



PART 70

TECHNICAL SUPPORT DOCUMENT

(STATEMENT of BASIS)

APPLICATION FOR:
Operating Permit Renewal

PREPARED BY:
Broadbent & Associates
For
CertainTeed Gypsum Manufacturing, Inc.

Source Name: CertainTeed Gypsum Manufacturing, Inc.
Source ID: 00004

SOURCE LOCATION:
13500 Blue Diamond Road
Las Vegas, NV 89161

SIC code 3275, “Gypsum Products”
NAICS code 327420, “Gypsum Product Manufacturing”

Application Date: October 2, 2025

TSD Date: September 15, 2026

EXECUTIVE SUMMARY

CertainTeed Gypsum Manufacturing, Inc. operates a wallboard manufacturing facility located in Hydrographic Area 212 (Las Vegas Valley). Hydrographic Area 212 is an attainment area for all regulated pollutants, except ozone. The area was designated as serious nonattainment for ozone on January 21, 2025. Clark County has drafted or imposed new requirements to address this designation to include reducing the major source thresholds for NO_x and VOC pollutants to 50 tons per year. As a result, the source is being reclassified as a major source for NO_x pollutants.

CertainTeed is a major source for NO_x and CO, a synthetic minor source of PM₁₀ and PM_{2.5}, and a minor source for all other regulated pollutants. It is also a source of GHG pollutants (CO₂, CH₄, N₂O, and SF₆). Emission units present at this source include natural gas-fired dryers, diesel-powered generators, crushers, screens, silos, hoppers, conveyors, roller mills, mixers, aboveground storage tank, stockpiles, and haul roads. The source is neither a categorical stationary source as defined in AQR 12.2.2(j) nor belongs to any other 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 manufacturing and support processes fall under SIC code 3275, “Gypsum Products” and NAICS code 327420, “Gypsum Products Manufacturing”. The source is subject to 40 CFR Part 60, Subparts OOO, UUU, and IIII and 40 CFR Part 63, Subparts ZZZZ and CCCCCC. By adhering to the requirements of 40 CFR Part 60, Subpart IIII, the source will meet the requirements of 40 CFR Part 63, Subpart ZZZZ.

DAQ will continue to require the permittee to estimate GHG emissions in terms of each individual pollutant (CO₂, CH₄, N₂O, SF₆ etc.) during subsequent permitting actions will include these PTEs for informational purposes.

Pursuant to AQR 12.5.2, all terms and conditions in Sections 1 through 10 of this operating permit are federally enforceable unless explicitly denoted otherwise.

This permitting action is based on the minor revision application submitted on June 10, 2025, the significant revision application submitted on July 29, 2025, and the renewal application submitted on October 2, 2025.

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)

Description	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs	GHG ¹
Part 70 OP PTE	63.09	32.02	82.70	193.06	0.73	26.65	6.88	104,374.74
Major Source Thresholds (Title V)	100	100	100	100	100	100	10/25 ²	-
Major Source Thresholds (Serious Nonattainment)	-	-	50	-	-	50	-	-

¹Expressed in units of CO₂e (metric tons)

²10 tons for any individual hazardous air pollutant, or 25 tons for the combination of all hazardous air pollutants.

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ACRONYMS AND ABBREVIATIONS

AQR	Clark County Air Quality Regulation
BACT	Best Available Control Technology
CAM	Compliance Assurance Monitoring
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
DOM	date of manufacture
dscf	dry standard cubic feet
dscm	dry standard cubic meters
EPA	U.S. Environmental Protection Agency
EU	emission unit
GHG	greenhouse gas
GWP	global warming potential
HAP	hazardous air pollutant
H ₂ S	hydrogen sulfide
hp	horsepower
kW	kilowatt
MMBtu	British thermal units (in millions)
N ₂ O	nitrous oxide
NAICS	North American Industry Classification System
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	nitrogen oxide(s)
NSPS	New Source Performance Standard
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
QIP	quality improvement plan
RACT	Reasonably Available Control Technology
RT	round trip
SIC	Standard Industrial Classification
SF ₆	sulfur hexafluoride
SO ₂	sulfur dioxide
TSD	technical support document
VMT	vehicle miles traveled
VOC	volatile organic compound

I. PROCESS DESCRIPTION

CertainTeed Gypsum Manufacturing, Inc. operates a gypsum wallboard manufacturing facility. The gypsum rock necessary for the manufacturing process is mined off-site. The major parts of the process include a truck unloading station, discharge terminal, CP Mill (Claudius Peters), roller mills, plaster kettles, plaster operations, stucco bins, wallboard manufacturing, accelerator process, and wallboard recycling. Each is described in more detail below.

