.4214 – Reporting and Recordkeeping Requirements

Discussion: The operator of the CI ICE shall keep records that include: engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement; emission control equipment; and fuel used. If the stationary CI

internal combustion is a certified engine, the owner or operator shall keep documentation from the manufacturer that the engine is certified to meet the emission standards. These requirements are addressed in the Part 70 OP.

40 CFR 63-NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES:

Subpart ZZZZ – National Emission Standard for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR 63.6585 – Applicability

Discussion: Subpart ZZZZ is applicable to owners and operators of stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand. EUs: U06 and U03 are applicable to this Subpart.

40 CFR 63.6595 – Date of Compliance

Discussion: The applicable emission units must comply with the applicable emission limitations and operating limitations no later than May 3, 2013.

40 CFR 63.6603 – Emission Limitations and Operating Limitations

Discussion: The requirements are stipulated in the Part 70 OP.

40 CFR 63.6625 – Monitoring, Installation, Collection, Operation and Maintenance Requirements

Discussion: The source must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

Subpart CCCCCC – National Emission Standard for Hazardous Air Pollutants for Gasoline Dispensing Facilities

40 CFR 63.11111 – Applicability

Discussion: This Subpart is applicable to each GDO that is located at an area source of HAP. The affected source includes each gasoline cargo tank during the delivery of product to a GDO and also includes each storage tank. The Permittee is subject to the requirements of §63.1116 for facilities with a monthly throughput of less than 10,000 gallons of gasoline. EU: J01 is applicable to this Subpart.

40 CFR 63.11113 – Compliance timelines

Discussion: The Permittee is required to comply with this subpart as of January 10, 2011.

40 CFR 63.11116 – Requirements for facilities with monthly throughput of less than 10,000 gallons gasoline

Discussion: The Permittee is subject to the requirements of this section. The Permittee shall not allow gasoline to be handled in a manner that would result in vapor release to the atmosphere for extended periods of time. The Permittee shall minimize

and clean all gasoline spills, cover open gasoline containers, and minimize gasoline sent to open waste collection system.

40 CFR 63.11120 – Testing and Monitoring Requirements

Discussion: The requirements are stipulated in the Part 70 OP.

40 CFR 63.11124 – Notifications Requirements

Discussion: The Permittee is subject to the notifications, records, and reports. The Permittee shall submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority within the appropriate time frames.

40 CFR 63.11125 – Recordkeeping Requirements

Discussion: The Permittee is subject to the recordkeeping requirements. The Permittee shall keep records for a period of five (5) years and the records shall be made available for inspection during the course of a site visit.

40 CFR 63.11126 – Reporting Requirements

Discussion: The requirements are stipulated in the Part 70 OP.

40 CFR 64-COMPLIANCE ASSURANCE MONITORING:

40 CFR 64.2 – Applicability

Discussion: CAM requirements contained in 40 CFR 64 are only applicable for an emission unit when that unit meets all of the following:

- The unit must be located at a major source for which a Part 70 or 71 permit is required.
- The unit must be subject to an emission limitation or standard.
- The unit must have uncontrolled potential emissions of at least 100 percent of the major source amount (in accordance with Part 70).
- The unit must use a control device to achieve compliance.

Table V-B-1 shows the emission units at this stationary source that are subject to the CAM rule.

Table V-B-1: Emission Units Subject to CAM Requirements

Division	Group	ID	Description	Control Method	Control Efficiency (%)	PM ₁₀ Uncontrolled PTE (tons/yr)
PABCO	2	B24	Rotary Dryer #1	Baghouse	99.50%	2300.00
		B36	Rotary Dryer #2	Baghouse	99.50%	2300.00
	4	D11	Impeller Mill #1	Baghouse	99.50%	111.42
		D14	Impeller Mill #2	Baghouse	99.50%	111.42
		D17	Impeller Mill #3	Baghouse	99.50%	111.42
		D20	Impeller Mill #4	Baghouse	99.50%	111.42
		D23	Impeller Mill #5	Baghouse	99.50%	111.42
		D26	Impeller Mill #6	Baghouse	99.50%	111.42
		D29	Impeller Mill #7	Baghouse	99.50%	111.42
		D32	Impeller Mill #8	Baghouse	99.50%	111.42
		D35	Impeller Mill #9	Baghouse	99.50%	111.42
	5	E37	End Saw	Baghouse	99.50%	256.50
7	G3	Impeller Mill #10	Baghouse	99.50%	615.85	

