DES
DEPARTMENT OF ENVIRONMENT AND SUSTAINABILITY
air quality desert conservation PROGRAM sustainability

4701 W. Russell Rd Suite 200
Las Vegas, NV 89118-2231
Phone (702) 455-5942
Fax (702) 383-9994

PART 70
TECHNICAL SUPPORT DOCUMENT
(STATEMENT of BASIS)

APPLICATION FOR:
Operating Permit Renewal

PREPARED BY:
All4 Inc.
For
PABCO Building Products, LLC

Source Name: PABCO Gypsum
Source ID: 00011

SOURCE LOCATION:
8000 East Lake Mead Boulevard
Las Vegas, Nevada 89124

SIC 3275: Gypsum Products
NAICS Code 327420: Gypsum Product Manufacturing

TSD Date: February 11, 2025

EXECUTIVE SUMMARY

PABCO Gypsum, a division of PABCO Building Products, LLC, is a wallboard manufacturing facility that falls under SIC code 3275, "Gypsum Products," and NAICS code 327420, "Gypsum Product Manufacturing." The facility is located in Hydrographic Area 215 (the Black Mountains area), which is classified as attainment for all regulated air pollutants. The source is subject to the requirements of 40 CFR Part 60, Subparts IIII, OOO, and UUU, and 40 CFR Part 63, Subparts ZZZZ and CCCCCC. It is neither a categorical stationary source as defined in AQR 12.2.2(j) nor belongs to a stationary source category which, as of August 7, 1980, is being regulated under Section 111 or 112 of the Act. Therefore, fugitive emissions are not included in source status determination. The source is a major stationary source for NO_x and CO, a synthetic minor source for $PM_{10,}$ and $PM_{2.5}$, and a minor source for SO_2, VOC, and HAP.

The PABCO operation includes the mining, crushers, screens, calciners, aggregate dryers, impeller mills, mixers, storage bins, conveyors, and board dryers needed to manufacture wallboard panels. Gypsum ore is mined from an on-site quarry, passed through several beneficiation processes, and stored prior to its use in the manufacturing processes. Under the primary operating scenario, PABCO receives exhaust gas from the co-located power-generating facility owned and operated by Nevada Cogeneration Associates #2 (NCA #2) to operate the Coe board dryer. The alternative operating scenario, in which the Coe board dryer uses its own burners, is triggered when NCA #2 turbine exhaust gas is unavailable. In addition to the wallboard manufacturing operations, the source operates diesel-powered water pumps and an aboveground gasoline storage tank.

To reduce waste, a reclaim/reuse process recycles approximately 4% of all manufactured wallboard that does not meet industry specifications.

Table 1 summarizes the source PTE for each regulated air pollutant for all emission units addressed by this Part 70 Operating Permit.

Table 1. Source PTE (tons per year)

Pollutants	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	CO_2e
Nonfugitive Emissions	68.64	30.18	313.44	457.25	3.95	79.59	7.74	314,692.52
Fugitive Emissions	61.65	7.41	4.70	16.55	0.84	0	0	
Source PTE	130.29	37.59	318.14	473.80	4.79	79.59	7.74	314,692.52
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25	
Major Source Thresholds (PSD)	250	250	250	250	250	250	10/25	

TABLE OF CONTENTS

I. SOURCE INFORMATION 5

II. PROCESS DESCRIPTION 5

III. PERMITTING HISTORY 6

IV. FACILITY EMISSION UNITS 8

V. EMISSIONS CALCULATIONS 14

VI. CONTROL TECHNOLOGY 15

VII. OPERATIONAL LIMITS 17

VIII. MONITORING 19

IX. PERFORMANCE TESTING 23

X. REVIEW OF APPLICABLE REGULATIONS 24

A. Local Regulatory Requirements 24

B. Applicable Federal Regulations 26

XI. COMPLIANCE SUMMARY 30

XII. ENVIRONMENTAL JUSTICE 36

XIII. PERMIT SHIELD 38

XIV. INCREMENT ANALYSIS 38

XV. PUBLIC PARTICIPATION 39

XVI. ATTACHMENTS 39

ACRONYMS AND ABBREVIATIONS

ANFO	ammonium nitrate-fuel oil
AQR	Clark County Air Quality Regulation
ATC	authority to construct
BACT	best available control technology
CARB	California Air Resources Board
CFR	Code of Federal Regulations
CH_4	methane
CO	carbon monoxide
CO_2e	carbon dioxide equivalent
DAQ	Division of Air Quality
DES	Clark County Department of Environment and Sustainability
EPA	U.S. Environmental Protection Agency
EU	emission unit
GDO	gasoline dispensing operation
GWP	global warming potential
H_2S	hydrogen sulfide
hp	horsepower
gpm	gallons per minute
MMBtu	British thermal units (in millions)
N_2O	nitrous oxide
NAICS	North American Industry Classification System
NOV	notice of violation
NO_x	nitrogen oxide(s)
O&M	operations and maintenance
Pb	lead
$PM_{2.5}$	particulate matter less than 2.5 microns in aerodynamic diameter
PM_{10}	particulate matter less than 10 microns in aerodynamic diameter
ppm	parts per million
PTE	potential to emit
RACT	reasonably available control technology
RT	round trip
SDE	status determination emissions
SIC	Standard Industrial Classification
SO_2	sulfur dioxide
TDS	total dissolved solids
VAEL	voluntary accepted emission limit
VMT	vehicle miles traveled
VOC	volatile organic compound

I. SOURCE INFORMATION

Action Received:	July 25, 2024
Permittee:	PABCO Gypsum
Source ID #:	00011
Source Name:	PABCO Building Products, LLC
Source Address:	8000 East Lake Mead Boulevard, Las Vegas, NV 89124

II. PROCESS DESCRIPTION

PABCO has organized the various operations into groups, as described below.

Group 1: Quarry Operations
Mining operations in the quarry include drilling, blasting, loading, and hauling gypsum ore. The ore is transported from the quarry to a stockpile via a conveyor system.

Group 2: Beneficiation Operations
In the beneficiation process, the gypsum is separated from clays and other impurities found in the ore. The ore is then dried in a rotary dryer equipped with natural gas fired burners. A baghouse is used to control dust from the drying operation. The dried ore is conveyed to a dome building for storage until needed for wallboard manufacturing.

Group 4: Transfer Station and Boardline #1 Calcining Operations
Gypsum ore is conveyed from the storage dome to a transfer station, where it is crushed and screened before being transferred to a tripper station. Dust emissions associated with these operations are controlled with a baghouse. The tripper station allows gypsum ore to be transferred to either the Boardline #1 or Boardline #2 calcining and wallboard manufacturing plants.

IMP mills dry, fine grind, and calcine the gypsum to produce stucco. Each mill is equipped with a cyclone collector to remove stucco product from the gas stream and a baghouse to control dust from the cyclone. From the IMP mills, the stucco is conveyed to two storage bins controlled with baghouses. The individual natural gas burners are the only source of heat for each IMP mill.

Group 5: Boardline #1 Wallboard Manufacturing
The stucco produced is conveyed to storage silos. Dust generated during conveying and storage is controlled by baghouses. In the wallboard manufacturing process, stucco and other dry additives are fed from the various storage bins into a pin mixer. Water and other liquid additives are added to the mixer to produce a stucco slurry, which is then extruded between two sheets of paper at a forming station to produce a continuous sheet of gypsum wallboard. The wallboard product is then conveyed to a drying oven. The board drying equipment consists of the Coe dryer, which has 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 primary operating scenario, and a duct to receive exhaust gas from NCA #2 under the alternative operating 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 that vents a portion of the circulating air. After drying, the edges of the product are trimmed

with saws. Dust generated in this operation is collected and controlled by a baghouse. Ancillary to the manufacturing process, some product is cut up to make slutters or to produce a different length of board. Dust generated in these operations is collected and controlled by a baghouse.

Group 6: Accelerator System
Accelerator is an additive produced from raw gypsum supplied from one of the IMP mill rock feed bins. It is produced by fine grinding the raw gypsum in a crusher and then a ball mill. The accelerator product is stored in a bin, from which it is fed to the pin mixer along with other dry additives. The emission units in this group include conveyors, storage bins, a crusher, and a ball mill. Accelerator raw material is also purchased in bags, the content of which can be transferred to the accelerator processing system. A baghouse controls dust generated by the ball mill.

Group 7: Boardline #2 Calcining Operations
This group of emission units consists of four IMP mills and associated equipment; it operates in a manner similar to the Boardline #1 calcining operation. There are no alternative operating scenarios associated with Boardline #2 equipment.

Group 8: Boardline #2 Wallboard Manufacturing
This group operates in the same manner as the Boardline #1 manufacturing process. Boardline #2 uses two Flakt board dryers, each equipped with three separate heating zones. No alternative operating scenario is associated with this operation.

Group 9: Cooling Towers
This group consists of two 1,200 gallon per minute (gpm) cooling towers and one 3,495-gpm cooling tower.

Group 10: Fuel Storage Tanks
This group consists of one 10,000-gallon aboveground gasoline tank and five aboveground diesel storage tanks (10,000 gallon, 1,000 gallon, 550 gallon, and two 300 gallon).

Group 11: Recycling Operation
This operation consists of equipment for recycling off-specification gypsum wallboard, including equipment to grind, screen, and store recycled material for re-use in the gypsum manufacturing process. Dust emissions are controlled with baghouses.

Group 12: Pumps
This group consists of two diesel-powered fire pumps (240 hp each) and two diesel-powered water pumps (464 hp and 85 hp).

III. PERMITTING HISTORY

The Title V operating permit for PABCO Building Products was last renewed on January 29, 2020, and will expire on January 28, 2025. The source submitted a renewal application within the time frame specified by AQR 12.5.2.1(a)(2). As a result, the source is covered by an application shield.

Since the last permit renewal, the following permits have been issued:

Minor Revision Application Submitted April 2, 2020

A minor permit revision which added truck loading (EU: T01) was issued on June 10, 2020.

Reopen for Cause Initiated by DAQ

On January 28, 2021, DAQ sent a letter to the permittee stating that the permit would be reopened to revise the source PTE to include $PM_{2.5}$ emissions, which had been excluded from all previous permitting actions. On March 5, 2021, the permittee submitted the requested PTE calculations. The revised permit, which combined the minor revision application identified below, was issued on December 28, 2021.

Significant Revision Application Submitted February 2, 2021

This application consisted of two separate requests as follows:

1. Addition of two feeders identified as EUs: E43 and H37, increase in annual throughput for the PIN mixer (EU: H22), addition of silicone to inks and additives (EUs: E40 and H36), and revisions to emission factors for PM10, PM2.5, CO and VOC for the Flakt dryer (EU: H26).
2. PABCO entered into a settlement agreement with the Clark County Air Pollution Control Board on November 19, 2020. The Hearing Officer Order mandated the following elements to be added to the permit:
    a. Installation of a Polyethylene cover for the reserve stockpile (part of EU: M1);
    b. Creation of an SOP for proper operation, maintenance and replacement of the polyethylene cover;
    c. Employee training for safe access and coverage of the reserve stockpile along with proper maintenance of the covering; and
    d. Replacement of the ductwork connecting EUs: B25, and K04 through K07 to Baghouse 1.

The revised permit, which was combined with the Reopen for Cause action identified above, was issued on December 28, 2021.

ATC Application Submitted December 5, 2022

An ATC which added two new impeller systems, each consisting of an impeller mill, rock bin, and baghouse was issued on January 31, 2023.

Significant Revision Application Submitted December 5, 2022

The impeller systems identified in the ATC permit were incorporated into the operating permit issued on July 3, 2023.

Current Permitting Action

An application for renewal of the Title V operating permit was submitted on July 25, 2024. The application did not request any changes to the permitted emission units, annual throughputs, or control devices.

The application requested an eighteen month extension for the construction of the impeller systems identified in the ATC permit issued on January 31, 2023. Due to the fact that these emission units were incorporated into the operating permit issued on July 3, 2023, an extension cannot be granted.

The application also requested a permit shield. However, the request was not specific to the emission units or plant processes the permittee wished the permit shield to cover. It was explained to the Responsible Official and source consultant, via e-mail correspondence, what specific information is required for DAQ to proceed with this request. The permittee subsequently withdrew this request via an e-mail message received on August 26, 2024.

The PTE for the GHG emissions was not calculated for the two new impeller mills (EUs: D46 and D48) included ATC permit issued on January 31, 2023. These emissions were also excluded when these units were incorporated into the operating permit (significant revision issued July 3, 2023). This oversight has been corrected and the source PTE for GHG has been updated with this permitting action.

The permit conditions pertaining monitoring and recordkeeping for the ductwork installed to control emissions from EUs: B25 and K04 – K07 were removed with this permitting action. Compliance staff stated that these conditions were only implemented to ensure the permittee would install the required ductwork. The conditions were not meant to remain in the permit after the required ductwork was installed.

IV. FACILITY EMISSION UNITS

Emission Units

Table IV-1 lists the emission units at this stationary source.

Table IV-1: Emission Unit List

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
Quarry Operations (Group #1)						
A1	Material Handling					30502099
A5	Blasting	50,000 sq ft/blast				30504001
	Drilling	750 tons ANFO per year. 10,000 holes/yr				30504002
Beneficiation Operations (Group #2)						
B1	Hopper Feeder					30501503
B2	Primary Crusher	615 tons/hr	Pioneer	VS4248	403748	30501505
B3	Conveyor System (5 belts & stacker)					30501504
B37	Apron Feeder (2 bins)					30501504
S07	Ore Reclaim Belt					30501504
B40	Screen	615 tons/hr	JCI	6202-32LF	S071888	30501507
B42	Screen Collection Belt					30501504
B41	Hammer Mill	615 tons/hr	Universal Engineering	7036598	306X615	30501506
S13	Recycle Belt					30501504
B36	Rotary Dryer #2	288 tons/hr; 85 MMBtu/hr	Gencor	CFS225	225BH15589 8-07-NA	30501501

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
B25	Conveyor System (3 belts)					30501504
B28	Dome Stockpile	1.13 Acres				30501508
B29	Conveyor System (2 belts); Dome Bypass (alternate scenario)					30501504
B34	Hopper Feeder					30501503
B35	Hopper Bin					30501509
B32	Conveyor Belt Drop					30501504
B33	Conveyor Belt Drop					30501504
Truck Loading (Group 2a)						
T01	Truck Loading					30502506
Boardline #1 Calcining Operation (Group #4)						
D1	Belt Feeder Drop from Dome					30501504
D2	Belt Feeder Drop from Dome					30501504
D3	Belt Feeder Drop from Dome					30501504
D4	Conveyor Belt Drop					30501504
D43	Transfer Station Screen	180 tons/hr	FMC	65	D-801401	30501507
D44	Transfer Station Crusher	30 tons/hr	American Pulverizer	18x18	8133	30501506
D5	Variable Splitter					30501504
D6	Bypass Conveyor					30501504
D7	Conveyor Belt Drop					30501504
D8	Tripper Station					30501504
D9	Screw Conveyor					30501504
D18	Screw Conveyor					30501504
D27	Screw Conveyor					30501504
D10	Rock Bin #1					30501509
D11	Impeller Mill #1	10 tons/hr, 5 MMBtu/hr	CE Raymond	50		30501511
D13	Rock Bin #2					30501509
D14	Impeller Mill #2	10 tons/hr, 5 MMBtu/hr	CE Raymond	50	64017	30501511
D16	Rock Bin #3					30501509
D17	Impeller Mill #3	10 tons/hr, 5 MMBtu/hr	CE Raymond	50		30501511
D19	Rock Bin #4					30501509
D20	Impeller Mill #4	10 tons/hr, 5 MMBtu/hr	CE Raymond	50	84021	30501511
D22	Rock Bin #5					30501509
D23	Impeller Mill #5	10 tons/hr, 5 MMBtu/hr	CE Raymond	50		30501511
D25	Rock Bin #6					30501509
D26	Impeller Mill #6	10 tons/hr, 5 MMBtu/hr	CE Raymond	50		30501511
D28	Rock Bin #7					30501509

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
D29	Impeller Mill #7	10 tons/hr, 5 MMBtu/hr	CE Raymond	50	86003	30501511
D31	Rock Bin #8					30501509
D32	Impeller Mill #8	10 tons/hr, 5 MMBtu/hr	CE Raymond	50	86002	30501511
D34	Rock Bin #9					30501509
D35	Impeller Mill #9	10 tons/hr, 5 MMBtu/hr	CE Raymond	50	86054	30501511
D45	Rock Bin #14					30501509
D46	Impeller Mill #14	25 tons/hr, 22.5 MMBtu/hr	TBD	83	TBD	30501511
D47	Rock Bin # 15					30501509
D48	Impeller Mill #15	25 tons/hr, 22.5 MMBtu/hr	TBD	83	TBD	30501511
D36	Screw Conveyor System (6 screw conveyors)					30501504
D42	Screw Conveyor					30501504
Boardline #1 Wallboard Manufacturing (Group #5)						
E1	Stucco Elevator #1A					30501504
E2	Screw Conveyor					30501504
E3	Stucco Bin #1					30501514
E4	Screw Conveyor					30501504
E5	Entoleter Elevator					30501504
E6	Transfer Point					30501504
E7	Entoleter (Mill)	45 tons/hr	Entoleter, Inc	Series 27/40	5129	30501502
E8	Screw Conveyor					30501504
E9	Screw Conveyor					30501504
E10	Stucco Elevator #1					30501504
E11	Screw Conveyor					30501504
E12	Stucco Bin #2					30501514
E13	Rotary Valve					30501504
E14	Bin #2 Discharge Screw					30501504
E15	Transfer Point					30501504
E16	Scalping Screw					30501504
E17	Scale (Transfer Point)					30501504
E18	Return Screw					30501504
E19	Stucco Recirculating Elevator					30501504
E20	Bin Recirculation Screw					30501504
E21	Rotary Valve					30501504
E22	Live Bottom Bin					30501514
E23	Metering Screw Conveyor					30501504
E23a	Line #1 Paper Heater	4.625 MMBtu/hr	Style B Linoflame Burners		60693	30501503
E25	Accelerator Bin					30501503