Truck Unloading and Discharge Terminal

The truck unloading station receives gypsum rock. The delivered material is stored at the stockpile area near the plant. The rock material is conveyed to the discharge terminal. The rock material from the discharge terminal is transported via conveyor belts to rock bins in the Raymond Mill building and silos in the CP Mill building.

CP Mill

The single CP Mill combines grinding, drying, and calcining operations into one single unit. The material from the discharge terminal is conveyed to a 1,200-ton Board Rock Bin. The gypsum rock is then transferred to the CP Mill which pulverizes the rock and contacts it with the combustion gases of the flash calciner, converting the pulverized gypsum rock into stucco. The gases carry the calcinated stucco to the CP Mill baghouses. The baghouse separates the stucco from the gas stream and controls particulate emissions related to the transfer of the stucco from the CP Mill to the conveyance system. The stucco is then transferred to storage bins.

Roller Mills

The roller mills pulverize and dry the gypsum rock to produce land plaster. There are five roller mills equipped with flash dryers, cyclones, and baghouses. The material from the discharge terminal is stored in bins, then and gravity-fed to the roller mills, where the rock size is reduced 92%. The mills grind the gypsum rock into a fine powder, which is dried by hot air blown from a flash dryer. The hot air carries the dust from the mill to a high efficiency cyclone, which separates most of the pulverized land plaster from the air stream. The associated Raymond Mill baghouse captures the small amount of land plaster not collected by the cyclone. A collection screw collects all the land plaster captured by the cyclones and baghouses and conveys the material to one of seven land plaster storage bins.

Plaster Kettles

The land plaster is converted into stucco in the continuous kettle calciners. Crushed gypsum from the roller mills is either conveyed from the collection and distribution screws into a 400-ton land plaster bin or conveyed directly to the Kettle LP bins. The land plaster is delivered from the storage bin into kettle calciners, where heat removes most of the chemically bound water in the land plaster, converting it to stucco. The calcined stucco from the kettle is gravity fed into a hot pit, where it cools. The stucco from the hot pits passes into a collection screw that transports it to bucket elevators. A maximum of 2,000 tons per year of crushed gypsum from the 400-ton bin goes to the accelerator system. An additional 50,000 tons per year of ground gypsum goes to a packer via a screw conveyor to produce agricultural gypsum. The agricultural gypsum is packed into paper bags and stacked on pallets.

Plaster Operations

The plaster operations involve processes that prepare, store, and package gypsum/plaster products sold off-site, such as hard wall and casting plaster. Stucco produced in the roller mills and kettles is used in the plaster operations. Stucco from the bucket elevator is dropped into a screw conveyor, which transports it to multiple storage bins. Approximately 20 tons per hour of stucco for hard wall production flows through a ball mill. The hard wall plaster is then transported by a bucket elevator to a screw conveyor to the three bins. A portion of the stucco from the roller mills bypasses the ball mill and is fed to the entoletter, then directly to the three hard wall finish bins by two screw conveyors and another bucket elevator.

The hard wall plaster is finally sent through mixers and sackers. The hard wall plaster is loaded through the loading system, which includes a 100 pound sacker and a 2,000 pound super sacker. The bulk loading operation consists of pneumatically transferring gypsum plaster into a silo and then gravity feeding into a bulk truck. The bulk loading bin is equipped with a baghouse to control dust emissions.

Stucco and reground wallboard are sent to the 100-ton regrind bin by screw conveyor. The plaster is then fed to the three 80-ton casting finish bins by three screw conveyors and a bucket elevator. The castings plaster uses cement as an additive, which is delivered by truck to the 28-ton cement bin. The cement is unloaded pneumatically through the pipe using a blower on the truck. The mixture of casting plaster and cement is sent to a 100 pound sacker.

Stucco Bins—Board Plant

The stucco produced in the CP Mill is consumed in the board plant. Stucco is transported to six 100-ton stucco storage bins by five screw conveyors and two bucket elevators. The stucco from the storage bins is fed into the surge bin, incline screw, metering screw, and then to the pin mixer. Some of the stucco flowing from the surge bin (approximately 1–2 tons per hour) is recirculated at the incline screw back to the stucco storage bins.