Division	Group	ID	Description	Control	Control	PM ₁₀
		G8	Impeller Mill #11	Baghouse	99.50%	615.85
		G14	Impeller Mill #12	Baghouse	99.50%	790.25
		G19	Impeller Mill #13	Baghouse	99.50%	790.25
	8	H24	End Saw	Baghouse	99.50%	370.50
		H30	End Saw	Baghouse	99.50%	370.50

The CAM Plan for applicable units is as follows:

I. Background

a. Emissions Unit

Identification:

B24 and B36 (Group #2 Beneficiation Operations)

Description:

Gencor Rotary Dryers

Facility:

PABCO Gypsum, Black Mountain Facility

b. Applicable Regulation, Emission Limit and Monitoring Requirement

Regulation:

40 CFR 60, Subpart UUU, Title V OP 11

Emission Limits:

Particulate Matter: 0.057 g/dscm

Visible Emissions: 10% opacity

Monitoring Requirements:

Δp reading for baghouse, opacity monitoring

c. Control Technology

Enclosure vented to baghouse.

II. Monitoring Approach

a. Indicator

Pressure differential (Δp) for particulate matter, visible emission for opacity.

b. Measurement Approach

On a daily basis, the Δp will be measured and the time of the reading and the Δp will be recorded.

c. Indicator Range

For particulate matter the indicator range for Δp is 1-9 inches of water. For opacity the indicator is no visible emissions.

d. QIP Threshold

The QIP threshold is three (3) excursions in each quarterly reporting period. Excursion is defined as any measured Δp below 1 inch of water or above 9 inches of water.

e. Performance Criteria

Data Representativeness:

Measurements will be made at the emission point.

Verification of Operational Status:

Δp gauge will be installed, calibrated, and operated per manufacturer recommendations.

QA/QC Procedures:

The Δp gauge will be calibrated annually. The visible observations will be made by a trained observer.

Monitoring Frequency:

Daily records of Δp and visual observations.

Data Collection Procedure:

Δp will be measured with a Magnehelic pressure gauge and recorded daily. Daily visual observations will be made twice, about 15 seconds apart.

III. Justification

a. Background

The units are rotary dryers. The particulate matter emissions are generated from drying the screened and crushed aggregate. A small amount of particulate matter emissions also result from natural gas combustion.

b. Rationale for Selection of Performance Indicator

The Δp between inlet and outlet of the baghouse is an accepted standard indicator of satisfactory baghouse performance. For opacity readings, the absence of visible emissions demonstrates compliance.

c. Rationale for Selection of Indicator Level

If the measured Δp is within the range specified in the manufacturer's O&M guidelines, the baghouse is considered to be operating normally. The absence of visible emissions demonstrates compliance with the opacity limit.

I. Background

a. Emissions Unit

Identification:

D11, D14, D17, D20, D23, D26, D29, D32, D35 (Group #4, Boardline #1 Calcining Operations)

Description:

Impeller Mills 1 - 9

Facility:

PABCO Gypsum, Black Mountain Facility

b. Applicable Regulation, Emission Limit and Monitoring Requirement

Regulation:

40 CFR 60, Subpart OOO, Title V OP 11

Emission Limits:

Particulate Matter: 0.050 g/dscm

Visible Emissions: 7% opacity

Monitoring Requirements:

Δp reading for baghouse, opacity monitoring

c. Control Technology

Enclosure vented to baghouse.

II. Monitoring Approach

a. Indicator

Pressure differential (Δp) for particulate matter, visible emission for opacity.

b. Measurement Approach

On a daily basis, the Δp will be measured and the time of the reading and the Δp will be recorded.

c. Indicator Range

For particulate matter the indicator range for Δp is 1-9 inches of water. For opacity the indicator is no visible emissions.

d. QIP Threshold

The QIP threshold is three (3) excursions in each quarterly reporting period. Excursion is defined as any measured Δp below 1 inch of water or above 9 inches of water.

e. Performance Criteria

Data Representativeness:

Measurements will be made at the emission point.