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
E26	Feeder					30501504
E27	Additive Bin					30501503
E27a	Additive Bin/Feeder		Acrision	BDF1.5-GG/2	05467-01	30501503
E29	Additive Bin					30501503
E31	Additive Bin					30501503
E33	Additive Bin					30501503
E28	Feeder					30501504
E30	Feeder					30501504
E32	Feeder					30501504
E34	Feeder					30501504
E43	Feeder					30501504
E24	Mixing Screw Conveyor					30501504
E35	Mixer	90 tons/hr	Broder Machine	5750	8150	30501516
E37	End Saw					30501521
E37a	End Saw Bunker/Disposal		Fabricated On-site			30501514
E39	Coe Board Dryer	110 MMBtu/hr				30501520
E40	Printing and Other VOC-Containing Materials					30501503
E41	Dunnage/Slutter system		Sweetwater Machine and Welding			30501521
E42	Cutback Saw Process		Fabricated On-site			30501521
Accelerator System (Group #6)						
F1	Screw Conveyor					30501504
F2	Vacuum Feed					30501504
F3	Storage Bin					30501509
F4	Storage Bin					30501509
F5	Crusher	6 tons/hr	Mikropulverizer	44		30501506
F6	Screw Conveyor					30501504
F7	Ball Mill	1 ton/hr	Service Welding and Machine	3x19		30501515
F8	Elevator Conveyor					30501504
Boardline #2 Calcining Operations (Group #7)						
G1	Screw Conveyor Drop					30501504
G12	Screw Conveyor Drop					30501504
G2	Rock Bin #10					30501509
G3	Impeller Mill #10 – Aggregate	19 MMBtu/hr	Alston	83	97036	30501511
G4	Double Cone Classifier					30501504
G5	Cyclone Collector					30501509
G7	Rock Bin #11					30501509
G8	Impeller Mill #11	19 MMBtu/hr	Alston	83	97037	30501511
G9	Double Cone Classifier					30501504
G10	Cyclone Collector					30501509

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
G13	Rock Bin #12					30501509
G14	Impeller Mill #12	22.5 MMBtu/hr	Alston	83	93019	30501511
G15	Double Cone Classifier					30501504
G16	Cyclone Collector					30501509
G18	Rock Bin #13					30501509
G19	Impeller Mill #13	22.5 MMBtu/hr	Alston	83	93020	30501511
G20	Double Cone Classifier					30501504
G21	Cyclone Collector					30501509
G6	Feed Screw Conveyor Drop					30501504
G11	Feed Screw Conveyor Drop					30501504
G17	Feed Screw Conveyor Drop					30501504
G22	Feed Screw Conveyor Drop					30501504
Boardline #2 Wallboard Manufacturing (Group #8)						
H1	Stucco Storage Bin #3					30501514
H2	Stucco Storage Bin #4					30501514
H3	Stucco Screw Conveyor					30501504
H4	Stucco Bucket Elevator					30501504
H5	Recirculating Screw Conveyor					30501504
H7	Stucco Feed Elevator					30501504
H8	Stucco Metering					30501514
H6	Stucco Surge Bin					30501514
H11	Additive Bin					30501503
H11a	Additive Bin/Feeder					30501503
H13	Additive Bin					30501503
H15	Additive Bin					30501503
H19	Additive Bin					30501503
H17	Accelerator Bin					30501503
H12	Feeder					30501504
H14	Feeder					30501504
H16	Feeder					30501504
H18	Feeder					30501504
H20	Feeder					30501504
H37	Feeder					30501504
H20a	Line #2 Paper Heater	5.25 MMBtu/hr	Style B Linoflame Burners		51838	30501520
H10	Mixing Screw Conveyor					30501504
H22	Pin Mixer		Broeder Machine Works	8600		30501518
H24	End Saw					30501521

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
H26	Flakt Board Dryer Combustion, All zones	87.32 MMBtu/hr	ABB Flakt			30501520
H27	Stucco Storage Bin #5					30501514
H28	Stucco Screw Conveyor					30501504
H29	Recirculating Screw Conveyor					30501504
H30	End Saw					30501521
H32	Flakt Board Dryer Combustion Zone 1	45 MMBtu/hr	ABB Flakt			30501520
	Combustion Zone 2	45 MMBtu/hr				
	Combustion Zone 3	30 MMBtu/hr				
H33	Stucco Cooler		Gyptech	GKL52690	PALV-0940-ER6565	30501503
H34	Stucco Screw Conveyor					30501504
H35	Stucco Screw Conveyor					30501504
H36	Printing and Other VOC-Containing Materials					30501503
Cooling Towers (Group #9)						
I01	Cooling Tower	1,200 gpm	Evapco	ATW207C	988659W	38500101
I02	Cooling Tower	1,200 gpm	Evapco	ATW207C	988659W	38500101
I03	Cooling Tower	3,495 gpm	Baltimore Aircoil	3473A-2	U054003201	38500101
Gasoline Dispensing Operation (Group #10)						
J01	Aboveground Storage Tank; Regular Gasoline	10,000 gallons				40600306
Reclaim/Reuse Process (Group #11)						
K01	Screw Grinder		ACTA Recycling	AR-GS-6	001612021	30501502
K02	Perforated Screw Conveyor		Martin Screw			30501504
K04	Belt Conveyor	20 tons/hr				30501504
K05	Roller Mill	19.2 tons/hr	Antenore Visentin	RO12C	115-12	30501502
K06	Vibratory Screen	19.2 tons/hr				30501507
K07	Conveyor System (3 belts)					30501504
K10	Storage Bin					30501510
K11	Screw Conveyor System (3 conveyors)					30501504
Pumps (Group #12)						
U03	Diesel Water Pump; DOM: 2012	464 hp	Cummins	QSL9-G7NR3	L120435661	20200102
U04	Diesel Emergency Fire Pump; DOM: 2007	240 hp	John Deere	6068HF120	PE6068468340 2	20200102
U05	Diesel Emergency Fire Pump; DOM: 2007	240 hp	John Deere	6068HF120	CD6068B020 341	20200102
U06	Diesel Water Pump; DOM: 2002	85 hp	Perkins	1004-42	AR36677	20200102

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
Stockpiles and Haul Roads						
M1	Stockpiles	90 Acres				30502507
K14	Haul Road; Unpaved	14.2 VMT/hr				30502504
	Haul Road; Paved	2.3 VMT/hr				

Table IV-2: Insignificant Activities

Description
Aboveground Storage Tank; Diesel; 10,000 gallons
Aboveground Storage Tanks (2); Diesel; 1,000 gallons
Aboveground Storage Tank; Diesel (2); 300 gallons
Aboveground Storage Tank; Diesel; 550 gallons

V. EMISSIONS CALCULATIONS

Applicability

Permitting applicability is determined by calculating the emissions for all proposed emission units using 8,760 hours of operation (except for emergency generators or fire pumps, which use 500 hours), any inherent controls, any inherent throughput limitations, and the emission factors provided by the manufacturer, by source test results, by EPA AP-42, or by other approved methods.

Applicability emissions include emissions from insignificant emission units and activities, but do not include fugitive emissions (except for categorical sources listed in AQR 12.2.2(j) or any other stationary source category that, as of August 7, 1980, is being regulated under Sections 111 or 112 of the Act). PABCO is not a categorical source, as defined in AQR 12.2.2(j), so fugitive emissions (EUs: A5, M1 and K14) are not included in source applicability determination calculations.

As shown in Tables V-1 and V-2, the source continues to be a major stationary source for NO_x and CO, a synthetic minor source for PM_{10}, and $PM_{2.5}$, and a minor source for SO_2, VOC, and HAP.

Table V-1: Source Applicability Emissions (tons per year)

	PM_{10}	**$PM_{2.5}$**	**NO_X**	**CO**	**SO_2**	**VOC**	**HAP**	**GHG[1]**
Permit Applicability Thresholds	5	5	5	25	25	5	N/A	N/A
Major Source Thresholds	100	100	100	100	100	100	10/25[2]	N/A
PSD Thresholds	250	250	250	250	250	250	N/A	N/A
Applicability Emissions	10,871.78	1,606.32	321.70	461.72	3.95	80.14	7.76	314,692.52

[1]Expressed in units of CO_2e
[2]10 tons for single HAP pollutant or 25 tons for any combination of HAP pollutants

PTE

Table V-2: Source PTE (tons per year)

PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[1]
130.29	37.59	318.14	473.80	4.79	79.59	7.74	314,692.52

Table V-3. Emissions Increase Calculation and Significance Evaluation (tons per year)

	PM_{10}	$PM_{2.5}$	NO_X	CO	SO_2	VOC	HAP	GHG[1]
PTE for Current Permitting Action	130.29	37.59	318.14	473.80	4.79	79.59	7.74	314,692.52
PTE from Permit Issued 07/03/2023	130.29	37.59	318.14	473.80	4.79	79.59	7.74	292,046.33
Total Source Emissions Increase	0	0	0	0	0	0	0	22,646.19
AQR 12.2.2(uu) Significance Thresholds	15	10	40	100	40	40	10	N/A
AQR 12.5.1(d) Minor NSR Significance	7.5	5	20	50	20	20	10	N/A

[1]Expressed in units of CO_2e

VI. CONTROL TECHNOLOGY

There are no new emission units or control devices associated with this permitting action. In addition, the emission increases associated with this permitting action are below the AQR 12.2.2(uu) significant thresholds. Therefore, a BACT analysis is not required. All BACT requirements established with previous permitting actions, and identified in the proposed renewal operating permit, remain enforceable. The calculated emission increase is also below the AQR 12.5.1(d) minor NSR significance levels and therefore, a RACT analysis is not triggered.

This section contains a summary of BACT and RACT requirements established with previous permitting actions.

Table VI-1: Summary of Add-On Control Devices

EU	Device Type[1]	Manufacturer	Model No.	Serial No.	Pressure Drop (inch/H_2O)	Pollutant
B25, K04-K07	Baghouse 1	General Combustion	UFI-70	14005	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
B35, D43, D44, D1, D2, D3, D4, K11	Baghouse 2	SLY	STJ-5617-12	RP6-1055	1.0 – 6.0”	$PM_{10}/PM_{2.5}$
B36	Baghouse 3	Gencor	CFS225	225BH155898-07-NA	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
K01, K02	Baghouse 4	Mikropul	121S-8-20-TRC	990141111GA	1.0 – 12.0”	$PM_{10}/PM_{2.5}$
D7, D8, D9, D10, D13, D16, D18, D19, D22, D25, D27 D28, D31, D34, D45, D47, G2, G7, G13 and G18	Baghouse 5	Buell Norblo			1.0 – 6.0”	$PM_{10}/PM_{2.5}$

EU	Device Type[1]	Manufacturer	Model No.	Serial No.	Pressure Drop (inch/H_2O)	Pollutant
D11	Baghouse 6	Pulse Air	Ultra Jet #50		1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D14	Baghouse 7	Pulse Air	Ultra Jet #50	64017	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D17	Baghouse 8	Pulse Air	Ultra Jet #50		1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D20	Baghouse 9	Pulse Air	Ultra Jet #50	84021	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D23	Baghouse 10	Pulse Air	Ultra Jet #50		1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D26	Baghouse 11	Pulse Air	Ultra Jet #50		1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D29	Baghouse 12	Mikro Pulsaire	Ultra Jet #50	86003	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D32	Baghouse 13	Mikro Pulsaire	Ultra Jet #50	86002	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D35	Baghouse 14	Mikro Pulsaire	Ultra Jet #50	86054	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D46	Baghouse	TBD	TBD	TBD	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D48	Baghouse	TBD	TBD	TBD	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
D36, D42, E1, E2, E3	Baghouse 15	Rayjet	6T100-46T		1.0 – 6.0”	$PM_{10}/PM_{2.5}$
E10–E20	Baghouse 16	Wheelabrator-Frye	84	48	1.0 – 6.0”	$PM_{10}/PM_{2.5}$
E4–E9, E21–E23, E24–E35, E37, E37a, E41, E42	Baghouse 17	Hosokawa Mikropul	25S8-20	980009H1	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
G1, G6, G11, G12, G17, G22, H1	Baghouse 18	Mikro Pulsaire	255-8-30	98095112	1.0 – 6.0”	$PM_{10}/PM_{2.5}$
G3–G5	Baghouse 19	CP Environmental	144TNFW 465C	97036	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
G8–G10	Baghouse 20	CP Environmental	144TNFW 465C	97037	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
G14–G16	Baghouse 21	CP Environmental	144TNFW 465C	3019	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
G19–G21	Baghouse 22	CP Environmental	144TNFW 465C	3020	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
H2–H5	Baghouse 23	Mikro Pulse Air	255-8-30	980095111	1.0 – 6.0”	$PM_{10}/PM_{2.5}$
H6, H7, H8, H10–H20, H22, H24	Baghouse 24	Hosokawa Mikropul	25S8-20	980009H2	1.0 – 9.0”	$PM_{10}/PM_{2.5}$
K10, H27–H29	Bin Vent					$PM_{10}/PM_{2.5}$
H30	Baghouse 25	Hosokawa Mikropul	25S8-20	860106H1	1.0 – 9.0”	$PM_{10}/PM_{2.5}$

[1]Each baghouse shall achieve a minimum control efficiency of 99.5%.

Mineral Processing and Wallboard Manufacturing

1. Silt loading on haul roads shall not exceed 0.33 ounces per square foot, as determined by AQR 93.4.1.
2. The moisture content of the gypsum raw material shall be monitored and wet suppression applied as needed to the primary crusher (EU: B2) to control PM emissions within allowable opacity limits during the processing of material.
3. Partial enclosures shall be maintained for the dome stockpile, variable splitter, and the bypass conveyor to achieve a minimum rated particulate control efficiency of 90% (EUs: B28, D5, and D6).
4. Full enclosures shall be maintained to achieve the rated particulate control efficiency of 100% for the accelerator system (EUs: F1, F2, F3, F4, F5, F6, F7, and F8).

Cooling Towers

5. Each cooling tower shall be operated with drift eliminators that have a manufacturer's maximum drift rate of 0.001% (EUs: I01, I02, and I03).
6. The TDS content of the circulation water for each cooling tower shall not exceed 6,000 parts per million (EUs: I01, I02, and I03).

Gasoline Dispensing (EU: J01)

7. Storage tanks shall be equipped with a Phase I vapor recovery system on all storage tanks that are rated with at least 90.0% control efficiency when in operation.

Internal Combustion Engines

8. Only diesel fuel with a maximum sulfur content of 15 ppm and either a minimum cetane index of 40 or a maximum aromatic content of 35% by volume shall be combusted in the diesel-powered water pump (EU: U03) and each diesel-powered fire pump (EUs: U04 and U05).

Blasting *[AQR 12.5.2.6(a), AQR 40.1, AQR 41.1]*

9. Blasting shall not be performed when the National Weather Service forecasts wind gusts above 25 mph (EU: A5).
10. Blasting shall not occur within 1,500 feet of a residential area, occupied building, or major roadway when the wind direction is toward these areas (EU: A5).

Stockpiles

11. The permittee shall install and maintain a 200' x 200' BTL-20 scrim reinforced polyethylene lining shall be maintained which will cover the entire reserve stockpile (part of EU: M1, located to the south of the dome stockpile EU: B28).

VII. OPERATIONAL LIMITS

There are no additional operational limitations associated with this permitting action. All limitations established with previous permitting actions remain enforceable. This section contains a summary of operational limitations established with previous permitting actions. These operational limitations were requested by the permittee.

Table VII-1. Operational Limitations

Operation	EU	Description	Annual Throughput
Quarry—Group 1	A1	Material Loading	2,300,000 tons
	A5	Blasting	58 blasts
			Disturbed Area: 50,000 ft^2 per blast
			750 tons (ANFO)
			90 tons (emulsion)
			14 tons (high explosive)
			0.90 tons (cast TNT booster)
		Drilling	10,000 holes
Beneficiation—Group 2	B2	Primary Crusher	2,300,000 tons
Calcining Line #1—Group 4	D1, D2, D3	Belt Feeder Drops	2,300,000 tons total
	D11, D14, D17, D20, D23, D26, D29, D32, D35	Impeller Mills #1 - 9,	368,001 tons aggregate (combined total)
	D46, D48	Impeller Mills #14 & 15	580,000 tons (combined total)
	D36 and D42 (individually or combined)	Screw Conveyors	331,200 tons (each unit)
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, E27a, E29, E31, E33	Additive Bins	8,346 tons (each)
	E35	Mixer	450,000 tons
	E37	End Saw	450,000,000 ft^2
	E37a	End Saw Bunker Disposal Process	10,000 tons
	E39	Coe Board Dryer	1,950,370 tons exhaust gas from NCA
	E40	Inks and Additives (Printing and Alpha Foamer)	400 pounds black ink
			500 pounds make-up ink
			270,000 pounds alpha foamer
			283,200 pounds silicone
	E41	Dunnage/slutter system	36,000,000 square board feet
	E42	Cutback saw process	2,750,000 square board feet
Accelerator—Group 6	F3, F4	Storage Bins	10,000 tons (combined total)
	F5	Crusher	10,000 tons
Calcining Line #2—	G1	Screw Conveyor	452,000 tons

Operation	EU	Description	Annual Throughput
Group 7	G12	Screw Conveyor	580,000 tons
	G3, G8	Impeller Mills #10-#11	452,000 tons (combined total)
	G14, G19	Impeller Mills #12-#13	580,000 tons (combined total)
Wallboard Line #2—Group 8	H1, H2	Stucco Bins #3 and #4	516,000 tons (each)
	H6	Stucco Surge Bin	1,032,000 tons
	H11, H11a, H13, H15, H19	Additive Bins	119,500 tons (each)
	H17	Accelerator Bin	8,803 tons
	H22	Pin Mixer	1,683,332 tons
	H24, H30	End Saws	650,000,000 ft^2 (each)
	H26	Flakt Dryer #2	764,923.2 MMBtu
	H27	Stucco Storage Bin #5	580,000 tons
	H33	Stucco Cooler	1,032,000 tons
	H36	Inks and Additives (Printing and Alpha Foamer)	500 pounds black ink
			390,000 pounds alpha foamer
			188,800 pounds silicone
Storage Tanks—Group 10	J01	GDO	22,000 gallons

1. The total area of stockpiles throughout the gypsum product operation (EU: M1) shall be limited to 88.87 acres.
2. The total area for the dome stockpile (EU: B28) shall be limited to 1.13 acres.
3. The total VMT on unpaved roads (EU: K14) shall be limited to 72,550 miles in any consecutive 12-month period.
4. The total VMT on paved roads (EU: K14) shall be limited to 19,909 miles in any consecutive 12-month period. *[AQR 12.5.2.6(a)]*
5. The operation of each fire pump shall be limited to 100 hours per year for testing and maintenance purposes. Each fire pump may be operated up to 50 hours/year for nonemergency situations, but those hours count towards the 100 hours provided for testing and maintenance (EUs: U04 and U05).
6. The operation of the water pump (EU: U03) shall be limited to 6,200 hours in any consecutive 12-month period.
7. The operation of the water pump (EU: U06) shall be limited to 800 hours in any consecutive 12-month period.