Wallboard Manufacturing

The manufacturing of wallboard uses a mixture of stucco, solid and liquid additives, and process water. Stucco flowing from the stucco storage bins is mixed with water, foam, accelerator, and other liquid additives in the pin mixer. The facility manufactures standard and fire-rated wallboard. The composition of the slurry varies according to the desired physical characteristics. The pin mixer deposits the slurry between two continuous sheets of paper that pass through a wallboard forming plate. The paper and slurry mold are placed on a forming conveyor belt, where the slurry is allowed to set. The mold forms a continuous sheet of wallboard. At the end of the conveyor the rotating knife cuts the wallboard into individual pieces of varying length, which are then dried while conveyed through the AKI board dryer. The AKI dryer has two main exhaust stacks and a wet end seal exhaust stack. The wet end seal exhaust stack is the exhaust point for an air curtain that draws just enough dryer air to prevent cool ambient air from entering the front of the dryer. At the exit of the AKI dryer, each long board is divided into two boards with radial center saws and trimmed with two pairs of end saws, then an end tape is applied.

Accelerator System

The accelerator consists of land plaster that is further ground in ball mills and mixed with a sugar additive. The accelerator is composed of approximately 80% land plaster and 20% sugar. The mixture helps control the curing process. The land plaster from the Raymond roller mills is

conveyed by a screw conveyor to the land plaster bin and over to the 8 ball mills. The material discharged from the ball mills is conveyed by screw conveyor to the board plant and discharged from the accelerator storage bin.

Wallboard Recycling System

The wallboard recycling system chops and pulverizes reject wallboard for reuse in the board plant. The reject wallboard is loaded into the pulverizer, where the wallboard is ground into fine material. The ground material, containing some shredded paper, is then fed to a screen to remove the paper. From the screen, the reclaimed gypsum is stockpiled by a stacker conveyor. From the stockpile, the material is fed into the feed hopper of the fold belt going to the discharge terminal. A diesel engine provides the power for the system. A maximum of 120,000 tons per year of recycled wallboard is processed.

II. PERMITTING HISTORY

The current Title V operating permit for CertainTeed Gypsum Manufacturing was issued on June 2, 2021, and will expire on June 1, 2026. The source submitted a renewal application on October 2, 2025, which is 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 applications have been received:

August 9, 2021 – Reopen For Cause

The reopen for cause permitting action was initiated by DAQ to add annual reporting requirements for sources that emit more than 25 tons of NO_x and VOC pollutants per year. These requirements are in accordance with Section 182(a)(3)(b) of the Clean Air Act and AQR Section 12.9.1. This application was combined with the Reopen for Cause permitting action initiated on September 2, 2021.

September 2, 2021 – Reopen for Cause

The reopen for cause permitting action was initiated by DAQ to add conditions for fugitive dust from unpaved parking lots and storage areas (AQR 92) and dust control for construction activities (AQR 94). The revised permit, which included the August 9, 2021, application, was issued on November 23, 2021.

January 12, 2022 – Minor Revision

The permittee submitted a minor revision application requesting to include emissions from the consumption of silicone to EU: J.3.1. The revised permit, which included operational limitations, monitoring conditions, and recordkeeping and reporting conditions, was issued on May 3, 2022.

February 9, 2023 –Under AQR 12.5.2.12(a) (Prior Notification)

The permittee submitted a prior notification form to replace the bin vent identified as control device BV05, which controls emissions from the stucco cooling bins (EU: I.2). The source PTE was unaffected by this change. A revised permit was not issued.

March 13, 2023 – Minor Revision

The permittee submitted a minor revision application to replace the burner for the CP Mill (EU: E.11) with a low NO_x burner. The new burner decreased NO_x emissions by 11.82 ton/yr, but increased CO emissions by 16.96 ton/yr. The revised permit was issued on October 11, 2023.

April 5, 2023 – ATC

The permittee submitted an ATC application to add a new grinder (EU: N.8) and conveyor (EU: N.9). Also, 40 CFR Part 60, Subpart OOO requirements, including monitoring, testing, and recordkeeping and reporting, applicable to the new units were incorporated into the permit. The ATC permit was issued on September 14, 2023.

May 8, 2023 – Under AQR 12.5.2.12(a) (Prior Notification)

The permittee submitted a prior notification form to replace two bin vents identified as control devices BV01, which controls emissions from Rock Silo #1 (EU: E.8.1) and BV03, which controls the CP Mill Feed Silo (EU: E.9.3). The source PTE was unaffected by this change. A revised permit was not issued.