Verification of Operational Status:

Δp gauge will be installed, calibrated and operated per manufacturer recommendations.

QA/QC Procedures: The Δp gauge will be calibrated annually. The visible observations will be made by a trained observer.

Monitoring Frequency: Daily records of Δp and visual observations.

Data Collection Procedure: Δp will be measured with a Magnehelic pressure gauge and recorded daily. Daily visual observations will be made twice, about 15 seconds apart.

III. Justification

a. Background

The units are grinding mills. The particulate matter emissions are generated from drying the screened and crushed aggregate. A small amount of particulate matter emissions also result from natural gas combustion.

b. Rationale for Selection of Performance Indicator

The Δp between inlet and outlet of the baghouse is an accepted standard indicator of satisfactory baghouse performance. For opacity readings, the absence of visible emissions demonstrates compliance.

c. Rationale for Selection of Indicator Level

If the measured Δp is within the range specified in the manufacturer's O&M guidelines, the baghouse is considered to be operating normally. The absence of visible emissions demonstrates compliance with the opacity limit.

I. Background

a. Emissions Unit

Identification:

E37, H24 and H30 (Group #5 Boardline #1 Wallboard Manufacturing and Boardline #2 Wallboard Manufacturing)

Description:

End Saws

Facility:

PABCO Gypsum, Black Mountain Facility

b. Applicable Regulation, Emission Limit and Monitoring Requirement

Regulation:

40 CFR 60, Subpart OOO, Title V OP 11

Emission Limits:

Particulate Matter: 0.050 g/dscm

Visible Emissions: 7% opacity

Monitoring Requirements:

Δp reading for baghouse, opacity monitoring

c. Control Technology

Baghouse.

II. Monitoring Approach

a. Indicator

Pressure differential (Δp) for particulate matter, visible emission for opacity.

b. Measurement Approach

On a daily basis, the Δp will be measured and the time of the reading and the Δp will be recorded.

c. Indicator Range

For particulate matter the indicator range for Δp is 1-9 inches of water. For opacity the indicator is no visible emissions.

d. QIP Threshold

The QIP threshold is three (3) excursions in each quarterly reporting period. Excursion is defined as any measured Δp below 1 inch of water or above 9 inches of water.

- e. Performance Criteria
 - Data Representativeness: Measurements will be made at the emission point.
 - Verification of Operational Status: Δp gauge will be installed, calibrated and operated per manufacturer recommendations.
 - QA/QC Procedures: The Δp gauge will be calibrated annually. The visible observations will be made by a trained observer.
 - Monitoring Frequency: Daily records of Δp and visual observations.
 - Data Collection Procedure: Δp will be measured with a Magnehelic pressure gauge and recorded daily. Daily visual observations will be made twice, about 15 seconds apart.

III. Justification

- a. Background

The units are end saws. The particulate matter emissions are generated from sawing operation.
- b. Rationale for Selection of Performance Indicator

The Δp between inlet and outlet of the baghouse is an accepted standard indicator of satisfactory baghouse performance. For opacity readings, the absence of visible emissions demonstrates compliance.
- c. Rationale for Selection of Indicator Level

If the measured Δp is within the range specified in the manufacturer's O&M guidelines, the baghouse is considered to be operating normally. The absence of visible emissions demonstrates compliance with the opacity limit.

I. Background

- a. Emissions Unit
 - Identification: **G3, G8, G14 and G19** (Group #7 Boardline #2 Calcining Operations)
 - Description: Impeller Mills
 - Facility: PABCO Gypsum, Black Mountain Facility
- b. Applicable Regulation, Emission Limit and Monitoring Requirement
 - Regulation: 40 CFR 60, Subpart OOO, Title V OP 11
 - Emission Limits: Particulate Matter: 0.050 g/dscm
Visible Emissions: 7% opacity
 - Monitoring Requirements: Δp reading for baghouse, opacity monitoring
- c. Control Technology

Enclosure vented to a Baghouse.