VIII. MONITORING

There are no additional monitoring requirements associated with this permitting action. All monitoring requirements established with previous permitting actions remain enforceable. This section contains a summary of monitoring requirements established with previous permitting actions.

Visual Emission Checks

1. Daily visual emissions check of stack emissions shall be conducted from each baghouse while in operation.
2. A visual emissions check shall be conducted at least quarterly on the diesel-powered water pump (EU: U03) and each fire pump (EUs: U04, U05, and U06) while in operation.

Mineral Processing and Wallboard Manufacturing/Recycling

3. The throughput of each emission unit listed in Table VII-1 shall be monitored to demonstrate compliance with operational limits on a consecutive 12-month basis.
4. Daily monitoring of the free moisture content of the mined gypsum raw material during the processing of material.
5. The permittee shall perform visible emissions checks at all transfer point locations daily during processing of material.

Baghouses

6. Daily monitoring of the pressure drop across each baghouse cell shall be conducted with the installation and operation of a pressure differential (Magnehelic) gauge per manufacturer's specifications.
7. Monthly external inspections of each baghouse shall be conducted while it is running to ensure that equipment is maintained in good working order and operated according to manufacturer's specifications:
8. Visual inspections of each baghouse interior shall be conducted annually to determine the internal mechanical integrity of the unit and spot any defects.

Stockpiles and Haul Roads

9. Monthly monitoring of the total area of stockpiles throughout the gypsum product operation (EU: M1).
10. Daily inspections shall be conducted on the polyethylene cover for the reserve stockpile for tears or holes.
11. Monthly monitoring of the VMT on paved and unpaved roads (EU: K14).
12. Semiannual determinations of silt content from all unpaved haul roads when in operation, in accordance with AQR 91.4.1.2 (EU: K14).
13. Semiannual determinations of silt loading from all paved haul roads when in operation, in accordance with AQR 93.4.1.2 (EU: K14).

Cooling Towers

14. Monthly monitoring of the TDS of the cooling tower recirculation water using a conductivity meter or another device approved in advance by the Control Officer (EUs: I01, I02, and I03).

Flakt Dryer #2

15. Monthly monitoring of the heat input to the Flakt Dryer #2 (EU: H26) in MMBtu using either a fuel flow meter or a calculation method based on the amount of water evaporated.
16. If the heat input calculation is based on the amount of water evaporated rather than direct measurement of fuel as provided in condition 22 above, then the following monitoring procedures shall be followed: *[AQR 12.5.2.6(d)]*

a. Monitoring of the monthly throughput of material processed through Flakt Dryer #2 (EU: H26) in msf.

b. Conducting hourly moisture analysis by weighing the material at the inlet and outlet of the Flakt Dryer #2 (EU: H26) and calculate the evaporation rate in lbs/msf during production runs.

c. Monthly calculations of the amount of water evaporated through Flakt Dryer #2 (EU: H26) and record it as pounds, based on the average monthly evaporation rate in lbs/msf.

d. Monthly calculations of the amount fuel consumed through Flakt Dryer #2 (EU: H26) using a factor of 1,470 BTU/lbs of water evaporated. The fuel consumption shall be recorded in units of MMBtu.

Gasoline Dispensing

17. Monthly monitoring of the total throughput of gasoline (EU: J01).
18. Daily inspections for gasoline spills.
19. Inspections of the covers on gasoline containers and fill pipes after each delivery.

Internal Combustion Engines

20. Monitoring the sulfur content and cetane index or aromatic content of the fuel burned in the diesel-powered water pump (EU: U03) and each diesel-powered fire pump (EUs: U04 and U05) by retaining a copy of vendor fuel specifications.
21. Monitoring the operation of each emergency fire pump (EUs: U04 and U05) with a nonresettable hour meter and monitor the duration of operation for testing, maintenance, and nonemergency operation, and separately for emergencies.
22. Monitoring the operation of each water pump (EU: U03 and U06) with a nonresettable hour meter.

Drilling and Blasting

23. Monitoring the number of holes drilled on a monthly basis and as a consecutive 12-month total (EU: A5).
24. Monitoring of the total blasting area in square feet per each blast (EU: A5).
25. Monitoring the number of blasts on a monthly basis and as a consecutive 12-month total (EU: A5).
26. Monitoring of the amount of ANFO, emulsion, and high explosive consumed in tonnage on a monthly basis and as a consecutive 12-month total (EU: A5).

Compliance Assurance Monitoring

27. The emission units identified in Table VIII-1 are subject to CAM requirements in accordance with 40 CFR Part 64.

Table VIII-1: Emission Units Subject to CAM Requirements

ID	Description	Control Method	Manufacturer	Model #	Serial No.
B36	Rotary Dryer #2	Baghouse 3	Gencor	CFS225	225BH155898- 07

ID	Description	Control Method	Manufacturer	Model #	Serial No.
D11	Impeller Mill #1	Baghouse 6	Pulse Air	Ultra Jet #50	NA
D14	Impeller Mill #2	Baghouse 7	Pulse Air	Ultra Jet #50	64017
D17	Impeller Mill #3	Baghouse 8	Pulse Air	Ultra Jet #50	NA
D20	Impeller Mill #4	Baghouse 9	Pulse Air	Ultra Jet #50	84021
D23	Impeller Mill #5	Baghouse 10	Pulse Air	Ultra Jet #50	NA
D26	Impeller Mill #6	Baghouse 11	Pulse Air	Ultra Jet #50	NA
D29	Impeller Mill #7	Baghouse 12	Mikro Pulsaire	Ultra Jet #50	86003
D32	Impeller Mill #8	Baghouse 13	Mikro Pulsaire	Ultra Jet #50	86002
D35	Impeller Mill #9	Baghouse 14	Mikro Pulsaire	Ultra Jet #50	86054
E37	End Saw	Baghouse 17	Hosokawa Mikropul	25S8-20	980009H1
G3	Impeller Mill #10	Baghouse 19	CP Environmental	144TNFW 465C	97036
G8	Impeller Mill #11	Baghouse 20	CP Environmental	144TNFW 465C	97037
G14	Impeller Mill #12	Baghouse 21	CP Environmental	144TNFW 465C	3019
G19	Impeller Mill #13	Baghouse 22	CP Environmental	144TNFW 465C	3020
H24	End Saw	Baghouse 24	Hosokawa Mikropul	25S8-20	980009H2
H30	End Saw	Baghouse 25	Hosokawa Mikropul	25S8-20	860106H1

28. The permittee shall monitor the opacity and pressure differential for each baghouse listed in Table VIII-1 in accordance with the monitoring requirements in Table VIII-2.

Table VIII-2. Monitoring Approach for Baghouses – PM_{10} and Opacity

CAM Element	Indicator 1	Indicator 2
Indicator	Pressure differential (Δp).	Visible emissions (VE) for opacity.
Measurement Approach	The Δp shall be measured across the baghouse with a magnehelic gauge or equivalent; the time of reading and measured value will be recorded.	VE shall be monitored at the baghouse stack exhaust and documented on a daily basis using EPA Method 22. A Method 9 opacity reading will be performed if visible emissions are observed.
Indicator Range	The indicator range for Δp for each baghouse as defined in Table VI-1.	If the presence of visible emissions is observed during Method 22 test, a Method 9 test shall be conducted to demonstrate compliance with the opacity limit specified in Section 3.2 of this permit.
Excursion	An excursion is defined as a pressure drop outside the operating parameters defined in Table VI-1. Excursions shall trigger an inspection, correction actions, and a reporting requirement.	An excursion is defined as the presence of visible emissions above the opacity limit. Excursions shall trigger an inspection, corrective actions, and a reporting requirement. The equipment will be shut down until repairs are made.
QIP Thresholds	More than six excursions within a semiannual reporting period.	More than six excursions within a semiannual reporting period.

CAM Element	Indicator 1	Indicator 2
Performance Criteria Data Representativeness	Pressure taps are located on the high- and low-pressure sides of the bag filters. A differential pressure gauge measures and displays the Δp with a minimum accuracy of ± 0.25" of water column.	Observations are made at the baghouse exhaust.
QA/QC Practices and Criteria	The Δp gauge shall be installed, calibrated, and maintained per manufacturer's recommendations.	The VE observer will be familiar with baghouse operations, visible emissions, and EPA Method 22. The Method 9 opacity observations shall be made by a certified observer.
Monitoring Frequency	Daily Δp measures shall be made.	Daily VE checks shall be made.
Data Collection Procedures	Δp measurements shall be recorded upon observation.	The VE observation is documented by the observer and recorded daily.
Averaging Period	Not applicable.	VE checks are 6 minutes duration. Method 9 is one 6-minute average.

IX. PERFORMANCE TESTING

There are no additional performance testing requirements associated with this permitting action. All performance testing requirements established with previous permitting actions remain enforceable. This section contains a summary of performance testing requirements established with previous permitting actions.

Board Dryers

1. Performance testing for NO_X, CO, and VOC emission rates from the Coe and Flakt board dryers (EUs: E39, H26, and H32) shall be conducted from each zone stack outlet in accordance with the test methods and frequencies identified in Table IX-1.
2. Performance testing for NOX and CO emission rates from the rotary dryer (EU: B36) shall be conducted from each stack in accordance with the test methods and frequencies identified in Table IX-1.

Table IX-1. Performance Testing Methods for Combustion Emissions

Pollutant	Test Method	Frequency
NO_X	EPA Method 7E	Five years, Within the Same Quarter as the Anniversary Date of the Previous Test
CO	EPA Method 10	
VOC	EPA Method 18 or 25a	
Stack Gas Parameters	EPA Methods 1, 2, 3 or 4	

Particulate Matter Concentration

3. Performance testing for PM concentration shall be conducted on all emission units subject to 40 CFR Part 60, Subpart UUU (EUs: B36, D11, D14, D17, D20, D23, D26, D29, D32, D35, D46, D48, G3, G8, G14, and G19) in accordance with EPA Test Method 5 and the procedures in 40 CFR Parts 60.8, 60.11, 60.636, and the protocols identified in Table IX-2.

Table IX-2. Performance Testing Protocols

EU	Description	Baghouse				Protocol
		ID	Make	Model No.	Serial No.	
B25, & K04-K07	Roller Mill, Screen & Conveyors	1	General Combustion	UFI-70	14005	Test Every Five Years
B36	Rotary Dryer #2	3	Gencor	CFS225		Test Every Five Years
D11	Impeller Mill #1	6	Pulse Air	Ultra Jet #50		Permittee shall test at least two baghouses (ID: 6–11) every five years.
D14	Impeller Mill #2	7	Pulse Air	Ultra Jet #50	64017	
D17	Impeller Mill #3	8	Pulse Air	Ultra Jet #50		
D20	Impeller Mill #4	9	Pulse Air	Ultra Jet #50	84021	
D23	Impeller Mill #5	10	Pulse Air	Ultra Jet #50		
D26	Impeller Mill #6	11	Pulse Air	Ultra Jet #50		
D29	Impeller Mill #7	12	Mikro Pulsaire	Ultra Jet #50	86003	Permittee shall test one baghouse (ID: 12–14) every five years.
D32	Impeller Mill #8	13	Mikro Pulsaire	Ultra Jet #50	86002	
D35	Impeller Mill #9	14	Mikro Pulsaire	Ultra Jet #50	56054	
G3	Impeller Mill #10	19	CP Environmental	144TNFW465C		Permittee shall test one baghouse (ID: 19–22) every five years.
G8	Impeller Mill #11	20	CP Environmental	144TNFW465C		
G14	Impeller Mill #12	21	CP Environmental	144TNFW465C		
G19	Impeller Mill #13	22	CP Environmental	144TNFW465C		
D46	Impeller Mill #14		TBD	TBD	TBD	Permittee shall test one baghouse every five years (EUs: D46 & D48)
D48	Impeller Mill #15		TBD	TBD	TBD	

Gasoline Dispensing

4. Phase I vapor recovery tests shall be conducted in accordance with the CARB-approved vapor recovery test procedures and frequencies listed in Table IX-3.

Table IX-3. Vapor Recovery System Testing Procedures and Schedules

Type of Vapor Recovery System	Test Procedure	Frequency
Phase I Vapor Balance System	Pressure Decay/Leak test: TP201.3A (as revised for AST)	Initial and every three years thereafter
	Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves: CARB Procedure TP-201.1E (as revised)	

X. REVIEW OF APPLICABLE REGULATIONS

A. LOCAL REGULATORY REQUIREMENTS

DAQ has determined that the following public law, statutes, and associated regulations are applicable:

1. Chapter 445B of the Nevada Revised Statutes;

2. Portions of the AQRs included in the Nevada State Implementation Plan (SIP). SIP requirements are federally enforceable. All requirements in OPs issued by DAQ are federally enforceable because these are issued under AQR sections included in the Nevada SIP; and

3. AQR sections not included in the Nevada SIP. These locally applicable requirements are locally enforceable only.

Chapter 445B of the Nevada Revised Statutes and the 1990 Clean Air Act Amendments establish the general authority for the AQRs.

EPA issued final approval of DAQ's Part 70 (Title V) program on November 30, 2001 (vol. 66, p. 63188 of the *Federal Register*). AQR 19, "Part 70 Operating Permits" [amended 07/01/04], details the program. On September 20, 2010, Clark County submitted a revision to EPA (AQR 12.5) that is still awaiting approval. These regulations are available on DAQ's website at: http://www.clarkcountynv.gov/depts/AirQuality/Pages/Rules_CurrentRulesandRegulations.aspx.

The AQRs contain sections that are federally enforceable and sections that are locally enforceable only. Locally enforceable rules have not been approved by EPA for inclusion in the Nevada SIP. Requirements and conditions in this Part 70 OP related only to non-SIP rules are notated as locally enforceable only.

Table X-1: Clark County AQRs and Nevada State Implementation Plan

Applicable AQR Title	Applicable Subsection	SIP	Affected EU
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
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" (Repealed)	When applicable; applicable subsections	Yes	Entire source
11, "Ambient Air Quality Standards" (Repealed)	Applicable subsections	Yes	Entire source
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

Applicable AQR Title	Applicable Subsection	SIP	Affected EU
13, "National Emission Standards for Hazardous Air Pollutants"	AQR 13.2(b)(85), "Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"; AQR 13.2(b)(106), "Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities"	No	Diesel engines and gasoline storage tank (EUS: J01, U06 & U03)
14, "New Source Performance Standards"	AQR 14.1(b)(68), "Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants" AQR 14.1(b)(74), "Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries" AQR 14.1(b)(81), "Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"	No	Various mineral processing emission units, dryers, calciners, & diesel engines, including but not limited to EUs: U06 and U03
18, "Permit and Technical Service Fees"	18.1, "Operating Permit Issuance Fees" 18.2, Annual Emissions Unit and Annual Permit Renewal Fees" 18.4, "NSR Application Review Fee" 18.5, "Part 70 Application Review Fee" 18.6, "Annual Emission Inventory and Emission Fee" 18.16, "Billing Procedures"	Yes	Entire source
26, "Emission of Visible Air Contaminants"	AQR 26.1, "Opacity Limits" (≤ 20% for 3 min in 60-min period)	Yes	Entire source
28, "Fuel Burning Equipment"	Emission limitations for PM	Yes	Entire source
40, "Prohibitions of Nuisance Conditions"	40.1	No	Entire source
41, "Fugitive Dust"	41.1	Yes	Entire source
42, "Open Burning"	42.2	No	Entire source
43, "Odors in the Ambient Air"	43.1	No	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. APPLICABLE FEDERAL REGULATIONS

DAQ has determined that the following federal regulations are applicable:

4. Clean Air Act, as amended (authority: 42 U.S.C. § 7401, et seq.)

5. Title 40 of the Code of Federal Regulations (CFR).

40 CFR PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

40 CFR Part 52.21 Prevention of significant deterioration of air quality.

Discussion: Hydrographic Area 215 (the Black Mountains area) is designated as attainment for all criteria pollutants. PABCO is subject to this regulation because at least one criteria pollutant exceeds the 250-tpy major source threshold.

40 CFR PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart A—General Provisions

40 CFR Part 60.7 Notification and record keeping.

Discussion: This regulation requires the source to notify DAQ of modifications, opacity testing, records of malfunctions of process equipment and/or continuous monitoring device(s), continuous emissions monitoring system data, and performance test data. DAQ requires sources to maintain records for five years, a more stringent requirement than the two years required by 40 CFR Part 60.7. These requirements are found in the Part 70 OP.

40 CFR Part 60.8 Performance tests.

Discussion: This regulation outlines notice of intent to test, applicable test methods, acceptable test method operating conditions, and the requirement for three test runs. DAQ requirements for initial performance testing are identical to this regulation. DAQ also requires periodic performance testing on EUs based on throughput or usage. These requirements are found in the Part 70 OP.

