



PART 70

TECHNICAL SUPPORT DOCUMENT

(STATEMENT of BASIS)

APPLICATION FOR:
Operating Permit Minor Revision

PREPARED BY:
Broadbent & Associates, 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: August 19, 2026

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 III, 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 PM₁₀, and PM_{2.5}, and a minor source for SO₂, VOC, and HAP. It is also a source of GHG pollutants.

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, the Coe board dryer is operated by combusting natural gas in the burners. This unit may also receive exhaust gas from the co-located power-generating facility owned and operated by Nevada Cogeneration Associates #2 (NCA #2) as an alternative operating scenario. 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	71.44	32.98	331.90	505.91	4.18	79.14	8.46	358,925.98
Fugitive Emissions	61.65	7.41	4.70	16.55	0.84	0	0	0
Source PTE	133.09	40.39	336.60	522.46	5.02	79.14	8.46	358,925.98
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	-

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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 ₂ e	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
GHG	greenhouse gas
GWP	global warming potential
H ₂ S	hydrogen sulfide
hp	horsepower
gpm	gallons per minute
MMBtu	British thermal units (in millions)
N ₂ O	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 DESCRIPTION

PABCO has organized 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 three 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).

II. PERMITTING HISTORY

The Title V operating permit for PABCO Building Products was renewed on February 11, 2025.

Minor Revision - April 24, 2025

The minor revision application requested the following changes:

- Increase the consecutive 12-month throughput of the silicone component in inks from 283,200 to 483,200 pounds (EU: E40).
- Increase the consecutive 12-month throughput for printing and other VOC-containing materials (EU: E40) from 554,100 to 753,600 pounds.
- Remove the “make-up ink” component from EU: E40.
- Increase the consecutive 12-month throughput of the silicone component in inks from 188,800 to 388,800 pounds (EU: H36).

- Increase the consecutive 12-month throughput for printing and other VOC-containing materials (EU: H36) from 579,300 to 779,000 pounds.
- Increase the consecutive 12-month throughput for the feeder (EU: E43) from 44 to 144 tons.
- Increase the consecutive 12-month throughput for the feeder (EU: H37) from 29 to 129 tons.
- Revise the primary and alternate operating scenarios for the Coe board dryer (EU: E39) to identify the primary operation to be combustion of pipeline natural gas and the secondary operation to be exhaust gas from Nevada Cogeneration Associates #2 (NCA #2).

The revised permit was issued on July 1, 2025.

Current Permitting Action

A minor revision application was submitted on February 23, 2026, requesting to add a third board dryer, rated at 91.0 MMBtu/hour, to the wallboard manufacturing line (Group 8). The unit is identified as EU: H38. The application meets the requirements of a minor permit revision pursuant to AQR 12.5.2.14(a). The tunnel board dryer is not subject to NSPS Subpart UUU and the project emissions increase is below minor NSR significance.

A mathematical error was discovered with the PTE calculation for source-wide VOC pollutants. The previous permit revision (04/24/2025) reversed the primary and secondary operating scenarios for the Coe dryer (EU: E39) due to termination of the agreement between PABCO and NCA #2. However, when the source PTE was calculated, the VOC emissions for NCA #2 (now the alternate operating scenario) were inadvertently included. As a result, the source-wide VOC emissions were overestimated by 6.14 tons per year. This has been corrected with this permitting action.

Following source review of the draft permit, the permittee submitted a supplemental application on July 9, 2026, to add a new belt feeder from the Dome (EU: D49) and to replace the diesel-powered 240 hp fire pump, previously identified as EU: U05, with a new 250 hp diesel-powered fire pump (EU: U07). Both emission units were identified during a Full Compliance Evaluation (FCE) conducted by DES Compliance staff on May 19, 2026. As a result of this change, the potential to emit (PTE) for all regulated pollutants decreased. Therefore, this permitting action still qualifies as a minor revision.