II. Monitoring Approach

- a. Indicator

Pressure differential (Δp) for particulate matter, visible emission for opacity.
- b. Measurement Approach

On a daily basis, the Δp will be measured and the time of the reading and the Δp will be recorded.
- c. Indicator Range

For particulate matter the indicator range for Δp is 1-9 inches of water. For opacity the indicator is no visible emissions.
- d. QIP Threshold

The QIP threshold is three (3) excursions in each quarterly reporting period. Excursion is defined as any measured Δp below 1 inch of water or above 9 inches of water.

e. Performance Criteria

- Data Representativeness: Measurements will be made at the emission point.
- Verification of Operational Status: Δp gauge will be installed, calibrated and operated per manufacturer recommendations.
- QA/QC Procedures: The Δp gauge will be calibrated annually. The visible observations will be made by a trained observer.
- Monitoring Frequency: Daily records of Δp and visual observations.
- Data Collection Procedure: Δp will be measured with a Magnehelic pressure gauge and recorded daily. Daily visual observations will be made twice, about 15 seconds apart.

III. Justification

a. Background

The units are grinding mills. The particulate matter emissions are generated from drying of the screened and crushed aggregate. A small amount of particulate matter emissions also result from natural gas combustion.

b. Rationale for Selection of Performance Indicator

The Δp between inlet and outlet of the baghouse is an accepted standard indicator of satisfactory baghouse performance. For opacity readings, the absence of visible emissions demonstrates compliance.

c. Rationale for Selection of Indicator Level

If the measured Δp is within the range specified in the manufacturer's O&M guidelines, the baghouse is considered to be operating normally. The absence of visible emissions demonstrates compliance with the opacity limit.

VI. COMPLIANCE

A. Compliance Certification

Requirements for compliance certification:

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

Table VI-A-1: Reporting Schedule¹

Required Report	Applicable Period	Due Date ¹
Semi-annual Report for 1st Six-Month Period	January, February, March, April, May, June	July 30 each year
Semi-annual Report for 2 nd Six-Month Period, Any additional annual records required.	July, August, September, October, November, December	January 30 each year
Annual Compliance Certification Report	Calendar Year	January 30 each year

Required Report	Applicable Period	Due Date¹
Annual Emission Inventory Report	Calendar Year	March 31 each year
Notification of Malfunctions, Startup, Shutdowns or Deviations with Excess Emission	As Required	Within 24 hours of the Permittee learns of the event
Report of Malfunctions, Startup, Shutdowns or Deviations with Excess Emission	As Required	Within 72 hours of the notification
Deviation Report without Excess Emissions	As Required	Along with semi-annual reports
Performance Testing	As Required	Within 60 days from the end of the test.

¹ 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 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 PABCO Gypsum