40 CFR Part 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. The source is subject to 40 CFR Part 60, Subparts OOO, UUU, and IIII. Compliance requirements for these standards are discussed in the corresponding sections.

40 CFR Part 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 Part 60.670 Applicability and designation of affected facility.

Discussion: The facility is currently subject to standards based on 40 CFR Part 60.670(a)(1).

40 CFR Part 60.672 Standard for particulate matter (PM).

Discussion: These requirements are addressed in the Part 70 OP.

40 CFR Part 60.675 Test Methods and procedures.

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

40 CFR Part 60.676 – Reporting and recordkeeping.

Discussion: The permittee shall submit to the EPA Administrator and the Control Officer all information required by this section. Specific recordkeeping and reporting requirements are identified in the Part 70 OP.

Subpart UUU—Standards of Performance for Calciners and Dryers in Mineral Industries

40 CFR 60.730 Applicability and designation of affected facility.

Discussion: The facility is currently subject to standards based on 40 CFR Part 60.730(a).

40 CFR Part 60.732 Standards for particulate matter.

Discussion: No emissions shall be discharged into the atmosphere from any affected facility that (a) contains PM in excess of 0.092 grams per day per standard cubic meter (g/dscm) [i.e., PM > 0.040 gr/dscm] for calciners and calciners & dryers installed in series, and contains PM in excess of 0.057 g/dscm for dryers; and (b) exhibits greater than 10% 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 Part 60.734 Monitoring of emissions and operations.

Discussion: This section requires daily opacity observations. The requirement is found in the Part 70 OP.

40 CFR Part 60.735 Recordkeeping and reporting requirements.

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

40 CFR Part 60.736 Test methods and procedures.

Discussion: The permittee shall determine compliance with the PM standards using test methods described in this subsection. These requirements are found in the Part 70 OP.

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

40 CFR Part 60.4200 Applicability.

Discussion: Compression ignition engines that are not fire pumps and were manufactured after April 1, 2006, are subject to this subpart. Also subject are fire pump engines manufactured after July 1, 2006, that were manufactured as certified National Fire Protection Association fire pump engines.

40 CFR Part 60.4204 Emission standards for non-emergency stationary CI internal combustion engines.

Discussion: This section defines the emission standards that owners and operators must meet based on horsepower rating and year of manufacture. The water pump identified as EU: U03 is subject to this definition.

40 CFR Part 60.4205 Emission standards for emergency stationary CI internal combustion engines.

Discussion: This section defines the emission standards that owners and operators must meet based on horsepower rating and year of manufacture. The fire pumps identified as EUs: U04 and U05 are subject to this definition.

40 CFR Part 60.4207 Fuel requirements for stationary CI internal combustion engines.

Discussion: This section states that, beginning on October 1, 2010, such owners and operators must use diesel fuel that meets the requirements of 40 CFR 80.510(b).

40 CFR Part 60.4208 Deadline for importing or installing stationary CI ICE produced in previous model years.

Discussion: This section defines the dates after which owners and operators may no longer install compression ignition engines that do not meet applicable emission standards.

40 CFR Part 60.4211 Compliance requirements for owners or operators of stationary CI internal combustion engines.

Discussion: This section defines acceptable methods that owners and operators must employ to maintain compliance with applicable emission standards.

40 CFR Part 60.4214 Notification, reporting, and recordkeeping requirements for owners or operators of a stationary CI internal combustion engines.

Discussion: This section defines the types of records that owners and operators must maintain and how they must be submitted.

40 CFR PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES

Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

40 CFR Part 63.6580 Purpose of subpart ZZZZ.

Discussion: Subpart ZZZZ establishes national emission limitations and operating limitations for HAPs emitted from stationary reciprocating internal combustion engines (RICE) located at major and area sources of HAP emissions. This subpart also establishes requirements to demonstrate initial and continuous compliance with emission and operating limitations.

40 CFR Part 63.6585 Applicability.

Discussion: This subpart defines sources that are subject to the requirements of Subpart ZZZZ. As the owner/operator of stationary RICE, PABCO is applicable.

40 CFR Part 63.6590 What this subpart covers.

Discussion: All existing, new, or reconstructed stationary RICE are subject to this subpart (EU: U06).

40 CFR Part 63.6595 Compliance Date.

Discussion: This subpart establishes May 3, 2013, as the date to comply with all applicable requirements.

40 CFR Part 63.6603 Emission limitations, operating limitations, and other requirements for existing stationary RICE located at an area source of HAP emissions.

Discussion: This section defines inspection and maintenance requirements based on engine horsepower ratings.

40 CFR Part 63.6640 Continuous compliance requirements.

Discussion: This section defines acceptable methods for demonstrating continuous compliance with emission limitations, operating limitations, and other requirements.

40 CFR Part 63.6655 Recordkeeping Requirements.

Discussion: This section defines the type of records that must be kept to verify compliance.

40 CFR Part 63.6660 Record Retention Requirements.

Discussion: All records must be maintained in a suitable form and must be readily accessible, in hard copy or electronic form, for a minimum of five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

40 CFR PART 64—COMPLIANCE ASSURANCE MONITORING

40 CFR Part 64.2 Applicability.

Discussion: PABCO currently has several EUs subject to an emission limitation or standard that use a control device to achieve compliance. These EUs process PM_{10} emissions because none of the combustion EUs are required to have a control device. Therefore, only EUs with precontrol emissions exceeding 100 tpy of PM_{10} are subject to the CAM rule. EUs subject to the CAM rule, as defined in 40 CFR 64.2(a), are identified in Table VIII-1.

40 CFR PART 72—ACID RAIN PERMIT REGULATIONS

Subpart A—Acid Rain Program General Provisions

40 CFR Part 72.6 Applicability.

Discussion: The provisions of this regulation do not apply to the source because the source has no affected units based on the criteria listed in this section.

40 CFR PART 73—SULFUR DIOXIDE ALLOWANCE SYSTEM

40 CFR Part 73.2 Applicability.

Discussion: The provisions of this regulation do not apply to the source based on the criteria listed in this section.

40 CFR PART 75—CONTINUOUS EMISSIONS MONITORING

40 CFR Part 75.2 Applicability.

Discussion: The permittee is not subject to the acid rain emission limitations of 40 CFR Part 72. Therefore, the facility is not subject to the monitoring requirements in this section.

XI. COMPLIANCE SUMMARY

Table XI-1: AQR Compliance Summary

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 0	"Definitions"	Applicable. PABCO will comply with all applicable definitions as they apply.	PABCO will meet all applicable test methods if new definitions apply.	PABCO complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 4	"Control Officer"	Applicable. The Control Officer or representative may enter into PABCO property, with or without prior notice, at any reasonable time to establish compliance.	PABCO will allow the Control Officer to enter its property as required.	PABCO complies with applicable requirements.
AQR 12.5	"Part 70 Operating Permit Requirements"	Applicable. PABCO is a major stationary source, and the initial Title V permit application was submitted as required by 40 CFR 70. Renewals are due 6–18 months before expiration. Revisions will be submitted within 12 months of starting operation of any new EU.	PABCO shall submit renewal applications between 6 and 18 months before permit expiration, and revision applications within 12 months of starting operation of any new EU.	PABCO complies with applicable requirements.
AQR 13.2(b)(82)	"Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"	Applicable. PABCO operates engines subject to this AQR.	Applicable monitoring requirements.	PABCO complies with applicable requirements.
AQR 13.2(b)(106)	"Subpart CCCCCC – National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities"	Applicable. The PABCO gasoline tank is an affected unit.	Applicable monitoring requirements.	PABCO complies with applicable requirements.
AQR 14.1(a)	"New Source Performance Standards: 40 CFR Part 60 Incorporated by Reference"	Applicable. PABCO is an affected facility under the regulations. AQR 14 is locally enforceable; however, the NSPS standards referenced are federally enforceable.	Applicable monitoring, recordkeeping, and reporting requirements.	PABCO complies with applicable requirements.
AQR 14.1(b)(69)	"Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants	Applicable. PABCO operates crushers processing more than 25 tons/hour of nonmetallic mineral material.	Applicable performance tests, opacity tests, and monitoring, recordkeeping & reporting requirements.	PABCO complies with applicable requirements.
AQR 14.1(b)(75)	"Subpart UUU – 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, and monitoring, recordkeeping & reporting requirements.	PABCO complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 14.1(b)(82)	Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"	Applicable. Several of the PABCO engines are subject to this regulation.	Applicable monitoring, recordkeeping & reporting requirements.	PABCO complies with applicable requirements.
AQR 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 21	"Acid Rain Permits"	Not Applicable per 40 CFR 72.6(b)(1).	Not applicable.	Not applicable.
AQR 25	"Affirmative Defense for Excess Emissions due to Malfunctions, Startup, and Shutdown"	Applicable. Any upset, break-down, emergency condition, or malfunction which causes emissions of regulated air pollutants in excess of any permit limits shall be reported to the Control Officer. Locally and federally enforceable.	Any upset, breakdown, emergency condition, or malfunction in which emissions exceed any permit limit shall be reported to the Control Officer within 24 hours of the time the owner learns of the emissions.	PABCO complies with applicable requirements.
AQR 26	"Emission of Visible Air Contaminants"	Applicable. Opacity for the PABCO combustion units shall not exceed 20% for more than 3 min. in any 60-min. period.	Compliance determined by EPA Method 9.	PABCO complies with applicable requirements.
AQR 28	"Fuel Burning Equipment"	Applicable. The PM emission rate for the fuel burning equipment is below AQR 28 requirements.	Maximum allowable PM emission rate determined from equation in AQR 28.2.2.	PABCO complies with applicable requirements.
AQR 40	"Prohibitions of Nuisance Conditions"	Applicable. No person shall cause or allow any source to discharge air contaminants (or other material) in quantities that will cause a nuisance. Locally enforceable only.	PABCO's air contaminant emissions are controlled by pollution control devices or good combustion in order to not cause a nuisance.	PABCO complies with applicable requirements.
AQR 41	"Fugitive Dust"	Applicable. PABCO shall take necessary actions to abate fugitive dust from becoming airborne.	PABCO utilizes appropriate best practices to not allow airborne fugitive dust.	PABCO complies with applicable requirements.
AQR 42	"Open Burning"	Applicable. If PABCO burns combustible material in open areas, the Control Officer will approve it in advance. Locally enforceable rule only.	PABCO will contact DAQ and obtain advance approval for burning activities identified in AQR 42.	PABCO complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 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 an hour, if the odor causes a nuisance, and if odor detection is separated by at least 15 minutes. Locally enforceable rule only.	PABCO is not expected to cause odors.	PABCO complies with applicable requirements.
AQR 70.4	"Emergency Procedures"	Applicable. PABCO submitted an emergency standby plan for reducing or eliminating emissions in the Section 16 OP application.	PABCO submitted an emergency standby plan and received the Section 16 OP.	PABCO complies with applicable requirements.

Table XI-2: Applicable Federal Air Quality Regulations

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR Part 52.21	"Approval and Promulgation of Implementation Plans: Subpart A—General Provisions"	Applicable. PABCO will comply with all applicable definitions.	PABCO will continue to meet BACT and other impact analysis requirements by monitoring & keeping records of emission data.	PABCO complies with applicable state SIP requirements, including monitoring and keeping records of emission data.
40 CFR Part 52.1470	"Approval and Promulgation of Implementation Plans: Subpart DD—Nevada" [SIP rules]	Applicable. PABCO is classified as a Title V source, so SIP rules apply.	Applicable requirements for monitoring & keeping records of emission data.	PABCO complies with applicable state SIP requirements, including monitoring and keeping records of emission data.
40 CFR Part 60	"Appendix A-3 to Part 60— Test Methods 4 through 5I" (particulate matter)	Applicable. Emissions from stacks are subject to PM standards.	EPA Test Method 5.	PABCO complies with applicable requirements.
40 CFR Part 60	Appendix A-4 to Part 60—Test Methods 6 through 10B" (Method 9, opacity)	Applicable. Emissions from stacks are subject to opacity standards.	EPA Test Method 9.	PABCO complies with applicable requirements.
40 CFR 60, Subpart A	"Standards of Performance for New Stationary Sources – General Provisions"	Applicable. PABCO is an affected facility under this rule.	Applicable monitoring, recordkeeping & reporting requirements.	PABCO complies with applicable requirements.
40 CFR 60, Subpart OOO	"Standards of Performance for Nonmetallic Mineral Processing Plants"	Applicable. PABCO is an affected facility under this rule.	Applicable monitoring, recordkeeping & reporting requirements.	PABCO complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR 60, Subpart UUU	"Standards of Performance for Calciners and Dryers in Mineral Industries"	Applicable. PABCO is an affected facility under this rule.	Applicable monitoring, recordkeeping & reporting requirements.	PABCO complies with applicable requirements.
40 CFR 60, Subpart IIII	"Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"	Applicable. Three PABCO engines are subject to this rule.	Applicable monitoring, recordkeeping & reporting requirements.	PABCO complies with applicable requirements.
40 CFR Part 63, Subpart ZZZZ	"National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"	Applicable. One PABCO engine is subject to this rule.	Applicable monitoring, performance testing, recordkeeping & reporting requirements.	PABCO complies with applicable requirement.
40 CFR Part 63, Subpart CCCCCC	"National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities"	Applicable. The PABCO gasoline tank is subject to the requirements of this rule.	Applicable monitoring, recordkeeping & reporting requirements.	PABCO complies with applicable requirements.
40 CFR Part 64	"Compliance Assurance Monitoring"	Applicable. PABCO has PM_{10} emissions that use an active control device.	PABCO monitors pressure differential and opacity to demonstrate compliance with PM_{10} emission limits.	PABCO complies with applicable requirements.
40 CFR 68	"Chemical Accident Prevention Provisions"	Not Applicable. PABCO does not store or handle any chemicals subject to this rule.	Not applicable.	Not applicable.
40 CFR Part 70	"State Operating Permit Programs"	Applicable. PABCO is a major stationary source permitted under this rule. The initial Title V permit application was submitted as required. Renewals are due 6–18 months before expiration; revisions will be submitted within 12 months of starting operation of any new EUs.	The previous Part 70 OP renewal was issued 01/29/2020. This renewal application was submitted on 07/25/2024. Applications for new EUs will be submitted within 12 months of startup.	PABCO complies with applicable requirements.
40 CFR Part 72	"Permits Regulation"	Not Applicable.	Not applicable.	Not applicable.
40 CFR Part 75	"Continuous Emission Monitoring"	Not Applicable.	Not applicable.	Not applicable.

Table XI-3: Streamlining Demonstration

EU	Regulation	Regulatory Standard	Permit Limit	Standard Averaging Period	Permit Limit Averaging Period	Is Permit Limit Equal or More Stringent?	Streamlining Statement
B1, B3, B37, S07, B40, B42, B41, S13, B25, B29, B32, B33, B34, D5, and D6	40 CFR 60.672 (Subpart OOO)	10% opacity	10% opacity	6 consecutive minutes	6 consecutive minutes	Yes	The permit limit is as stringent as the standard.
B2	40 CFR 60.672 (Subpart OOO)	15% opacity	15% opacity	6 consecutive minutes	6 consecutive minutes	Yes	The permit limit is as stringent as the standard.
K10	40 CFR 60.672 (Subpart OOO)	7% opacity	7% opacity	6 consecutive minutes	6 consecutive minutes	Yes	The permit limit is as stringent as the standard.
B35, D1 - D4, D7-D10, D13, D16, D19, D22, D25, D26, D28, D31, D34, D36, D42, D43, D44, E1–E23, E25–E27a, E29–E37a, G1, G4–G7, G9–G13, G15–G18, G20–G22, H1–H8, H10–H20, H22, H24, H27–H30, H33–H35	40 CFR 60.672 (Subpart OOO)	7% opacity	7% opacity	6 consecutive minutes	6 consecutive minutes	Yes	The permit limit is as stringent as the standard.
		0.05 g/dscm	0.05 g/dscm	NA	NA	Yes	
B36	40 CFR 60.732 (Subpart UUU)	10% opacity	10% opacity			Yes	The permit limit is as stringent as the standard.
		0.057 g/dscm	0.057 g/dscm			Yes	
D11, D14, D17, D20, D23, D29, D32, D35, G3, G8, G14, and G19	40 CFR 60.732 (Subpart UUU)	10% opacity	10% opacity			Yes	The permit limit is as stringent as the standard.
		0.092 g/dscm	0.092 g/dscm			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			Yes	The permit limit is as stringent as the standard.

XII. ENVIRONMENTAL JUSTICE

The primary principle of environmental justice is that all people have a right to live in a healthful environment that is protected from industrial pollution. Environmental justice focuses on the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

The EPA EJ Screen website provides demographic indicators (e.g., low-income communities, communities of color, and tribal/indigenous communities) with environmental indicators in order to conduct a screening of a community potentially disproportionately and adversely affected by environmental and human health harms or risks.

The PABCO gypsum mine is a wallboard manufacturing facility is located outside of the Las Vegas metropolitan area. The nearest residential area in Las Vegas is approximately 8 miles west of the source. In order to obtain reasonable demographic data, a 13 mile radius from the center of the source the was selected. The area within this circle equates to 531 square miles and represents a residential population of 343,664. The statistics indicate that there is a high percentile of the socioeconomic indicators in this area. However, there is no increase for any criteria pollutant associated with this permitting action. Therefore, additional outreach is not warranted.