Following the May 19, 2026 FCE, a Permit Change Referral Form (PCRF) was submitted by the Compliance inspector. The items identified in the PCRF, listed below, have been incorporated into the operating permit and TSD as noted. Other items in the PCRF have been already addressed in the permit.

Emission Unit Section

PCRF Comment #1: Water pump engine (EU: U03) is not a water pump engine but a regular continuous-duty engine that powers a well pump onsite. Additionally, this unit has a lower rating of 422 hp.

Resolution: Revised description and recalculated PTE based on the lower hp rating. This resulted in a slight reduction to the source PTE.

PCRF Comment #2: Insignificant unit identified: 1,000-gallon propane tank.

Resolution: Added this tank to the list of insignificant activities in the operating permit and TSD.

PCRf Comment #3: Like/kind replacement of B40. Make: ASTEC, Model: 6202-32LP, S/N: S246187.

Resolution: Retained emission unit identifier and added the manufacturer, model number, and serial number as provided in the PCRf.

PCRf Comment #4: Hammer Mill (EU: B41) has a model number of 7036-59A.

Resolution: Made correction to operating permit and TSD.

PCRf Comment #5: Rotary Dryer #2 (EU: B36) has a model number of “EQUINOX” and a S/N: EQ/UF-1952.

Resolution: Made correction to operating permit and TSD.

PCRf Comment #6: Vibratory Screen (EU: K06) info obtained. Make: FMC Corporation, Model: I-96, S/N: 826611-A.

Resolution: Made correction to operating permit and TSD.

Control Section

PCRf Comment #7: In Table 2-1 on the binvent line, K10 is a separate process than H27-H29. I suggest a separate line item to avoid confusion.

Resolution: Added separate line to table, as suggested.

Monitoring Section

PCRf Comment #8: Permit condition 4.1.20 requires silt loading for a paved surface. It has been determined that this requirement is not appropriate for paved surfaces. I suggest removal of the requirement.

Resolution: Removed Condition, as suggested.

PCRf Comment #9: Monthly bin vent inspection condition is missing (EUs: K10 & H27-H29).

Resolution: Added Conditions 4.1.16 through 4.1.18 to operating permit.

PCRf Comment #10: Gas meters have since been installed on the board dryers. Recommend replacing all moisture testing conditions with gas meter conditions.

Resolution: Removed all references to moisture analysis, as suggested. The description used in the permit is “fuel meter”.

PCRf Comment #11: Phase I inspection section does not contain all inspection criteria required.

Resolution: Added Condition 4.1.29(a-h)

PCRf Comment #12: QIP requirements not in CAM section.

Resolution: Added Conditions 4.1.41 through 4.1.45 to operating permit.

Recordkeeping Section

PCRf Comment #13: Permit condition 4.3.8.e only refers to repairs of the cover. Please add “inspections” to condition.

Resolution: Added Condition 4.3.8(f)

PCRF Comment #14: Missing condition for VOC materials: “SDS records of all VOC-containing materials used in the manufacturing of wallboard;”

Resolution: Added Condition 4.3.8(f)

PCRF Comment #15: Add length of haul road condition from template.

Resolution: Added Condition 4.3.8(i)

PCRF Comment #16: Add QIP for CAM unit baghouses.

Resolution: Added Condition 4.3.8(u)

III. 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	Astec	6202-32LP	S246187	30501507
B42	Screen Collection Belt					30501504
B41	Hammer Mill	615 tons/hr	Universal Engineering	7036598	7036-59A	30501506
S13	Recycle Belt					30501504
B36	Rotary Dryer #2	288 tons/hr; 85 MMBtu/hr	Gencor	Equinox	EQ/UF-1952	30501501
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

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
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
D49 ^N	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
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

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
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
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

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
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 (primary operating scenario)				30501520
		NCA Exhaust Gas (alternate scenario)				
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