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 0	Definitions	Applicable – PABCO will comply with all applicable definitions as they apply.	PABCO will meet all applicable test methods should new definitions apply.	PABCO complies with applicable requirements.
AQR Section 4	Control Officer	Applicable – The Control Officer or his representative may enter into PABCO property, with or without prior notice, at any reasonable time for purpose of establishing compliance with permit regulations	PABCO will allow Control Officer to enter property as required.	PABCO complies with applicable requirements.
AQR Section 12.5	Part 70 Operating Permits	Applicable – PABCO is a major stationary source and under Part 70. Renewal applications are due between 6 and 18 months prior to expiration. Revision applications will be submitted within 12 months of commencing operation of the new emission unit.	PABCO submitted the initial Part 70 permit application within 12 months of startup. The renewal application was submitted within the appropriate timeframe.	PABCO complies with applicable requirements for permit renewal. PABCO is currently addressing emission units that were previously not regarded as such. These efforts are being performed in cooperation with Air Quality Compliance
AQR Section 13.2.85 Subpart ZZZZ	NESHAP – Stationary Reciprocating Internal Combustion Engines	Applicable – The PABCO operates engines subject to this regulation.	Applicable monitoring requirements.	PABCO must be in compliance with the applicable requirements on and after May 3, 2013.
AQR Section 13.2.109 Subpart CCCCCC	NESHAP – Gasoline Dispensing Facilities	Applicable – The PABCO gasoline tank is an affected unit.	Applicable monitoring requirements.	PABCO complies with applicable requirements.
AQR Section 14.1.1 Subpart A	NSPS – General Provisions	Applicable – PABCO is an affected facility under the regulations. AQR Section 14 is locally enforceable; however, the NSPS standards they reference are federally enforceable.	Applicable monitoring, recordkeeping and reporting requirements.	PABCO complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 14.1.74 Subpart OOO	NSPS – Standards of Performance for Nonmetallic Mineral Processing Plants	Applicable –PABCO has emission units processing more than 25 tons per hour of mineral material.	Applicable performance tests, opacity tests, monitoring, recordkeeping and reporting requirements.	PABCO complies with applicable requirements.
AQR Section 14.1.80 Subpart UUU	NSPS – Standards of Performance for Calciners and Dryers in Mineral Industries	Applicable –PABCO operates calciners and dryers subject to this regulation.	Applicable performance tests, opacity tests, monitoring, recordkeeping and reporting requirements.	PABCO complies with applicable requirements.
AQR Section 14.1.90 Subpart IIII	NSPS – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Applicable – Several of the PABCO engines are subject to this Subpart	Applicable monitoring, recordkeeping and reporting.	PABCO complies with applicable requirements.
AQR Section 18	Permit and Technical Service Fees	Applicable – PABCO will be required to pay all required/applicable permit and technical service fees.	PABCO is required to pay all required/applicable permit and technical service fees.	PABCO complies with applicable requirements.
AQR Section 21	Acid Rain Permits	Not Applicable.	Not applicable.	Not applicable.
AQR Section 22	Acid Rain Continuous Emission Monitoring	Not Applicable.	Not applicable.	Not applicable.
AQR Section 25	Affirmative Defense for Excess Emissions due to Malfunctions, Startup and Shutdown	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 Control Officer.	Any upset, breakdown, emergency condition, or malfunction in which emissions exceed any permit limit shall be reported to the Control Officer within 24 hours of the time the Permittee first learns of the excess emissions.	PABCO currently complies with applicable requirements.
AQR Section 26	Emissions of Visible Air Contaminants	Applicable – Opacity for any emission unit may not exceed 20 percent for more than 6 consecutive minutes.	Compliance determined by EPA Method 9 or visible emission observations.	PABCO complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR Section 40	Prohibition of Nuisance Conditions	Applicable – No person shall cause, suffer or allow the discharge from any source whatsoever such quantities of air contaminants or other material which cause a nuisance. Section 40 is locally enforceable only.	PABCO air contaminant emissions are controlled by pollution control devices or good combustion and thus will not cause a nuisance.	PABCO complies with applicable requirements.
AQR Section 41	Fugitive Dust	Applicable – PABCO shall take necessary actions to abate fugitive dust from becoming airborne.	PABCO utilizes appropriate best management practices to not allow airborne fugitive dust.	PABCO complies with applicable requirements.
AQR Section 42	Open Burning	Applicable – In event PABCO burns combustible material in any open areas, such burning activity will have been approved by Control Officer in advance. Section 42 is a locally enforceable rule only.	PABCO will contact Air Quality and obtain approval in advance for applicable burning activities as identified in the rule.	PABCO 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.	PABCO is not expected to cause odors.	PABCO complies with applicable requirements.
AQR Section 70.4	Emergency Procedures	Applicable – PABCO submitted an emergency standby plan for reducing or eliminating air pollutant emissions in the Operating Permit Application.	PABCO submitted an emergency standby plan and received the Operating Permit.	PABCO complies with applicable requirements.