Map of Selected Area

Languages Spoken at Home

LANGUAGE	PERCENT
English	53%
Spanish	41%
Other Indo-European	1%
Tagalog (including Filipino)	3%
Other Asian and Pacific Island	1%
Total Non-English	47%

Environmental and Socioeconomic Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
ENVIRONMENTAL BURDEN INDICATORS					
Particulate Matter 2.5 ($\mu g/m^3$)	8.54	8.15	58	8.45	62
Ozone (ppb)	69.1	69.2	39	61.8	83
Nitrogen Dioxide (NO_2) (ppbv)	10	10	39	7.8	77
Diesel Particulate Matter ($\mu g/m^3$)	0.509	0.388	67	0.191	95
Toxic Releases to Air (toxicity-weighted concentration)	350	1,400	72	4,600	40
Traffic Proximity (daily traffic count/distance to road)	1,600,000	1,800,000	49	1,700,000	67
Lead Paint (% Pre-1960 Housing)	0.024	0.063	66	0.3	20
Superfund Proximity (site count/km distance)	0	0.11	0	0.39	0
RMP Facility Proximity (facility count/km distance)	1.1	0.4	89	0.57	82
Hazardous Waste Proximity (facility count/km distance)	4.3	3.3	60	3.5	75
Underground Storage Tanks (count/km^2)	3.6	3.2	69	3.6	73
Wastewater Discharge (toxicity-weighted concentration/m distance)	120000	30000	91	700000	98
Drinking Water Non-Compliance (points)	0	0.39	0	2.2	0
SOCIOECONOMIC INDICATORS					
Demographic Index USA	2.23	N/A	N/A	1.34	82
Supplemental Demographic Index USA	2.23	N/A	N/A	1.64	82
Demographic Index State	2.56	1.81	78	N/A	N/A
Supplemental Demographic Index State	1.9	1.44	75	N/A	N/A
People of Color	75%	51%	79	40%	80
Low Income	44%	32%	72	30%	75
Unemployment Rate	9%	7%	69	6%	78
Limited English Speaking Households	10%	6%	80	5%	85
Less Than High School Education	26%	14%	82	11%	88
Under Age 5	7%	5%	69	5%	68
Over Age 64	12%	18%	40	18%	33

HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	19%	20%	31	20%	46
Heart Disease	5.3	5.7	43	5.8	41
Asthma	10.6	10.1	73	10.3	61
Cancer	4.6	6	25	6.4	16
Persons with Disabilities	13.1%	13.7%	51	13.7%	51

CLIMATE INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	2%	6%	45	12%	20
Wildfire Risk	11%	33%	61	14%	81

CRITICAL SERVICE GAPS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	15%	12%	68	13%	67
Lack of Health Insurance	17%	12%	74	9%	88
Housing Burden	Yes	N/A	N/A	N/A	N/A
Transportation Access Burden	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	17
Water Dischargers	529
Air Pollution	26
Brownfields	10
Toxic Release Inventory	33

Other community features within defined area:

Schools	81
Hospitals	12
Places of Worship	45

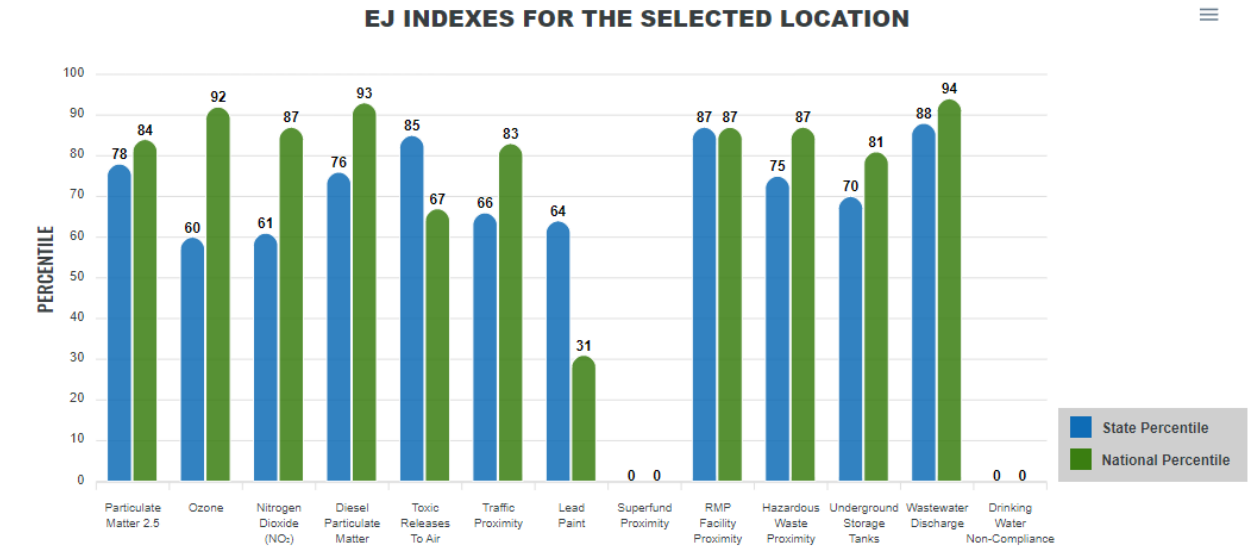
Other environmental data:

Air Non-attainment	Yes
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.



XIII. PERMIT SHIELD

The request for a permit shield was withdrawn on August 26, 2024.

XIV. INCREMENT ANALYSIS

PABCO Gypsum is a major source in Hydrographic Area 215 (Black Mountains Area). Permitted emission units include gypsum mining and processing. Since minor source baseline dates for NO_X (July 19, 1989) and PM_{10} (June 18, 1993) have been triggered, Prevention of Significant Deterioration (PSD) increment analysis is required.

DAQ modeled the source using AERMOD to track the increment consumption. Stack data submitted by the applicant were supplemented with information available for similar emission units. Five years (2011 to 2015) of meteorological data from the McCarran Station were used in the model. U.S. Geological Survey National Elevation Dataset terrain data were used to calculate elevations. Table XIV-1 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.

Table XIV-1: PSD Increment Consumption

Pollutant	Averaging Period	Source's PSD Increment Consumption (µg/m^3)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
PM_{10}	24-hour	4.28[1]	688628	4009853
PM_{10}	Annual	1.05	691795	4013457
NO_X	Annual	5.39	693435	4006130

[1] Highest Second High Concentration.

XV. PUBLIC PARTICIPATION

This is a renewal of the OP. Therefore, the source meets the criteria requiring public participation according to 12.5.2.17.

XVI. ATTACHMENTS

A-1. PTE for Gypsum Processing

EU	Description	Throughput (tons/yr)	EF (lbs/ton)		PM_{10} (tons/yr)	
			PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
A1	Material Loading	2,300,000	0.000092	0.0000138	0.11	0.02
B1	Hopper Feeder	2,300,000	0.000046	0.0000069	0.05	0.01
B2	Hopper Feeder to Crusher	2,300,000			0.62	0.09
	Primary Crusher	2,300,000	0.00054	0.000081		
	Crusher to Conveyor	2,300,000				
B3	Conveyor Belt to Conveyor Belt	2,300,000	0.000046	0.0000069	0.26	0.04
	Conveyor Belt to Conveyor Belt	2,300,000	0.000046	0.0000069		
	Conveyor Belt to Conveyor Belt	2,300,000	0.000046	0.0000069		
	Conveyor Belt to Transfer Belt	2,300,000	0.000046	0.0000069		
	Transfer Belt to Stacker	2,300,000	0.000046	0.0000069		
B37	Apron Feeder to Ore Reclaim Belt	2,300,000	0.000046	0.0000069		
S07	Ore Reclaim Belt	2,300,000	Included with B40		0	0
B40	Ore Reclaim Belt to Screen	2,300,000	Included with B40		2.53	0.17
	Screen	2,300,000	0.0022	0.00015		
	Screen to Collection Belt	2,300,000	Included with B40			
	Screen to Hammer Mill	2,300,000	Included with B40			
B42	Collection Belt	2,300,000	0.000046	0.0000069	0.05	0.01
B41	Hammer Mill to Recycle Belt	2,300,000	0.00054	0.000081	0.62	0.09
S13	Recycle Belt	2,300,000	0.000046	0.0000069	0.05	0.01

EU	Description	Throughput (tons/yr)	EF (lbs/ton)		PM_{10} (tons/yr)	
			PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
B25	Rotary Dryer to Conveyor Belt	2,300,000	5.5E-06	8.42E-07	0.02	0.01
	Conveyor Belt to Conveyor Belt	2,300,000	5.5E-06	8.42E-07		
	Conveyor Belt Drop into Dome	2,300,000	5.5E-06	8.42E-07		
B28	Dome Stockpile	1.13	0.166 lb/acre-day	0.249 lb/acre-day	0.03	0.01
B29	Conveyor Belt to Conveyor Belt; Dome Bypass (alternate scenario)	2,300,000	Included with EU: B25		0	0
	Conveyor Belt to Stockpile; Dome Bypass (alternate scenario)	2,300,000				
B34	Conveyor to Hopper Feeder	2,300,000	0.000046	0.0000069	0.05	0.01
B35	Hopper Bin	2,300,000	5.61E-06	8.42E-07	0.01	0.01
B32	Hopper to Conveyor Belt	2,300,000	0.000046	0.0000069	0.05	0.01
B33	Hopper to Conveyor Belt (alternate)	2,300,000	Included with B32		0	0
B36	Rotary Dryer #2 (aggregate processing)	2,300,000	0.01	0.0015	11.50	1.73
T01	Truck Loading	100,000	0.001	0.0015	0.05	0.01
D1	Belt Feeder Drop from Dome	766,667	5.5E-06	8.42E-07	0.01	0.01
D2	Belt Feeder Drop from Dome	766,667	5.5E-06	8.42E-07	0.01	0.01
D3	Belt Feeder Drop from Dome	766,667	5.5E-06	8.42E-07	0.01	0.01
D4	Conveyor Belt	2,300,000	Included with D43		0	0
D43	Conveyor Belt to Transfer Screen	2,300,000	Included with D43		0.41	0.01
	Transfer Station Screen	2,300,000	0.00036	2.5E-07		
	Screen to Belt	2,037,200	Included with D43			
	Screen to Transfer Station Crusher	262,800	Included with D43			
D44	Transfer Station Crusher	262,800	0.000012	0.0000018	0.01	0.01
	Crusher to Belt	262,800	Included with D44			
D5	Variable Splitter	2,300,000	0.00011	0.0000165	0.13	0.02
D6	Bypass Conveyor	2,300,000	0.00011	0.0000165	0.13	0.02
D7	Conveyor Belt Drop	2,300,000	5.5E-06	8.42E-07	0.01	0.01
D8	Tripper Station	2,300,000	5.5E-06	8.42E-07	0.01	0.01
D9	Screw Conveyor	122,667	0.0001	0.000015	0.01	0.01
D18	Screw Conveyor	122,667	0.0001	0.000015	0.01	0.01
D27	Screw Conveyor	122,667	0.0001	0.000015	0.01	0.01

EU	Description	Throughput (tons/yr)	EF (lbs/ton)		PM_{10} (tons/yr)	
			PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
D10	Rock Bin #1	40,889	0.0001	0.000015	0.00	0.01
D11	Impeller Mill #1 (aggregate processing)	40,889	0.02725	0.0041	0.56	0.08
D13	Rock Bin #2	40,889	0.0001	0.000015	0.01	0.01
D14	Impeller Mill #2 (aggregate processing)	40,889	0.02725	0.0041	0.56	0.08
D16	Rock Bin #3	40,889	0.0001	0.000015	0.00	0.01
D17	Impeller Mill #3 (aggregate processing)	40,889	0.02725	0.0041	0.56	0.08
D19	Rock Bin #4	40,889	0.0001	0.000015	0.00	0.01
D20	Impeller Mill #4 (aggregate processing)	40,889	0.02725	0.0041	0.56	0.08
D22	Rock Bin #5	40,889	0.0001	0.000015	0.00	0.01
D23	Impeller Mill #5 (aggregate processing)	40,889	0.02725	0.0041	0.56	0.08
D25	Rock Bin #6	40,889	0.0001	0.000015	0.01	0.01
D26	Impeller Mill #6 (aggregate processing)	40,889	0.02725	0.0041	0.56	0.08
D28	Rock Bin #7	40,889	0.0001	0.000015	0.01	0.01
D29	Impeller Mill #7 (aggregate processing)	40,889	0.02725	0.0041	0.56	0.08
D31	Rock Bin #8	40,889	0.0001	0.000015	0.01	0.01
D32	Impeller Mill #8 (aggregate processing)	40,889	0.02725	0.0041	0.56	0.08
D34	Rock Bin #9	40,889	0.0001	0.000015	0.01	0.01
D35	Impeller Mill #9 (aggregate processing)	40,889	0.02725	0.0041	0.56	0.08
D36	Screw Conveyor to Screw Conveyor	55,200	0.0001	0.000015	0.02	0.01
	Screw Conveyor to Screw Conveyor	55,200	0.0001	0.000015		
	Screw Conveyor to Screw Conveyor	55,200	0.0001	0.000015		
	Screw Conveyor to Stucco Elevator	55,200	0.0001	0.000015		
	Screw Conveyor to Screw Conveyor	55,200	0.0001	0.000015		
	Screw Conveyor to Screw Conveyor	55,200	0.0001	0.000015		
D42	Screw Conveyor to Screw Conveyor	331,200	0.002	0.0003	0.33	0.05
E1	Stucco Elevator #1A	331,200	0.000115	0.0000173	0.02	0.01
E2	Screw Conveyor	331,200	0.000115	0.0000173	0.02	0.01
E3	Stucco Bin #1	331,200	0.000115	0.0000173	0.02	0.01
E4	Screw Conveyor	331,200	0.000115	0.0000173	0.02	0.01

EU	Description	Throughput (tons/yr)	EF (lbs/ton)		PM_{10} (tons/yr)	
			PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
E5	Entoleter Elevator	331,200	0.000115	0.0000173	0.02	0.01
E6	Transfer Point	331,200	0.000115	0.0000173	0.02	0.01
E7	Entoleter (Mill)	331,200	0.00001	0.000015	0.01	0.01
E8	Screw Conveyor	331,200	0.000115	0.0000173	0.02	0.01
E9	Screw Conveyor	331,200	0.000115	0.0000173	0.02	0.01
E10	Stucco Elevator #1	331,200	0.000115	0.0000173	0.02	0.01
E11	Screw Conveyor	331,200	0.000115	0.0000173	0.02	0.01
E12	Stucco Bin #2	397,400	0.000115	0.0000173	0.02	0.01
E13	Rotary Valve	397,400	0.000115	0.0000173	0.02	0.01
E14	Bin #2 Discharge Screw	397,400	0.000115	0.0000173	0.02	0.01
E15	Transfer Point	397,400	0.000115	0.0000173	0.02	0.01
E16	Scalping Screw	397,400	0.000115	0.0000173	0.02	0.01
E17	Scale (Transfer Point)	66,240	0.000115	0.0000173	0.01	0.01
E18	Return Screw	66,240	0.000115	0.0000173	0.01	0.01
E19	Stucco Recirculating Elevator	66,240	0.000115	0.0000173	0.01	0.01
E20	Bin Recirculation Screw	66,240	0.000115	0.0000173	0.01	0.01
E21	Rotary Valve	397,400	0.000115	0.0000173	0.02	0.01
E22	Live Bottom Bin	397,400	0.000115	0.0000173	0.02	0.01
E23	Metering Screw Conveyor	397,400	0.000115	0.0000173	0.02	0.01
E25	Accelerator Bin	1,197	0.000115	0.0000173	0.01	0.01
E26	Feeder	1,197	0.000115	0.0000173	0.01	0.01
E27	Additive Bin	8,346	0.000115	0.0000173	0.01	0.01
E27a	Additive Bin/Feeder	8,346	0.023	0.000345	0.10	0.01
E29	Additive Bin	8,346	0.000115	0.0000173	0.01	0.01
E31	Additive Bin	8,346	0.000115	0.0000173	0.01	0.01
E33	Additive Bin	8,346	0.000115	0.0000173	0.01	0.01
E28	Feeder	8,346	0.000115	0.0000173	0.01	0.01
E30	Feeder	8,346	0.000115	0.0000173	0.01	0.01
E32	Feeder	8,346	0.000115	0.0000173	0.01	0.01
E34	Feeder	8,346	0.000115	0.0000173	0.01	0.01
E43	Feeder	44	0.000115	0.0000173	0.01	0.01
E24	Mixing Screw Conveyor	450,000	0.000115	0.0000173	0.03	0.01
E35	Mixer	450,000	0.000115	0.0000173	0.03	0.01
E37	End Saw	450,000,000	0.0000057	8.55E-07	1.28	0.19
E37a	End Saw to Conveyor	10,000	0.023	0.00345	0.60	0.10
	Conveyor to Bunker	10,000	0.023	0.00345		
	Wind Erosion	10,000	0.051	0.00765		
	Loader to Recycle Stockpile	10,000	0.023	0.00345		

EU	Description	Throughput (tons/yr)	EF (lbs/ton)		PM_{10} (tons/yr)	
			PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
E41	Dunnage/Slutter system	36,000,000 ft^2/yr	0.0000342	0.0000051	0.62	0.09
E42	Cutback Saw Process	2,750,000 ft^2/yr	0.0000089	0.0000014	0.01	0.01
F1	Screw Conveyor	23,214	Enclosed		0	0
F2	Vacuum Feed	23,214	Enclosed		0	0
F3	Storage Bin	23,214	Enclosed		0	0
F4	Storage Bin	23,214	Enclosed		0	0
F5	Crusher	52,560	Enclosed		0	0
F6	Screw Conveyor	23,214	Enclosed		0	0
F7	Ball Mill	23,214	Enclosed		0	0
F8	Elevator Conveyor	23,214	Enclosed		0	0
G1	Screw Conveyor Drop	452,000	0.0001	0.000015	0.02	0.01
G12	Screw Conveyor Drop	580,000	0.0001	0.000015	0.03	0.01
G2	Rock Bin #10	226,000	0.0001	0.000015	0.01	0.01
G3	Impeller Mill #10 (aggregate only)	226,000	0.02725	0.0041	3.08	0.46
G4	Double Cone Classifier	226,000	0.0001	0.000015	0.01	0.01
G5	Cyclone Collector	226,000	0.0001	0.000015	0.01	0.01
G7	Rock Bin #11	226,000	0.0001	0.000015	0.01	0.01
G8	Impeller Mill #11 (aggregate only)	226,000	0.02725	0.0041	3.08	0.46
G9	Double Cone Classifier	226,000	0.0001	0.000015	0.01	0.01
G10	Cyclone Collector	226,000	0.0001	0.000015	0.01	0.01
G13	Rock Bin #12	290,000	0.0001	0.000015	0.01	0.01
G14	Impeller Mill #12 (aggregate only)	290,000	0.02725	0.0041	3.95	0.59
G15	Double Cone Classifier	290,000	0.0001	0.000015	0.01	0.01
G16	Cyclone Collector	290,000	0.0001	0.000015	0.01	0.01
G18	Rock Bin #13	290,000	0.0001	0.000015	0.01	0.01
G19	Impeller Mill #13 (aggregate only)	290,000	0.02725	0.0041	3.95	0.59
G20	Double Cone Classifier	290,000	0.0001	0.000015	0.01	0.01
G21	Cyclone Collector	290,000	0.0001	0.000015	0.01	0.01
G6	Feed Screw Conveyor Drop	452,000	0.0001	0.000015	0.02	0.01
G11	Feed Screw Conveyor Drop	452,000	0.0001	0.000015	0.02	0.01
G17	Feed Screw Conveyor Drop	580,000	0.0001	0.000015	0.03	0.01
G22	Feed Screw Conveyor Drop	580,000	0.0001	0.000015	0.03	0.01
H1	Stucco Storage Bin #3	516,000	0.0001	0.000015	0.03	0.01