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
G10	Cyclone Collector					30501509
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
H38 ^N	Board Dryer; Three Combustion Zones	91.0 MMBtu/hr	Gyptech	TBD	TBD	30501520
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	FMC Corporation	I-96	826611-A	30501507
K07	Conveyor System (3 belts)					30501504
K10	Storage Bin					30501510
K11	Screw Conveyor System (3 conveyors)					30501504
Pumps (Group #12)						
U03	Diesel-Powered generator; Continuous Duty; DOM: 2012	422 hp	Cummins	QSL9-G7NR3	L120435661	20200102
U04	Diesel Emergency Fire Pump; DOM: 2007	240 hp	John Deere	6068HF120	PE606846834 02	20200102

EU	Description	Rating	Manufacturer	Model No.	Serial No.	SCC
U06	Diesel Water Pump; DOM: 2002	85 hp	Perkins	1004-42	AR36677	20200102
U07 ^N	Fire Pump		Clarke	JU6H- UFADR8	SO144029P	20200102
	Diesel Engine; DOM: 2019	250 hp	Deer	6068HFC48A	PE6068N013 867	
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				

Note: The 'N' superscript denotes a new emission unit with this permitting action.

Table IV-2: Insignificant Activities

Description	Rating
Aboveground Storage Tank; Diesel	10,000 Gallons
Aboveground Storage Tanks (2); Diesel	1,000 Gallons (each)
Aboveground Storage Tanks (2); Diesel	300 Gallons (each)
Aboveground Storage Tank; Diesel	550 Gallons
Aboveground Storage Tank; Propane	1,000 Gallons

IV. 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 PM₁₀, and PM_{2.5}, and a minor source for SO₂, 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	10,874.76	1,609.30	340.97	512.93	4.19	79.78	8.52	358,925.98

¹Expressed in units of CO₂e

²10 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
133.09	40.39	336.60	522.46	5.02	79.14	8.46	358,925.98

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	133.09	40.39	336.60	522.46	5.02	79.14	8.46	358,925.98
PTE from Permit Issued 07/01/2025	130.29	37.59	318.14	473.80	4.79	83.34	7.74	314,692.52
Total Source Emissions Increase	2.80	2.80	18.46	48.66	0.23	-4.20 ²	0.72	44,233.46
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

¹Expressed in units of CO₂e

²Actual increase 2.04 tpy. Fixed a calculation error with this permitting action. See explanation on Page 7 of this document, under "Current Permitting Action."

V. CONTROL TECHNOLOGY

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. 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. All BACT and RACT requirements established with previous permitting actions remain enforceable for existing emissions units.

The board dryer shall be equipped with burners that are rated at 42 ppm for NO_x and 176 pm for CO, corrected to 3% oxygen (EU: H38).

All other control requirements established with previous permitting actions remain enforceable for existing emissions units.

VI. OPERATIONAL LIMITS

The board dryer shall not exceed 8,300 hours of operation during any consecutive 12-month period (EU: H38). Without this operational limit, the NO_x PTE increase of this permitting action would be greater than the AQR 12.5.1(d) Minor NSR Significance threshold, requiring a RACT analysis.

All other operational limitations established with previous permitting actions remain enforceable for existing emissions units.

VII. MONITORING

The board dryer shall be operated with a nonresettable hour meter (or other device the Control Officer has approved in advance) and monitor its hours of operation (EU: H38).

All other monitoring requirements established with previous permitting actions remain enforceable.

VIII. PERFORMANCE TESTING

The permittee shall conduct initial performance tests, as identified in Table VIII-1, on the board dryer within 60 days of achieving the maximum production rate at which the unit will be operated, but no later than 180 days after initial startup. Subsequent performance tests shall be conducted at five year intervals, within the same calendar quarter of the previous successful test (EU: H38).