Table VI-B-2: Federal Air Quality Regulations Applicable to PABCO Gypsum

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR Part 52.21	Prevention of Significant Deterioration (PSD)	Applicable – PABCO PTE > 250 TPY (not one of the 28 source categories).	BACT analysis, air quality analysis using modeling, and visibility and additional impact analysis performed for original ATC permits.	PABCO complies with applicable sections as required by PSD regulations.
40 CFR Part 52.1470	SIP Rules	Applicable – PABCO is classified as a Title V source, and SIP rules apply.	Applicable monitoring and record keeping of emissions data.	PABCO is in compliance with applicable state SIP requirements including monitoring and record keeping of emissions data.
40 CFR Part 60, Subpart A	Standards of Performance for New Stationary Sources (NSPS) – General Provisions	Applicable – PABCO is an affected facility under the regulations.	Applicable monitoring, recordkeeping and reporting requirements.	PABCO complies with applicable requirements.
40 CFR Part 60, Subpart OOO	Standards of Performance for Nonmetallic Mineral Processing Plants	Applicable – The PABCO quarry operations and gypsum processing prior to the calciners are subject to the requirements of this Subpart.	Applicable monitoring, performance testing, recordkeeping and reporting requirements.	PABCO is currently working in cooperation with Air Quality Compliance to address performance testing on equipment not previously identified.
40 CFR Part 60, Subpart UUU	Standards of Performance for Calciners and Dryers in Mineral Industries	Applicable – The PABCO calciners and dryers are subject to the requirements of this Subpart.	Applicable performance testing, recordkeeping and reporting requirements.	PABCO complies with applicable requirements.
40 CFR Part 60, Subpart IIII	Standards of Performance for New Stationary Sources for Stationary Compression Ignition Internal Combustion Engines	Applicable – Several of the PABCO engines are subject to this Subpart.	Applicable monitoring, recordkeeping and reporting requirements.	PABCO complies with applicable requirements.
40 CFR Part 60	Appendix A, Method 9 or equivalent, (Opacity)	Applicable – Emissions from stacks are subject to opacity standards.	Opacity determined by EPA Method 9.	PABCO complies with applicable requirements.
40 CFR Part 63, Subpart ZZZZ	Emission Standards for Hazardous Air Pollutants – Stationary Reciprocating Internal Combustion Engines	Applicable – Several of the PABCO engines are subject to this Subpart.	Applicable monitoring, performance testing, recordkeeping and reporting requirements.	PABCO must be in compliance with the applicable requirements on and after May 3, 2013.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR Part 63, Subpart CCCCCC	Emission Standards for Hazardous Air Pollutants – Gasoline Dispensing Facilities	Applicable – PABCO gasoline tank is subject to the requirements of this Subpart	Applicable monitoring, recordkeeping and reporting requirements.	PABCO complies with applicable requirements.
40 CFR Part 64	Compliance Assurance Monitoring	Applicable – PABCO has PM ₁₀ emissions that have an emissions standard and use an active control device.	PABCO monitors pressure differential and opacity to demonstrate compliance with the PM ₁₀ emission limitations.	PABCO complies with applicable requirements.
40 CFR Part 70	Federally Mandated Operating Permits	Applicable – PABCO 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 unit.	PABCO submitted a timely renewal application. Applications for new units will be submitted within 12 months of startup.	PABCO complies with applicable requirements.
40 CFR Part 72	Acid Rain Permits Regulation	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR Part 73	Acid Rain Sulfur Dioxide Allowance System	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR Part 75	Acid Rain CEMS	Not Applicable.	Not Applicable.	Not Applicable.
40 CFR Part 82	Protection of Stratospheric Ozone	Applicable – PABCO is subject to stratospheric ozone regulations based on 40 CFR 82.4.	Applicable.	Applicable.

C. Permit Shield

A permit shield was not requested by the source.