EU	Description	Throughput (tons/yr)	EF (lbs/ton)		PM_{10} (tons/yr)	
			PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
H2	Stucco Storage Bin #4	516,000	0.0001	0.000015	0.03	0.01
H3	Stucco Screw Conveyor	1,032,000	0.0001	0.000015	0.05	0.01
H4	Stucco Bucket Elevator	1,032,000	0.0001	0.000015	0.05	0.01
H5	Recirculating Screw Conveyor	516,000	0.0001	0.000015	0.03	0.01
H7	Stucco Feed Elevator	1,032,000	0.0001	0.000015	0.05	0.01
H8	Stucco Metering	1,032,000	0.0001	0.000015	0.05	0.01
H6	Stucco Surge Bin	1,032,000	0.0001	0.000015	0.05	0.01
H11	Additive Bin	119,500	0.0001	0.000015	0.01	0.01
H11a	Additive Bin/Feeder	119,500	0.02	0.003	1.20	0.18
H13	Additive Bin	119,500	0.0001	0.000015	0.01	0.01
H15	Additive Bin	119,500	0.0001	0.000015	0.01	0.01
H19	Additive Bin	119,500	0.0001	0.000015	0.01	0.01
H17	Accelerator Bin	8,803	0.0001	0.000015	0.01	0.01
H12	Feeder	119,500	0.0001	0.000015	0.01	0.01
H14	Feeder	119,500	0.0001	0.000015	0.01	0.01
H16	Feeder	119,500	0.0001	0.000015	0.01	0.01
H18	Feeder	8,803	0.0001	0.000015	0.01	0.01
H20	Feeder	119,500	0.0001	0.000015	0.01	0.01
H37	Feeder	29	0.0001	0.000015	0.01	0.01
H10	Mixing Screw Conveyor	1,638,332	0.0001	0.000015	0.08	0.01
H22	Pin Mixer	1,638,332	0.0001	0.000015	0.08	0.01
H24	End Saw	650,000,000 ft^2/yr	0.0000057	8.55E-07	1.85	0.28
H27	Stucco Storage Bin #5	580,000	0.0001	0.000015	0.03	0.01
H28	Stucco Screw Conveyor	580,000	0.0001	0.000015	0.03	0.01
H29	Recirculating Screw Conveyor	580,000	0.0001	0.000015	0.03	0.01
H30	End Saw	650,000,000 ft^2/yr	0.0000057	8.55E-07	1.85	0.28
H33	Stucco Cooler	1,032,000	0.0001	0.000015	0.05	0.01
H34	Stucco Screw Conveyor	516,000	0.0001	0.000015	0.03	0.01
H35	Stucco Screw Conveyor	516,000	0.0001	0.000015	0.03	0.01
K01	Screw Grinder	175,200	0.000075	0.0000113	0.01	0.01
K02	Perforated Screw Conveyor	175,200	0.0000057	0.0000011	0.01	0.01
K04	Belt Conveyor	168,192	0.0000057	0.0000011	0.01	0.01
K05	Roller Mill	168,192	0.000075	0.0000113	0.01	0.01
K06	Vibratory Screen	168,192	0.000075	0.0000113	0.01	0.01

EU	Description	Throughput (tons/yr)	EF (lbs/ton)		PM_{10} (tons/yr)	
			PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
K07	Belt Conveyor to Belt Conveyor	168,192	0.0000057	0.0000011	0.01	0.01
	Belt Conveyor to Belt Conveyor	168,192	0.0000057	0.0000011		
	Belt Conveyor to Storage Bin	168,192	0.0000057	0.0000011		
K10	Storage Bin	168,192	0.0000057	0.0000011	0.01	0.01
K11	Screw Conveyor to Screw Conveyor	168,192	0.0000057	0.0000011	0.01	0.01
	Screw Conveyor to Screw Conveyor	168,192	0.0000057	0.0000011		
	Screw Conveyor to Belt Conveyor (EU: D7)	168,192	0.0000057	0.0000011		
K14	Haul Roads; Unpaved	72,550	0.757	0.0767	28.97	3.01
	Haul Roads; Paved	19,909	0.1514	0.02271		
M1	Stockpiles	88.87	1.66	0.249	26.92	7.05

A-2: PTE/Applicability Calculations for Natural Gas-Fired Rotary Dryer

				Emission Factor	Potential Emissions		
EU#:	B36			(lb/mmBtu)	lb/hr	lb/day	ton/yr
Make:	Gencor		**PM10**	6.85E-05	0.01	0.14	0.03
Model:	CFS225		**PM2.5**	6.85E-05	0.01	0.14	0.03
S/N:	225BH155898-07-NA		**NOx**	0.0400	3.40	81.60	14.89
85.0	mmBtu/hr		**CO**	0.1540	13.09	314.16	57.33
24.0	hr/day		**SOx**	0.0006	0.05	1.22	0.22
8760	hr/yr		**VOC**	0.0028	0.24	5.67	1.03
			HAP	1.90E-03	0.16	3.88	0.71
BACT:		**%O2**	**Lead**	4.90E-07	4.17E-05	1.00E-03	1.83E-04
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas 2						

A-3: PTE/Applicability Calculations for Natural Gas Combusted in Impeller Mills

				Emission Factor	Potential Emissions (per unit)		
EU#:	D11, D14, D17, D20, D23, D26, D29. D32, D35			(lb/mmBtu)	lb/hr	lb/day	ton/yr
Make:	CE Raymond		**PM10**	6.00E-05	0.01	0.01	0.01
Model:	50		**PM2.5**	6.00E-05	0.01	0.01	0.01
S/N:			**NOx**	0.065	0.33	7.80	1.42
5.0	mmBtu/hr		**CO**	0.0102	0.05	1.22	0.22
24.0	hr/day		**SOx**	0.0006	0.01	0.07	0.01
8760	hr/yr		**VOC**	0.00528	0.03	0.63	0.12
			HAP	1.900E-03	0.01	0.23	0.04
BACT:		**%O2**	**Lead**	4.90E-07	2.45E-06	5.88E-05	1.07E-05
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas 2						

A-4: PTE/Applicability Calculations for Natural Gas Combusted in Impeller Mills

				Emission	Potential Emissions (per unit)		
EU#:	D46 & D48			Factor	lb/hr	lb/day	ton/yr
Make:	TBD						
Model:	83		**PM10**	0.0000	0.00	0.00	0.00
S/N:	TBD		**PM2.5**	0.0000	0.00	0.00	0.00
			NOx	0.098	2.21	52.92	9.66
22.5	mmBtu/hr		**CO**	0.0824	1.85	44.50	8.12
24.0	hr/day		**SOx**	0.0006	0.01	0.32	0.06
8760	hr/yr		**VOC**	0.0054	0.12	2.92	0.53
			HAP	0.00190	0.04	1.03	0.19
BACT:		**%O2**	**Lead**	4.90E-07	1.10E-05	2.65E-04	4.83E-05
	ppm NOx	3.0					
	ppm CO	3.0					
	Natural Gas						
Fuel:	2						

A-5: PTE/Applicability Calculations for Natural Gas Combusted in Paper Heater

				Emission	Potential Emissions		
EU#:	E23a			Factor			
Make:				(lb/mmBtu)	lb/hr	lb/day	ton/yr
Model:			**PM10**	0.0075	0.03	0.83	0.15
S/N:			**PM2.5**	0.0075	0.03	0.83	0.15
			NOx	0.122	0.56	13.54	2.47
4.625	mmBtu/hr		**CO**	0.148	0.68	16.43	3.00
24.0	hr/day		**SOx**	0.0006	0.01	0.07	0.01
8760	hr/yr		**VOC**	0.0054	0.02	0.60	0.11
			HAP	0.0019	0.01	0.21	0.04
BACT:		**%O2**	**Lead**	4.90E-07	2.27E-06	5.44E-05	9.93E-06
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas 2						

A-6: PTE/Applicability Calculations for Natural Gas Combusted in Coe Board Dryer

				Emission	Potential Emissions		
EU#:	E39			Factor			
Make:	Coe			(lb/mmBtu)	lb/hr	lb/day	ton/yr
Model:			**PM10**	0.0137	1.51	36.17	6.60
S/N:			**PM2.5**	0.0136	1.50	35.90	6.55
			NOx	0.14	15.40	369.60	67.45
110.0	mmBtu/hr		**CO**	0.035	3.85	92.40	16.86
24.0	hr/day		**SOx**	0.0006	0.07	1.58	0.29
8760	hr/yr		**VOC**	0.0028	0.31	7.39	1.35
			HAP	0.0010	0.11	2.64	0.48
BACT:		**%O2**	**Lead**	4.90E-07	5.39E-05	1.29E-03	2.36E-04
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas 2						

A-7: PTE/Applicability Calculations for Natural Gas Combusted in Impeller Mills

EU#:	G3, G8			Emission Factor (lb/mmBtu)	Potential Emissions (per unit)		
Make:	Alston				lb/hr	lb/day	ton/yr
Model:	83		PM10	0.0120	0.23	5.47	1.00
S/N:	See OP & TSD		PM2.5	0.0119	0.23	5.43	0.99
			NOx	0.1	1.90	45.60	8.32
19.0	mmBtu/hr		CO	0.021	0.40	9.58	1.75
24.0	hr/day		SOx	0.0006	0.01	0.27	0.05
8760	hr/yr		VOC	0.0053	0.10	2.42	0.44
			HAP	0.0019	0.04	0.85	0.15
BACT:		%O2	Lead	4.90E-07	9.31E-06	2.24E-04	4.08E-05
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas 2						

A-8: PTE/Applicability Calculations for Natural Gas Combusted in Impeller Mills

EU#:	G14, G19			Emission Factor (lb/mmBtu)	Potential Emissions (per unit)		
Make:	Alston				lb/hr	lb/day	ton/yr
Model:	83		PM10	0.0076	0.17	4.10	0.75
S/N:	See OP & TSD		PM2.5	0.0075	0.17	4.05	0.74
			NOx	0.14	3.15	75.60	13.80
22.5	mmBtu/hr		CO	0.084	1.89	45.36	8.28
24.0	hr/day		SOx	0.0006	0.01	0.32	0.06
8760	hr/yr		VOC	0.0055	0.12	2.97	0.54
			HAP	0.0020	0.04	1.07	0.20
BACT:		%O2	Lead	4.90E-07	1.10E-05	2.65E-04	4.83E-05
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas 2						

A-9: PTE/Applicability Calculations for Natural Gas Combusted in Paper Heater

EU#:	H20a			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:					lb/hr	lb/day	ton/yr
Model:			PM10	0.0075	0.04	0.95	0.17
S/N:			PM2.5	0.0075	0.04	0.95	0.17
			NOx	0.122	0.64	15.37	2.81
5.25	mmBtu/hr		CO	0.149	0.78	18.77	3.43
24.0	hr/day		SOx	0.0006	0.01	0.08	0.01
8760	hr/yr		VOC	0.0054	0.03	0.68	0.12
			HAP	0.00190	0.01	0.24	0.04
BACT:		%O2	Lead	4.90E-07	2.57E-06	6.18E-05	1.13E-05
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas 2						

A-10: PTE/Applicability Calculations for Natural Gas Combusted in Flakt Board Dryer[1]

				Emission Factor	Potential Emissions		
EU#:	H26 - Combustion Zone 1			(lb/mmBtu)	lb/hr	lb/day	ton/yr
Make:	Flakt		**PM10**	0.0138	0.69	16.56	3.02
Model:			**PM2.5**	0.0137	0.69	16.44	3.00
S/N:			**NOx**	0	0.00	0.00	0.00
50.0	mmBtu/hr		**CO**	0.00E+00	0.00	0.00	0.00
24.0	hr/day		**SOx**	0.0006	0.03	0.72	0.13
8760	hr/yr		**VOC**	0.0000	0.00	0.00	0.00
			HAP	0.00198	0.10	2.38	0.43
BACT:		**%O2**	**Lead**	4.90E-07	2.45E-05	5.88E-04	1.07E-04
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas 2						

[1]See Table A-13 for NOx, CO, and VOC calculations

A-11: PTE/Applicability Calculations for Natural Gas Combusted in Flakt Board Dryer[1]

				Emission Factor	Potential Emissions		
EU#:	H26 - Combustion Zone 2			(lb/mmBtu)	lb/hr	lb/day	ton/yr
Make:	Flakt		**PM10**	0.0138	0.54	12.92	2.36
Model:			**PM2.5**	0.0137	0.53	12.82	2.34
S/N:			**NOx**	0	0.00	0.00	0.00
39.0	mmBtu/hr		**CO**	0.00E+00	0.00	0.00	0.00
24.0	hr/day		**SOx**	0.0006	0.02	0.56	0.10
8760	hr/yr		**VOC**	0.0000	0.00	0.00	0.00
			HAP	0.00198	0.08	1.85	0.34
BACT:		**%O2**	**Lead**	4.90E-07	2.45E-05	5.88E-04	1.07E-04
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas 2						

[1]See Table A-13 for NOx, CO, and VOC calculations

A-12: PTE/Applicability Calculations for Natural Gas Combusted in Flakt Board Dryer[1]

				Emission Factor	Potential Emissions		
EU#:	H26 - Combustion Zone 3			(lb/mmBtu)	lb/hr	lb/day	ton/yr
Make:	Flakt		**PM10**	0.0138	0.25	5.96	1.09
Model:			**PM2.5**	0.0137	0.25	5.92	1.08
S/N:			**NOx**	0	0.00	0.00	0.00
18.0	mmBtu/hr		**CO**	0.00E+00	0.00	0.00	0.00
24.0	hr/day		**SOx**	0.0006	0.01	0.26	0.05
8760	hr/yr		**VOC**	0.0000	0.00	0.00	0.00
			HAP	0.00198	0.04	0.86	0.16
BACT:		**%O2**	**Lead**	4.90E-07	8.82E-06	2.12E-04	3.86E-05
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas 2						

[1]See Table A-13 for NOx, CO and VOC calculations

A-13: PTE/Applicability Calculations for Natural Gas Combusted in Flakt Board Dryer[1]

EU	Emission Factors (lb/hr)			hr/yr	PTE (ton/yr)		
	NOx	CO	VOC		NOx	CO	VOC
H26	13.04	11.81	0.47	8,760	57.12	51.73	2.06

[1]Emission factors based on performance testing conducted by PABCO. Refer to Application submitted 01/28/2021.