Table VIII-1: Performance Testing Methods for Board Dryer

Pollutant	Test Method
NO _x	EPA Method 7E
CO	EPA Method 10
VOC	EPA Method 18 or 25a
Stack Gas Parameters	EPA Methods 1, 2, 3 or 4

All performance testing requirements established with previous permitting actions remain enforceable.

IX. REVIEW OF APPLICABLE REGULATIONS

Board Dryer

The new board dryer (EU: H38) added with this permitting action is a tunnel dryer. Therefore, it is not subject to 40 CFR Part 60, Subpart UUU. Tunnel dryers are included in the list of process units that are not subject to the regulation pursuant to §60.730(b).

Fire pump

The new fire pump (EU: U07) added with this permitting action was manufactured in 2019. As a result, it is subject to 40 CFR Part 60, Subpart IIII pursuant to §60.4200(a). By adhering to the provisions of Subpart IIII, the permittee will also meet the requirements of 40 CFR Part 63, Subpart ZZZZ.

There are no additional local or federal regulations associated with this permitting action. All regulations identified with previous permitting actions remain applicable to the source.

X. PERMIT SHIELD

The permittee did not request a permit shield.

XI. 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 PM₁₀ (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 was 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 XI-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 XI-1: PSD Increment Consumption

Pollutant	Averaging Period	Source's PSD Increment Consumption ($\mu\text{g}/\text{m}^3$)	Location of Maximum Impact	
			UTM X (m)	UTM Y (m)
PM ₁₀	24-hour	4.30 ¹	688628	4009853
PM ₁₀	Annual	1.07	691795	4013457
NO _x	Annual	5.39	693435	4006130

¹ Highest Second High Concentration.

XII. PUBLIC PARTICIPATION

Pursuant to AQR 12.5.2.17, public participation is not required for a minor revision to a Part 70 operating permit.

XIII. ATTACHMENTS

Table XIV-1: Summary of Source Wide PTE Emissions (ton/yr)

Process	PM10	PM2.5	NOx	CO	SO2	VOC	HAP
Gypsum Processing (Excludes Drilling & Blasting)	102.82	15.73	0	0	0	0	0
Drilling & Blasting	5.76	0.34	4.70	16.55	0.84		
Fuel Burning Equipment	23.84	23.65	323.11	500.65	4.13	13.69	7.61
Diesel-Powered Generators	0.31	0.31	8.79	5.26	0.05	0.93	0.07
Cooling Towers	0.36	0.36	0	0	0	0.00	0
Ink Consumption	0	0	0	0	0	61.75	0
Gasoline Dispensing	0	0	0	0	0	2.77	0.78
TOTAL	133.09	40.39	336.60	522.46	5.02	79.14	8.46

Table XIV-2: Applicability Emissions (tons per year)

Process	PM10	PM2.5	NOx	CO	SO2	VOC	HAP
Gypsum Processing	10849.23	1583.96	0	0	0	0	0
Fuel Burning Equipment	24.00	23.81	324.18	503.38	4.14	13.80	7.65
Diesel-Powered Generators	1.17	1.17	16.79	9.55	0.05	1.46	0.09
Cooling Towers	0.36	0.36	0	0	0	0.00	0
Ink Consumption	0	0	0	0	0	61.75	0
Gasoline Dispensing	0	0	0	0	0	2.77	0.78
TOTAL	10874.76	1609.30	340.97	512.93	4.19	79.78	8.52

Table XIV-3: PTE Calculations for Board Dryer

EU#:	H38		Emission Factor	Potential Emissions		
				lb/hr	lb/day	ton/yr
Make:	Gyptech		PM10	0.0075	0.68	2.83
Model:			PM2.5	0.0075	0.68	2.83
S/N:			NOx	0.051	4.64	19.26
91.0 mmBtu/hr			CO	0.1302	11.85	49.17
24.0 hr/day			SOx	0.0006	0.05	0.23
8300 hr/yr			VOC	0.0054	0.49	2.04
			HAP	0.0019	0.17	0.72
BACT:		%O2	Lead	4.90E-07	4.46E-05	1.85E-04
42 ppm NOx		3.0				
176 ppm CO		3.0				
Fuel:	Natural Gas	2				