D. Streamlining Demonstration

Table VI-D-1: Federal Regulation Streamlining Demonstration

EU	Regulation	Regulatory Standard	Permit Limit	Standard Averaging Period	Permit Limit Averaging Period	Is Permit Limit Equal or More Stringent?	Streamlining Statement
PABCO							
B1, B3 - B10, S02, B11, B13 - B17, B21, B22, B23, B37, B38, B39, S07, B40, B42, B41, S13, B44, B45, B25, B26, B27, B29, B30, B34, B32, B33, S27, C1 - C4, D5, D6, and D42	40 CFR 60.672 (Subpart 000)	10 percent opacity	10 percent opacity	6 consecutive minutes	6 consecutive minutes	Yes	Compliance with permit demonstrates compliance with the standard.
B2 and B18	40 CFR 60.672 (Subpart 000)	15 percent opacity	15 percent opacity	6 consecutive minutes	6 consecutive minutes	Yes	Compliance with permit demonstrates compliance with the standard.
B35, B31, D1 - D4, D7- D10, D18, D27, D10, D11, D13, D14, D16, D17, D19, D20, D22, D23, D25, D26, D28, D29, D31, D32, D34, D35 - D41, D43, D44, E1 - E37, G1 - G22, H1 - H8, H10 - H20, H22, H24, H27, H28, H29, H30, H33, H34 and H35	40 CFR 60.672 (Subpart 000)	7 percent opacity	7 percent opacity	6 consecutive minutes	6 consecutive minutes	Yes	Compliance with permit demonstrates compliance with the standard.
		0.05 g/dscm	0.05 g/dscm	NA	NA	Yes	
B24 and B26	40 CFR 60.732 (Subpart UUU)	10 percent opacity	10 percent opacity	6 consecutive minutes	6 consecutive minutes	Yes	Compliance with permit demonstrates compliance with the standard.
		0.057 g/dscm	0.057 g/dscm	NA	NA	Yes	
U04, U05	40 CFR 60.4205 (Subpart IIII)	10.5 g/kW-hr (7.8 g/hp-hr) NMHC + NO _x	10.5 g/kW-hr (7.8 g/hp-hr) NMHC + NO _x	NA	NA	Yes	Compliance with permit demonstrates compliance with the standard.
Sandia							
S10, S11, S12, S14, S15, S17, S18, S19, S20, S22, S23, S24 and S25	40 CFR 60.672 (Subpart 000)	10 percent opacity	10 percent opacity	6 consecutive minutes	6 consecutive minutes	Yes	Compliance with permit demonstrates compliance with the standard.
S21	40 CFR 60.672 (Subpart 000)	15 percent opacity	15 percent opacity	6 consecutive minutes	6 consecutive minutes		
U03	40 CFR 63.6603	49 ppmvd CO @ 15% O ₂ or reduce CO emissions by 70% or more	49 ppmvd CO @ 15% O ₂ or reduce CO emissions by 70% or more	4-hour averaging period	4-hour averaging period		

E. Summary of Monitoring for Compliance

Table VI-E-1: Summary of Monitoring for Compliance

Emission Unit	Process Description	Monitored Pollutants	Applicable Regulation	Requirements	Compliance Monitoring
PABCO					
A1, A2, A3, A4, A5, B28, E40, H36, I01, I02	Mining, Unpaved Haul Roads, Stockpiles, Blasting, Printing, Cooling Towers	Opacity	AQR Section 26	No greater than 20 percent opacity.	Visual emission observations.
B1, B3 - B10, S02, B11, B13 - B17, B21, B22, B23, B37, B38, B39, S07, B40, B42, B41, S13, B44, B45, B25, B26, B27, B29, B30, B34, B32, B33, S27, C1 - C4, D5, D6, and D42	Aggregate Processing without Capture System	Opacity	40 CFR 60, Subpart 000	No greater than 10 percent opacity.	Visual emission observations. Method 9 testing every five years.
B2 and B18	Crushers without capture system	Opacity	40 CFR 60, Subpart 000	No greater than 15 percent opacity.	Visual emission observations. Method 9 testing every five years.
B19, B20, B43, S26, B46, F1 – F8, H21, H23	Classifier, Blade Mill, Centrifuge Collection Tank, Accelerator Process, Wet Additives Feeder, Transfer Point	Opacity	AQR 12.5.2.6(a)	No visible emissions.	Visual emissions observations.
B24 and B36	Rotary Dryers	Opacity, PM	40 CFR 60, Subpart UUU	No greater than 10 percent opacity and no greater than 0.057 g/dscm PM concentration.	Visual emission observations. Method 9 and Method 5 testing every five years.
B35, B31, D1 - D4, D8, D9, D18, D27, D10, , D13, D16, D19, D22, D25, D28, D31, D346 - D41, D43, D44, E1 - E37, G1 - G22, H1 - H8, H10 - H20, H22, H24, H27, H28, H29, H30, H33, H34 and H35	Aggregate Processing with Capture System	Opacity, PM	40 CFR 60, Subpart 000	No greater than 7 percent opacity and no greater than 0.05 g/dscm PM concentration.	Visual emission observations. Method 9 and Method 5 testing every five years.
D11, D14, D17, D20, D23, D26, D29, D32, D35, G3, G8, G14 and G19	Impeller Mills (Calciners)	Opacity, PM	40 CFR 60, Subpart UUU	No greater than 7 percent opacity and no greater than 0.092 g/dscm PM concentration	Visual emission observations. Method 9 and Method 5 testing every five years.
E38, H25, H31	Paved Haul Roads	Opacity	ATC/OP Modification 6, Revision 1, Condition III-B-2-d (8/12/04)	No greater than 10 percent opacity.	Visual emission observations.