A-14: PTE/Applicability Calculations for Natural Gas Combusted in Flakt Board Dryer

				Emission Factor (lb/mmBtu)	Potential Emissions		
EU#:	H32 - Combustion Zones 1 and 2						
Make:	Flakt				lb/hr	lb/day	ton/yr
Model:			PM10	0.0076	0.34	8.21	1.50
S/N:			PM2.5	0.0075	0.34	8.10	1.48
			NOx	0.14	6.30	151.20	27.59
45.0	mmBtu/hr		CO	0.084	3.78	90.72	16.56
24.0	hr/day		SOx	0.0006	0.03	0.65	0.12
8760	hr/yr		VOC	0.0055	0.25	5.94	1.08
			HAP	0.00198	0.09	2.14	0.39
BACT:		%O2	Lead	4.90E-07	2.21E-05	5.29E-04	9.66E-05
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas	2					

A-15: PTE/Applicability Calculations for Natural Gas Combusted in Flakt Board Dryer

				Emission Factor (lb/mmBtu)	Potential Emissions		
EU#:	H32 - Combustion Zone 3						
Make:	Flakt				lb/hr	lb/day	ton/yr
Model:			PM10	0.0076	0.23	5.47	1.00
S/N:			PM2.5	0.0075	0.23	5.40	0.99
			NOx	0.14	4.20	100.80	18.40
30.0	mmBtu/hr		CO	0.084	2.52	60.48	11.04
24.0	hr/day		SOx	0.0006	0.02	0.43	0.08
8760	hr/yr		VOC	0.0055	0.17	3.96	0.72
			HAP	0.00198	0.06	1.43	0.26
BACT:		%O2	Lead	4.90E-07	1.47E-05	3.53E-04	6.44E-05
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas	2					

A-16. PTE for Diesel Engine

						Emission Factor	Potential Emissions		
EU#	U03		Horsepower:	464					
Make:	Cummins		Hours/Day:	24.0		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Model:	QSL9-G7		Hours/Year	6200	PM10	1.54E-04	0.07	1.72	0.22
S/N:	L120435661				NOx	5.73E-03	2.66	63.83	8.24
					CO	3.75E-03	1.74	41.74	5.39
Manufacturer Guarantees					SO_2	1.21E-05	0.01	0.14	0.02
PM10	0.07	1			VOC	6.61E-04	0.31	7.37	0.95
NOx	2.6	1			HAP	2.71E-05	0.01	0.30	0.04
CO	1.7	1							
SO_2		1							
VOC	0.3	1							
Engine Type:		2			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

A-17. PTE/Applicability for Diesel Engines

EU#	U04 and U05		Horsepower:	240		Emission Factor	Potential Emissions (per unit)		
Make:	John Deere		Hours/Day:	24.0		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Model:	6068HF120		Hours/Year	500	PM10	4.85E-04	0.12	2.79	0.03
S/N:	See OP & TSD				NOx	7.19E-03	1.72	41.40	0.43
					CO	1.30E-03	0.31	7.49	0.08
Manufacturer Guarantees					SO_2	1.21E-05	0.01	0.07	0.01
PM10	0.22	1			VOC	4.85E-04	0.12	2.79	0.03
NOx	3.26	1			HAP	2.71E-05	0.01	0.16	0.01
CO	0.59	1							
SO_2		1							
VOC	0.22	1							
Engine Type:		2			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

A-18. PTE for Diesel Engine

EU#	U06		Horsepower:	85		Emission Factor	Potential Emissions		
Make:	Perkins		Hours/Day:	24.0		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Model:	1004-42		Hours/Year	800	PM10	2.20E-03	0.19	4.50	0.07
S/N:	AR36677				NOx	1.43E-02	1.22	29.23	0.49
					CO	6.61E-03	0.56	13.49	0.22
Manufacturer Guarantees					SO_2	1.21E-05	0.01	0.02	0.01
PM10	1	1			VOC	4.85E-04	0.04	0.99	0.02
NOx	6.5	1			HAP	2.71E-05	0.01	0.06	0.01
CO	3	1							
SO_2		1							
VOC	0.22	1							
Engine Type:		2			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

A-19. PTE/Applicability for Cooling Towers

EU	Description	Drift Loss % (1)	Flow Rate (gal/min)	TDS (mg/l)	Hours of Operation		PM10 Emissions		PM2.5
					hr/day	hr/yr	lb/hr	ton/yr	ton/yr
I01	Cooling Tower; Evapco	0.001%	1200	6000	24	8760	0.02	0.07	0.07
I02	Cooling Tower; Evapco	0.001%	1200	6000	24	8760	0.02	0.07	0.07
I03	Cooling Tower; Baltimore Aircoil	0.001%	3495	6000	24	8760	0.05	0.22	0.22
							0.09	**0.36**	**0.36**

A-20. PTE/Applicability for Drilling Operations

Proposed limit (holes/yr)	PM_{10} EF (lb/hole)	Potential PM_{10} (tpy)	$PM_{2.5}$ EF (lb/hole)	Potential $PM_{2.5}$ (tpy)
10000	0.68	**3.40**	0.04	**0.20**

A-21. PTE/Applicability for Blasting Operations

Horizontal Area (ft2/blast)	Proposed Blasts (blasts/yr)	PM_{10} EF (lb/blast)	Potential PM_{10} (tpy)	$PM_{2.5}$ EF (lb/blast)	Potential $PM_{2.5}$ (tpy)
50000	58	81.39	**2.36**	4.70	**0.14**

A-22. PTE/Applicability for ANFO Consumption

EU	Description	Pollutant	Consumption (tpy)	EF (lb/ton)	PTE (tpy)
A5	ANFO	NOx	750	11.2	4.20
	Emulsions		90	11.2	0.50
				Total NOx	**4.70**
	ANFO	CO	750	37.5	14.06
	Emulsions		90	37.5	1.69
	High Explosives		14	63	0.44
	Cast TNT Booster		0.9	796	0.36
				Total CO	**16.55**
	ANFO	SO_2	750	2	0.75
	Emulsions		90	2	0.09
				Total SO_2	**0.84**

A-23. PTE/Applicability for Gasoline Dispensing

EU	EU Description	Annual Throughput (gallons)	Pollutant	EF (lbs/gal)	EF Description	PTE (tons/yr)
J01	Gasoline Dispensing	22,000	VOC	Calculation ftom TANKS	Standing Loss	2.6
				Calculation ftom TANKS	Working Loss	0.04
				0.011	Dispensing	0.12
				0.0007	Spillage	0.01
					Total VOC	2.77
			HAP (28% of VOC)	0.28		0.78

A-24. PTE/Applicability for Ink Consumption

EU	Description	Annual Throughput (lbs/yr)	Pollutant	VOC Content (percent/100)	PTE (tons/yr)
E40	Alpha Foamer	270,000	VOC	0.16	21.60
	Black Ink	400		0.99	0.20
	Make-Up Ink	500		1	0.25
	Silicone	283,200		0.02	2.83
H36	Alpha Foamer	390,000	VOC	0.16	31.20
	Black Ink	500		0.11	0.03
	Silicone	188,800		0.02	1.89
				Total VOC	**58.00**

A-25. PTE for GHG

EU	Description	Annual Throughput	Units	Pollutant	EF	Units	GHG (ton/yr)	GWP	CO_2e (ton/yr)
A5	Blasting (High Explosive)	14	Ton	CH_4	1.3	lb/ton	0.0091	25	0.23
	Blasting (Cast TNT Boosters)	1	Ton	CH_4	14.3	lb/ton	0.00715	25	0.18
B36	Rotary Dryer #2	788,400	MMBtu	CO_2	117	lb/MMBtu	46121.4	1	46121.40
		788,400	MMBtu	CH_4	0.0022	lb/MMBtu	0.86724	25	21.68
		788,400	MMBtu	N_2O	0.00022	lb/MMBtu	0.086724	298	25.84

EU	Description	Annual Throughput	Units	Pollutant	EF	Units	GHG (ton/yr)	GWP	CO_2e (ton/yr)
D10	IMP Mill #1	43,800	MMBtu	CO_2	117	lb/MMBtu	2562.3	1	2562.30
		43,800	MMBtu	CH_4	0.0022	lb/MMBtu	0.04818	25	1.20
		43,800	MMBtu	N_2O	0.00022	lb/MMBtu	0.004818	298	1.44
D13	IMP Mill #2	43,800	MMBtu	CO_2	117	lb/MMBtu	2562.3	1	2562.30
		43,800	MMBtu	CH_4	0.0022	lb/MMBtu	0.04818	25	1.20
		43,800	MMBtu	N_2O	0.00022	lb/MMBtu	0.004818	298	1.44
D16	IMP Mill #3	43,800	MMBtu	CO_2	117	lb/MMBtu	2562.3	1	2562.30
		43,800	MMBtu	CH_4	0.0022	lb/MMBtu	0.04818	25	1.20
		43,800	MMBtu	N_2O	0.00022	lb/MMBtu	0.004818	298	1.44
D19	IMP Mill #4	43,800	MMBtu	CO_2	117	lb/MMBtu	2562.3	1	2562.30
		43,800	MMBtu	CH_4	0.0022	lb/MMBtu	0.04818	25	1.20
		43,800	MMBtu	N_2O	0.00022	lb/MMBtu	0.004818	298	1.44
D22	IMP Mill #5	43,800	MMBtu	CO_2	117	lb/MMBtu	2562.3	1	2562.30
		43,800	MMBtu	CH_4	0.0022	lb/MMBtu	0.04818	25	1.20
		43,800	MMBtu	N_2O	0.00022	lb/MMBtu	0.004818	298	1.44
D25	IMP Mill #6	43,800	MMBtu	CO_2	117	lb/MMBtu	2562.3	1	2562.30
		43,800	MMBtu	CH_4	0.0022	lb/MMBtu	0.04818	25	1.20
		43,800	MMBtu	N_2O	0.00022	lb/MMBtu	0.004818	298	1.44
D28	IMP Mill #7	43,800	MMBtu	CO_2	117	lb/MMBtu	2562.3	1	2562.30
		43,800	MMBtu	CH_4	0.0022	lb/MMBtu	0.04818	25	1.20
		43,800	MMBtu	N_2O	0.00022	lb/MMBtu	0.004818	298	1.44
D31	IMP Mill #8	43,800	MMBtu	CO_2	117	lb/MMBtu	2562.3	1	2562.30
		43,800	MMBtu	CH_4	0.0022	lb/MMBtu	0.04818	25	1.20
		43,800	MMBtu	N_2O	0.00022	lb/MMBtu	0.004818	298	1.44
D34	IMP Mill #9	43,800	MMBtu	CO_2	117	lb/MMBtu	2562.3	1	2562.30
		43,800	MMBtu	CH_4	0.0022	lb/MMBtu	0.04818	25	1.20
		43,800	MMBtu	N_2O	0.00022	lb/MMBtu	0.004818	298	1.44
G2	IMP Mill #10	166,440	MMBtu	CO_2	117	lb/MMBtu	9736.74	1	9736.74
		166,440	MMBtu	CH_4	0.0022	lb/MMBtu	0.183084	25	4.58
		166,440	MMBtu	N_2O	0.00022	lb/MMBtu	0.018308	298	5.46
G7	IMP Mill #11	166,440	MMBtu	CO_2	117	lb/MMBtu	9736.74	1	9736.74
		166,440	MMBtu	CH_4	0.0022	lb/MMBtu	0.183084	25	4.58
		166,440	MMBtu	N_2O	0.00022	lb/MMBtu	0.018308	298	5.46
G13	IMP Mill #12	197,100	MMBtu	CO_2	117	lb/MMBtu	11530.35	1	11530.35
		197,100	MMBtu	CH_4	0.0022	lb/MMBtu	0.21681	25	5.42
		197,100	MMBtu	N_2O	0.00022	lb/MMBtu	0.021681	298	6.46

EU	Description	Annual Throughput	Units	Pollutant	EF	Units	GHG (ton/yr)	GWP	CO_2e (ton/yr)
G18	IMP Mill #13	197,100	MMBtu	CO_2	117	lb/MMBtu	11530.35	1	11530.35
		197,100	MMBtu	CH_4	0.0022	lb/MMBtu	0.21681	25	5.42
		197,100	MMBtu	N_2O	0.00022	lb/MMBtu	0.021681	298	6.46
D46	IMP Mill #14	197,100	MMBtu	CO_2	117	lb/MMBtu	11530.35	1	11530.35
		197,100	MMBtu	CH_4	0.0022	lb/MMBtu	0.21681	25	5.42
		197,100	MMBtu	N_2O	0.00022	lb/MMBtu	0.021681	298	6.46
D48	IMP Mill #15	197,100	MMBtu	CO_2	117	lb/MMBtu	11530.35	1	11530.35
		197,100	MMBtu	CH_4	0.0022	lb/MMBtu	0.21681	25	5.42
		197,100	MMBtu	N_2O	0.00022	lb/MMBtu	0.021681	298	6.46
E23a	Paper Heater	40,515	MMBtu	CO_2	117	lb/MMBtu	2370.128	1	2370.13
		40,515	MMBtu	CH_4	0.0022	lb/MMBtu	0.044567	25	1.11
		40,515	MMBtu	N_2O	0.00022	lb/MMBtu	0.004457	298	1.33
E39	Coe Dryer	963,600	MMBtu	CO_2	117	lb/MMBtu	56370.6	1	56370.60
		963,600	MMBtu	CH_4	0.0022	lb/MMBtu	1.05996	25	26.50
		963,600	MMBtu	N_2O	0.00022	lb/MMBtu	0.105996	298	31.59
H20a	Paper Heater	45,990	MMBtu	CO_2	117	lb/MMBtu	2690.415	1	2690.42
		45,990	MMBtu	CH_4	0.0022	lb/MMBtu	0.050589	25	1.26
		45,990	MMBtu	N_2O	0.00022	lb/MMBtu	0.005059	298	1.51
H26	Flakt Board Dryer (Zone 1)	438,000	MMBtu	CO_2	117	lb/MMBtu	25623	1	25623.00
		438,000	MMBtu	CH_4	0.0022	lb/MMBtu	0.4818	25	12.05
		438,000	MMBtu	N_2O	0.00022	lb/MMBtu	0.04818	298	14.36
	Flakt Board Dryer (Zone 2)	341,640	MMBtu	CO_2	117	lb/MMBtu	19985.94	1	19985.94
		341,640	MMBtu	CH_4	0.0022	lb/MMBtu	0.375804	25	9.40
		341,640	MMBtu	N_2O	0.00022	lb/MMBtu	0.03758	298	11.20
	Flakt Board Dryer (Zone 3)	157,680	MMBtu	CO_2	117	lb/MMBtu	9224.28	1	9224.28
		157,680	MMBtu	CH_4	0.0022	lb/MMBtu	0.173448	25	4.34
		157,680	MMBtu	N_2O	0.00022	lb/MMBtu	0.017345	298	5.17
H32	Flakt Board Dryer (Zone 1)	394,200	MMBtu	CO_2	117	lb/MMBtu	23060.7	1	23060.70
		394,200	MMBtu	CH_4	0.0022	lb/MMBtu	0.43362	25	10.84
		394,200	MMBtu	N_2O	0.00022	lb/MMBtu	0.043362	298	12.92
	Flakt Board Dryer (Zone 2)	394,200	MMBtu	CO_2	117	lb/MMBtu	23060.7	1	23060.70
		394,200	MMBtu	CH_4	0.0022	lb/MMBtu	0.43362	25	10.84
		394,200	MMBtu	N_2O	0.00022	lb/MMBtu	0.043362	298	12.92
	Flakt Board Dryer (Zone 3)	262,800	MMBtu	CO_2	117	lb/MMBtu	15373.8	1	15373.80
		262,800	MMBtu	CH_4	0.0022	lb/MMBtu	0.28908	25	7.23
		262,800	MMBtu	N_2O	0.00022	lb/MMBtu	0.028908	298	8.61

EU	Description	Annual Throughput	Units	Pollutant	EF	Units	GHG (ton/yr)	GWP	CO_2e (ton/yr)
U03	Diesel-Powered Water Pump	2,876,800	hp/hr-yr	CO_2	1.15	lb/hp-hr	1654.16	1	1654.16
		2,876,800	hp/hr-yr	CH_4	1.68E-05	lb/hp-hr	0.024165	25	0.60
		2,876,800	hp/hr-yr	N_2O	3.36E-06	lb/hp-hr	0.004833	298	1.44
U04	Diesel-Powered Fire Pump	120,000	hp/hr-yr	CO_2	1.15	lb/hp-hr	69	1	69.00
		120,000	hp/hr-yr	CH_4	1.68E-05	lb/hp-hr	0.001008	25	0.03
		120,000	hp/hr-yr	N_2O	3.36E-06	lb/hp-hr	0.000202	298	0.06
U05	Diesel-Powered Fire Pump	120,000	hp/hr-yr	CO_2	1.15	lb/hp-hr	69	1	69.00
		120,000	hp/hr-yr	CH_4	1.68E-05	lb/hp-hr	0.001008	25	0.03
		120,000	hp/hr-yr	N_2O	3.36E-06	lb/hp-hr	0.000202	298	0.06
U06	Diesel-Powered Water Pump	68,000	hp/hr-yr	CO_2	1.15	lb/hp-hr	39.1	1	39.10
		68,000	hp/hr-yr	CH_4	1.68E-05	lb/hp-hr	0.000571	25	0.01
		68,000	hp/hr-yr	N_2O	3.36E-06	lb/hp-hr	0.000114	298	0.03
								Total	**314692.52**

A-26. Applicability Emissions (gypsum processing)

EU	Description	Throughput		$PM_{2.5}$ EF (lbs/ton	PM_{10} EF (lbs/ton)	$PM_{2.5}$ (tons/yr	PM_{10} (tons/yr)
		tons/hr	tons/yr				
A1	Material Loading	408	3,574,080	1.38E-05	0.0022	0.02	3.93
B1	Hopper Feeder	615	5,387,400	6.90E-06	0.0011	0.02	2.96
B2	Primary Crusher	615	5,387,400	8.10E-05	0.0024	0.22	6.46
B3	Conveyor Belt to Conveyor Belt	615	5,387,400	6.90E-06	0.0011	0.02	2.96
	Conveyor Belt to Conveyor Belt	615	5,387,400	6.90E-06	0.0011	0.02	2.96
	Conveyor Belt to Conveyor Belt	615	5,387,400	6.90E-06	0.0011	0.02	2.96
	Conveyor Belt to Transfer Belt	615	5,387,400	6.90E-06	0.0011	0.02	2.96
	Transfer Belt to Stacker	615	5,387,400	6.90E-06	0.0011	0.02	2.96
B37	Apron Feeder to Ore Reclaim Belt	615	5,387,400	6.90E-06	0.0011	0.02	2.96
S07	Ore Reclaim Belt	615	5,387,400	Included with B40		0	0
B40	Screen	615	5,387,400	1.50E-04	0.072	0.40	193.95
B42	Collection Belt	615	5,387,400	6.90E-06	0.0011	0.02	2.96

EU	Description	Throughput		$PM_{2.5}$ EF	PM_{10} EF	$PM_{2.5}$	PM_{10}
		tons/hr	tons/yr	(lbs/ton	(lbs/ton)	(tons/yr	(tons/yr)
B41	Hammer Mill to Recycle Belt	615	5,387,400	8.10E-05	0.0024	0.22	6.46
S13	Recycle Belt	615	5,387,400	6.90E-06	0.0011	0.02	2.96
B25	Rotary Dryer to Conveyor Belt	615	5,387,400	1.65E-04	0.0011	0.44	2.96
	Conveyor Belt to Conveyor Belt	615	5,387,400	1.65E-04	0.0011	0.44	2.96
	Conveyor Belt Drop into Dome	615	5,387,400	1.65E-04	0.0011	0.44	2.96
B29	Conveyor Belt to Conveyor Belt; Dome Bypass (alternate scenario)	615	5,387,400	Included with EU: B25		0	0
	Conveyor Belt to Stockpile; Dome Bypass (alternate scenario)	615	5,387,400				
B34	Conveyor to Hopper Feeder	615	5,387,400	6.90E-06	0.0011	0.02	2.96
B35	Hopper Bin	615	5,387,400	1.65E-04	0.0011	0.44	2.96
B32	Hopper to Conveyor Belt	615	5,387,400	6.90E-06	0.0011	0.02	2.96
B33	Hopper to Conveyor Belt (alternate)	615	5,387,400	Included with B32		0	0
B36	Rotary Dryer #2	288	2,552,880	0.30	2.00	378.43	2,522.88
T01	Truck Loading		100,000	Calculated with DAQ Aggregate Tool		0.01	0.44
D1	Belt Feeder Drop from Dome	205	1,795,800	1.65E-04	0.0011	0.15	0.99
D2	Belt Feeder Drop from Dome	205	1,795,800	1.65E-04	0.0011	0.15	0.99
D3	Belt Feeder Drop from Dome	205	1,795,800	1.65E-04	0.0011	0.15	0.99
D4	Conveyor Belt	615	5,387,400	Included with D43		0	0
D43	Transfer Station Screen	180	1,576,800	5.00E-05	0.072	0.04	56.76
D44	Transfer Station Crusher	30	262,800	3.60E-04	0.0024	0.05	0.32
D5	Variable Splitter	615	5,387,400	1.65E-04	0.0011	0.44	2.96
D6	Bypass Conveyor	615	5,387,400	1.65E-04	0.0011	0.44	2.96
D7	Conveyor Belt Drop	615	5,387,400	1.65E-04	0.0011	0.44	2.96