Table XIV-4: GHG Calculations for Board Dryer

EU	Description	Annual Throughput	Units	Pollutant	EF	Units	GHG (ton/yr)	GWP	CO ₂ e (ton/yr)
H38	Board Dryer; Three Combustion Zones	755,300	MMBtu	CO ₂	117	lb/MMBtu	44185.05	1	44185.05
		755,300	MMBtu	CH ₄	0.0022	lb/MMBtu	0.83083	25	20.77
		755,300	MMBtu	N ₂ O	0.00022	lb/MMBtu	0.083083	298	24.76
Total									44230.58

Table XIV-5: Applicability Calculations for Board Dryer

EU#:	H38		Emission Factor	Potential Emissions		
				lb/hr	lb/day	ton/yr
Make:	Gyptech		PM10	0.0075	0.68	2.99
Model:			PM2.5	0.0075	0.68	2.99
S/N:			NOx	0.051	4.64	20.33
91.0 mmBtu/hr			CO	0.1302	11.85	51.90
24.0 hr/day			SOx	0.0006	0.05	0.24
8760 hr/yr			VOC	0.0054	0.49	2.15
			HAP	0.0019	0.17	0.76
BACT:		%O2	Lead	4.90E-07	4.46E-05	1.95E-04
42 ppm NOx		3.0				
176 ppm CO		3.0				
Fuel:	Natural Gas	2				

Table XIV-6: PTE and Applicability Calculations for Diesel Engine

EU#	U07		Horsepower:	250		Emission Factor	Potential Emissions		
Make:	Deere		Hours/Day:	24.0			lb/hr	lb/day	ton/yr
Model:	6068HFC48A		Hours/Year	500		PM10	1.10E-04	0.03	0.66
S/N:	PE6068N013867					NOx	5.93E-03	1.48	35.58
Manufacturer Guarantees						CO	9.92E-04	0.25	5.95
						SO ₂	1.21E-05	0.01	0.07
PM10	0.05	1				VOC	1.32E-04	0.03	0.79
NOx	2.69	1				HAP	2.71E-05	0.01	0.16
CO	0.45	1							
SO ₂		1							
VOC	0.06	1							
Engine Type:					2	Diesel Fuel Sulfur Content is 15 ppm (0.0015%)			

Table XIV-7: Revised PTE Calculations for Diesel Engine (reduced hp rating)

EU#	U03		Horsepower:	422		Emission Factor	Potential Emissions		
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	1.56
S/N:	L120435661					NOx	5.73E-03	2.42	58.05
Manufacturer Guarantees						CO	3.75E-03	1.58	37.96
						SO ₂	1.21E-05	0.01	0.12
PM10	0.07	1				VOC	6.61E-04	0.28	6.70
NOx	2.6	1				HAP	2.71E-05	0.01	0.27
CO	1.7	1							
SO ₂		1							
VOC	0.3	1							
Engine Type:					2	Diesel Fuel Sulfur Content is 15 ppm (0.0015%)			

Table XIV-8: Revised Applicability Calculations for Diesel Engine (reduced hp rating)

EU#	U03		Horsepower:	422		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	1.56
S/N:	L120435661					NOx	5.73E-03	2.42	58.05
Manufacturer Guarantees						CO	3.75E-03	1.58	37.96
						SO ₂	1.21E-05	0.01	0.12
PM10	0.07	1				VOC	6.61E-04	0.28	6.70
NOx	2.6	1				HAP	2.71E-05	0.01	0.27
CO	1.7	1							
SO ₂		1							
VOC	0.3	1							
Engine Type:					2	Diesel Fuel Sulfur Content is 15 ppm (0.0015%)			