Emission Unit	Process Description	Monitored Pollutants	Applicable Regulation	Requirements	Compliance Monitoring
E39, H26, H32	Coe Board Dryer, Flakt Board Dryers	Opacity	AQR Section 26, Air Quality Guidelines on Performance Testing	No greater than twenty percent opacity.	Visual emission observations. Performance Testing on NO _x , CO and VOC
U04, U05	Diesel Emergency Fire Pumps	Opacity, NMHC+NO _x , CO, PM	AQR Section 26, 40 CFR 60, Subpart IIII	No greater than twenty percent opacity, 10.5 g/kW-hr (7.8 g/hp-hr) of NMHC + NO _x , 3.5 g/kW-hr (2.6 g/hp-hr) of CO and 0.54 g/kW-hr (0.40 g/hp-hr) of PM	Visual emission observations. Recordkeeping of engine manufacturer data indicating compliance with the standards.
U06	Diesel Water Pump	Opacity	AQR Section 26, 40 CFR 63, Subpart ZZZZ	No greater than 20 percent opacity.	Visual emission observations.
Sandia					
S10, S11, S12, S14, S15, S17, S18, S19, S20, S22, S23, S24 and S25	Aggregate Processing	Opacity	40 CFR 60, Subpart OOO	No greater than 10 percent opacity.	Visual emission observations. Method 9 testing every five years.
S21	Crusher	Opacity	40 CFR 60, Subpart OOO	No greater than 15 percent opacity.	Visual emission observations. Method 9 testing every five years.
T01	Disturbed Surfaces and Stockpiles	Opacity	AQR Section 26	No greater than 20 percent opacity.	Visual emission observations.
T02	Unpaved Haul Road	Opacity	ATC/OP Modification 6, Revision 1, Condition III-B-3-c (8/12/04)	No greater than 10 percent opacity.	Visual emission observations.
U03	Diesel Water Pump	Opacity, CO	AQR Section 26, 40 CFR 63, Subpart ZZZZ	No greater than 20 percent opacity, 49 ppmvd @ 15% O ₂ CO or reduce CO emissions by 70% or more	Visual emission observations, Performance Testing on CO

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. ADMINISTRATIVE REQUIREMENTS

AQR Section 12.5 requires that Air Quality identify the original authority for each term or condition in the Part 70 OP. Such reference of origin or citation is denoted by [italic text in brackets] after each Part 70 Permit condition.

Air Quality proposes to issue the Part 70 OP conditions on the following basis:

Legal:

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

Factual:

PABCO has supplied all the necessary information for Air Quality to draft Part 70 OP conditions encompassing all applicable requirements and corresponding compliance.

Conclusion:

Air Quality has determined that PABCO will continue to determine compliance through the use of performance testing, semi-annual reporting, and daily recordkeeping, coupled with annual certifications of compliance. Air Quality proceeds with the preliminary decision that a Part 70 OP should be issued as drafted to PABCO for a period not to exceed five years.