EU	Description	Throughput		$PM_{2.5}$ EF	PM_{10} EF	$PM_{2.5}$	PM_{10}
		tons/hr	tons/yr	(lbs/ton	(lbs/ton)	(tons/yr	(tons/yr)
D8	Tripper Station	615	5,387,400	1.65E-04	0.0011	0.44	2.96
D9	Screw Conveyor	30	262,800	0.003	0.02	0.39	2.63
D18	Screw Conveyor	30	262,800	0.003	0.02	0.39	2.63
D27	Screw Conveyor	30	262,800	0.003	0.02	0.39	2.63
D10	Rock Bin #1	10	87,600	0.003	0.02	0.13	0.88
D11	Impeller Mill #1 (aggregate processing)	10	87,600	0.8175	5.45	35.81	238.71
D13	Rock Bin #2	10	87,600	0.003	0.02	0.13	0.88
D14	Impeller Mill #2 (aggregate processing)	10	87,600	0.8175	5.45	35.81	238.71
D16	Rock Bin #3	10	87,600	0.003	0.02	0.13	0.88
D17	Impeller Mill #3 (aggregate processing)	10	87,600	0.8175	5.45	35.81	238.71
D19	Rock Bin #4	10	87,600	0.003	0.02	0.13	0.88
D20	Impeller Mill #4 (aggregate processing)	10	87,600	0.8175	5.45	35.81	238.71
D22	Rock Bin #5	10	87,600	0.003	0.02	0.13	0.88
D23	Impeller Mill #5 (aggregate processing)	10	87,600	0.8175	5.45	35.81	238.71
D25	Rock Bin #6	10	87,600	0.003	0.02	0.13	0.88
D26	Impeller Mill #6 (aggregate processing)	10	87,600	0.8175	5.45	35.81	238.71
D28	Rock Bin #7	10	87,600	0.003	0.02	0.13	0.88
D29	Impeller Mill #7 (aggregate processing)	10	87,600	0.8175	5.45	35.81	238.71
D31	Rock Bin #8	10	87,600	0.003	0.02	0.13	0.88
D32	Impeller Mill #8 (aggregate processing)	10	87,600	0.8175	5.45	35.81	238.71
D34	Rock Bin #9	10	87,600	0.003	0.02	0.13	0.88
D35	Impeller Mill #9 (aggregate processing)	10	87,600	0.8175	5.45	35.81	238.71
D45	Rock Bin #14	25	219,000	0.003	0.02	0.33	2.19
D46	Impeller Mill #14	25	219,000	0.8175	5.45	89.52	596.78

EU	Description	Throughput		$PM_{2.5}$ EF	PM_{10} EF	$PM_{2.5}$	PM_{10}
		tons/hr	tons/yr	(lbs/ton	(lbs/ton)	(tons/yr	(tons/yr)
D47	Rock Bin # 15	25	219,000	0.003	0.02	0.33	2.19
D48	Impeller Mill #15	25	219,000	0.8175	5.45	89.52	596.78
D36	Screw Conveyor to Screw Conveyor	90	788,400	0.003	0.02	1.18	7.88
	Screw Conveyor to Screw Conveyor	90	788,400	0.003	0.02	1.18	7.88
	Screw Conveyor to Screw Conveyor	90	788,400	0.003	0.02	1.18	7.88
	Screw Conveyor to Stucco Elevator	90	788,400	0.003	0.02	1.18	7.88
	Screw Conveyor to Screw Conveyor	90	788,400	0.003	0.02	1.18	7.88
	Screw Conveyor to Screw Conveyor	90	788,400	0.003	0.02	1.18	7.88
D42	Screw Conveyor to Screw Conveyor	90	788,400	0.003	0.02	1.18	7.88
E1	Stucco Elevator #1A	45	394,200	0.00345	0.023	0.68	4.53
E2	Screw Conveyor	45	394,200	0.00345	0.023	0.68	4.53
E3	Stucco Bin #1	45	394,200	0.00345	0.023	0.68	4.53
E4	Screw Conveyor	45	394,200	0.00345	0.023	0.68	4.53
E5	Entoleter Elevator	45	394,200	0.00345	0.023	0.68	4.53
E6	Transfer Point	45	394,200	0.00345	0.023	0.68	4.53
E7	Entoleter (Mill)	45	394,200	0.003	0.002	0.59	0.39
E8	Screw Conveyor	45	394,200	0.00345	0.023	0.68	4.53
E9	Screw Conveyor	45	394,200	0.00345	0.023	0.68	4.53
E10	Stucco Elevator #1	45	394,200	0.00345	0.023	0.68	4.53
E11	Screw Conveyor	45	394,200	0.00345	0.023	0.68	4.53
E12	Stucco Bin #2	75	657,000	0.00345	0.023	1.13	7.56
E13	Rotary Valve	75	657,000	0.00345	0.023	1.13	7.56
E14	Bin #2 Discharge Screw	75	657,000	0.00345	0.023	1.13	7.56
E15	Transfer Point	75	657,000	0.00345	0.023	1.13	7.56
E16	Scalping Screw	33	289,080	0.00345	0.023	0.50	3.32
E17	Scale (Transfer Point)	33	289,080	0.00345	0.023	0.50	3.32
E18	Return Screw	33	289,080	0.00345	0.023	0.50	3.32

EU	Description	Throughput		$PM_{2.5}$ EF (lbs/ton	PM_{10} EF (lbs/ton)	$PM_{2.5}$ (tons/yr	PM_{10} (tons/yr)
		tons/hr	tons/yr				
E19	Stucco Recirculating Elevator	33	289,080	0.00345	0.023	0.50	3.32
E20	Bin Recirculation Screw	33	289,080	0.00345	0.023	0.50	3.32
E21	Rotary Valve	52.48	459,725	0.00345	0.023	0.79	5.29
E22	Live Bottom Bin	52.48	459,725	0.00345	0.023	0.79	5.29
E23	Metering Screw Conveyor	52.48	459,725	0.00345	0.023	0.79	5.29
E25	Accelerator Bin	0.63	5,519	0.00345	0.023	0.01	0.06
E26	Feeder	0.63	5,519	0.00345	0.023	0.01	0.06
E27	Additive Bin	0.95	8,322	0.00345	0.023	0.01	0.10
E27a	Additive Bin/Feeder	0.95	8,322	0.00345	0.023	0.01	0.10
E29	Additive Bin	0.95	8,322	0.00345	0.023	0.01	0.10
E31	Additive Bin	0.95	8,322	0.00345	0.023	0.01	0.10
E33	Additive Bin	0.95	8,322	0.00345	0.023	0.01	0.10
E28	Feeder	0.95	8,322	0.00345	0.023	0.01	0.10
E30	Feeder	0.95	8,322	0.00345	0.023	0.01	0.10
E32	Feeder	0.95	8,322	0.00345	0.023	0.01	0.10
E34	Feeder	0.95	8,322	0.00345	0.023	0.01	0.10
E43	Feeder	0.95	8,322	0.00345	0.023	0.01	0.10
E24	Mixing Screw Conveyor	90	788,400	0.00345	0.023	1.36	9.07
E35	Mixer	90	788,400	0.00345	0.023	1.36	9.07
E37	End Saw	58,334 ft^2/hr	511,005,840 ft^2/yr	1.71E-04 lb/ft^2	0.00114 lb/ft^2	43.69	291.27
E37a	End Saw to Conveyor		10,000	0.00345	0.023	0.02	0.12
	Conveyor to Bunker		10,000	0.00345	0.023	0.02	0.12
	Wind Erosion		10,000	0.00765	0.051	0.04	0.26
	Loader to Recycle Stockpile		10,000	0.00345	0.023	0.02	0.12
E41	Dunnage/Slutter system		36,000,000 ft^2/yr	0.001026 lb/ft^2	0.00684 lb/ft^2	18.47	123.12
E42	Cutback Saw Process		27,500,002 ft^2/yr	0.0002672 lb/ft^2	0.001781 lb/ft^2	0.37	2.45

EU	Description	Throughput		$PM_{2.5}$ EF	PM_{10} EF	$PM_{2.5}$	PM_{10}
		tons/hr	tons/yr	(lbs/ton	(lbs/ton)	(tons/yr	(tons/yr)
F1	Screw Conveyor	2.65	23,214	0	Enclosed	0	0
F2	Vacuum Feed	2.65	23,214	0	Enclosed	0	0
F3	Storage Bin	2.65	23,214	0	Enclosed	0	0
F4	Storage Bin	2.65	23,214	0	Enclosed	0	0
F5	Crusher	6	52,560	0	Enclosed	0	0
F6	Screw Conveyor	1	8,760	0	Enclosed	0	0
F7	Ball Mill	1	8,760	0	Enclosed	0	0
F8	Elevator Conveyor	1	8,760	0	Enclosed	0	0
G1	Screw Conveyor Drop	55.5	486,180	0.003	0.02	0.73	4.86
G12	Screw Conveyor Drop	91.7	803,292	0.003	0.02	1.20	8.03
G2	Rock Bin #10	30	262,800	0.003	0.02	0.39	2.63
G3	Impeller Mill #10 (aggregate only)	30	262,800	0.8175	5.45	107.42	716.13
G4	Double Cone Classifier	30	262,800	0.003	0.02	0.39	2.63
G5	Cyclone Collector	30	262,800	0.003	0.02	0.39	2.63
G7	Rock Bin #11	30	262,800	0.003	0.02	0.39	2.63
G8	Impeller Mill #11 (aggregate only)	30	262,800	0.8175	5.45	107.42	716.13
G9	Double Cone Classifier	30	262,800	0.003	0.02	0.39	2.63
G10	Cyclone Collector	30	262,800	0.003	0.02	0.39	2.63
G13	Rock Bin #12	30	262,800	0.003	0.02	0.39	2.63
G14	Impeller Mill #12 (aggregate only)	30	262,800	0.8175	5.45	107.42	716.13
G15	Double Cone Classifier	30	262,800	0.003	0.02	0.39	2.63
G16	Cyclone Collector	30	262,800	0.003	0.02	0.39	2.63
G18	Rock Bin #13	30	262,800	0.003	0.02	0.39	2.63
G19	Impeller Mill #13 (aggregate only)	30	262,800	0.8175	5.45	107.42	716.13

EU	Description	Throughput		$PM_{2.5}$ EF (lbs/ton	PM_{10} EF (lbs/ton)	$PM_{2.5}$ (tons/yr	PM_{10} (tons/yr)
		tons/hr	tons/yr				
G20	Double Cone Classifier	30	262,800	0.003	0.02	0.39	2.63
G21	Cyclone Collector	30	262,800	0.003	0.02	0.39	2.63
G6	Feed Screw Conveyor Drop	27.8	243,528	0.003	0.02	0.37	2.44
G11	Feed Screw Conveyor Drop	27.8	243,528	0.003	0.02	0.37	2.44
G17	Feed Screw Conveyor Drop	45.8	401,208	0.003	0.02	0.60	4.01
G22	Feed Screw Conveyor Drop	45.8	401,208	0.003	0.02	0.60	4.01
H1	Stucco Storage Bin #3	27.8	243,528	0.003	0.02	0.37	2.44
H2	Stucco Storage Bin #4	27.8	243,528	0.003	0.02	0.37	2.44
H3	Stucco Screw Conveyor	55.5	486,180	0.003	0.02	0.73	4.86
H4	Stucco Bucket Elevator	55.5	486,180	0.003	0.02	0.73	4.86
H5	Recirculating Screw Conveyor	55.5	486,180	0.003	0.02	0.73	4.86
H7	Stucco Feed Elevator	55.5	486,180	0.003	0.02	0.73	4.86
H8	Stucco Metering	55.5	486,180	0.003	0.02	0.73	4.86
H6	Stucco Surge Bin	55.5	486,180	0.003	0.02	0.73	4.86
H11	Additive Bin	20.5	179,580	0.003	0.02	0.27	1.80
H11a	Additive Bin/Feeder	20.5	179,580	0.003	0.02	0.27	1.80
H13	Additive Bin	20.5	179,580	0.003	0.02	0.27	1.80
H15	Additive Bin	20.5	179,580	0.003	0.02	0.27	1.80
H19	Additive Bin	20.5	179,580	0.003	0.02	0.27	1.80
H17	Accelerator Bin	4.66	40,822	0.003	0.02	0.06	0.41
H12	Feeder	20.5	179,580	0.003	0.02	0.27	1.80
H14	Feeder	20.5	179,580	0.003	0.02	0.27	1.80
H16	Feeder	20.5	179,580	0.003	0.02	0.27	1.80
H18	Feeder	20.5	179,580	0.003	0.02	0.27	1.80
H20	Feeder	20.5	179,580	0.003	0.02	0.27	1.80
H37	Feeder	20.5	179,580	0.003	0.02	0.27	1.80
H10	Mixing Screw Conveyor	107.2	939,072	0.003	0.02	1.41	9.39

EU	Description	Throughput		$PM_{2.5}$ EF (lbs/ton	PM_{10} EF (lbs/ton)	$PM_{2.5}$ (tons/yr	PM_{10} (tons/yr)
		tons/hr	tons/yr				
H22	Pin Mixer	107.2	939,072	0.003	0.02	1.41	9.39
H24	End Saw	100,000 ft^2/hr	876,000,000 ft^2/yr	0.000171 lb/ft^2	0.00114 lb/ft^2	74.9	499.32
H27	Stucco Storage Bin #5	46	402,960	0.003	0.02	0.60	4.03
H28	Stucco Screw Conveyor	46	402,960	0.003	0.02	0.60	4.03
H29	Recirculating Screw Conveyor	46	402,960	0.003	0.02	0.60	4.03
H30	End Saw	100,000 ft^2/yr	876,000,000 ft^2/yr	0.000171 lb/ft^2	0.00114 lb/ft^2	74.9	499.32
H33	Stucco Cooler	147.2	1,289,472	0.003	0.02	1.93	12.89
H34	Stucco Screw Conveyor	73.6	644,736	0.003	0.02	0.97	6.45
H35	Stucco Screw Conveyor	73.6	644,736	0.003	0.02	0.97	6.45
K01	Screw Grinder	20	175,200	0.00225	0.015	0.20	1.31
K02	Perforated Screw Conveyor	20	175,200	0.00021	0.0014	0.02	0.12
K04	Belt Conveyor	20	175,200	0.00021	0.0014	0.02	0.12
K05	Roller Mill	19.2	168,972	0.00225	0.015	0.19	1.27
K06	Vibratory Screen	19.2	168,972	0.00225	0.015	0.19	1.27
K07	Belt Conveyor to Belt Conveyor	19	166,440	0.00021	0.0014	0.02	0.12
	Belt Conveyor to Belt Conveyor	19	166,440	0.00021	0.0014	0.02	0.12
	Belt Conveyor to Storage Bin	19	166,440	0.00021	0.0014	0.02	0.12
K10	Storage Bin	40	350,400	0.00021	0.0014	0.04	0.25
K11	Screw Conveyor to Screw Conveyor	19	166,440	0.00021	0.0014	0.02	0.12
	Screw Conveyor to Screw Conveyor	19	166,440	0.00021	0.0014	0.02	0.12
	Screw Conveyor to Conveyor Belt (EU: D7)	19	166,440	0.00021	0.0014	0.02	0.12

A-27. Applicability Emissions for Diesel Engine

EU#	U03		Horsepower:	464		Emission Factor	Potential Emissions		
Make:	Cummins		Hours/Day:	24.0		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Model:	QSL9-G7		Hours/Year	8760	PM10	1.54E-04	0.07	1.72	0.31
S/N:	L120435661				NOx	5.73E-03	2.66	63.83	11.65
					CO	3.75E-03	1.74	41.74	7.62
Manufacturer Guarantees					SO_2	1.21E-05	0.01	0.14	0.02
PM10	0.07	1			VOC	6.61E-04	0.31	7.37	1.34
NOx	2.6	1			HAP	2.71E-05	0.01	0.30	0.06
CO	1.7	1							
SO_2		1							
VOC	0.3	1							
Engine Type:		2			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				

A-28. Applicability Emissions for Diesel Engine

EU#	U06		Horsepower:	85		Emission Factor	Potential Emissions (per unit)		
Make:	Perkins		Hours/Day:	24.0		(lb/hp-hr)	lb/hr	lb/day	ton/yr
Model:	1004-42		Hours/Year	8760	PM10	2.20E-03	0.19	4.50	0.82
S/N:	AR36677				NOx	1.43E-02	1.22	29.23	5.34
					CO	6.61E-03	0.56	13.49	2.46
Manufacturer Guarantees					SO_2	1.21E-05	0.01	0.02	0.01
PM10	1	1			VOC	4.85E-04	0.04	0.99	0.18
NOx	6.5	1			HAP	2.71E-05	0.01	0.06	0.01
CO	3	1							
SO_2		1							
VOC	0.22	1							
Engine Type:		2			Diesel Fuel Sulfur Content is 15 ppm (0.0015%)				