August 14, 2024 – Under AQR 12.5.2.12(a) (Prior Notification)

The permittee submitted a prior notification to inform DAQ that the bin vent identified as BV01 had not been replaced with the prior notification application dated May 3, 2023. Instead, the bin vent identified as BV02, which controls emissions from Rock Silo #2 (EU: E.8.2), was replaced at that time. The source PTE was unaffected by this change. A revised permit was not issued.

June 10, 2025 – Minor Revision

The permittee submitted a minor revision application to add alternate operating scenarios for Rolling Mills (Group 6), Plaster Production/Kettles (Group 7) and Plaster Operation (Group 8). The proposed changes do not affect the source PTE because each alternate operating scenario produces less emissions than the primary operating counterpart. In addition, none of the alternate operating scenarios can be operated simultaneously with their primary operating counterparts. A revised permit was not issued for this application. Instead, the application was combined with the renewal application dated October 2, 2025.

July 29, 2025 – Significant Revision

The permittee submitted a significant revision application to correct the heat input ratings for the seven natural gas-fired kettle calciners (EUs: G.8.4(a)-g(7) from 12.0 to 9.0 MMBtu/hr and to correct the heat input rating for the AKI board dryer (EU: J.3) from 141 to 148 MMBtu/hr. Previous permits erroneously identified the burner heat input ratings as 12.0 MMBtu/hr per unit, when the correct ratings are 9.0 MMBtu/hr. This application also included a RACT analysis, which was previously required for all major sources in accordance with AQR 120. However, DES later retracted this requirement due to a planned replacement of AQR 120 with AQR 122. A revised permit was not issued for this application. Instead, the application was combined with the renewal application dated October 2, 2025.

Current Permitting Action

The application for a permit renewal, submitted on October 2, 2025, included the information from the applications submitted on June 10 and July 29, 2025, but did not request any other changes to the permitted emission units or permit conditions.

Variances Between the Draft Renewal Permit and Renewal Application

1. The application included a 65 hp diesel engine identified as EU: N.7. This engine was used to power a rental air compressor which is no longer on site.
2. The particulate matter PTE for EU: E.11 is calculated using the flow rate and grain loading for the CP Mill baghouse. The application identifies the flow rate as 24,000 dscfm. However, correspondence with the consultant verified the actual flow rate to be to 26,000 dscfm. The ATC issued on August 24, 2005, identified the flow rate as 26,000 dscfm.
3. The insignificant activity table included “Diesel Dispensing Operations” and “1,500 Diesel Storage Tank”. The consultant verified that these two items are the same activity. Therefore, “Diesel Dispensing Operations” has been removed from the table.
4. It was confirmed that there are no open waste collection systems in use for the gasoline dispensing operation. Therefore, all permit conditions referencing waste collections systems have been removed from the permit.

On January 29, 2026, the permittee submitted a Notification of Startup for EUs: N.8 and N.9, which were introduced with an ATC permit issued September 14, 2023. The letter identified a startup date of July 9, 2025 for the two emission units. On February 3, 2026, the permittee responded to an e-mail inquiry from DES confirming that they wished to incorporate the two units into the Title V renewal permit that was currently being proceeded.

The two units will operate, on a nonsimultaneous basis with EUs: N.1 and N.2. As a result, the permitted throughputs and calculated PTE are unaffected.

Additionally, with this permitting action, DAQ is establishing conditions to enforce applicable fugitive dust emission requirements under AQR Section 41. As a result, the permit may include new or updated conditions.

AQR Section 102 is applicable to stationary sources of gasoline dispensing facilities and applicable conditions have been incorporated in the permit.

AQR Section 122 requirements have been added to the permit. Among other things, this includes initial and subsequent NO_x performance testing requirements for the CP Mill (EU: E.11) and AKI board dryer (EU: J.3). Although not required by AQR 122, initial and subsequent performance testing requirements for CO have been added for the AKI board dryer for continued compliance demonstration of CO emissions limitations.

Historically, the CO PTE for the AKI board dryer was calculated using a concentration of 261.68 ppm, which equates to 0.1870 lb/MMBtu. This emission factor was derived from a performance test conducted on July 31, 1998. Due to the new performance testing requirements being implemented with this permitting action, the permittee requested to revise the emission factor to add a 20% buffer. This proposal was accepted by DES and the PTE for EU: J.3 has been revised accordingly.

III. EMISSION UNITS

Emission Units

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

Table III-1: Emission Unit List

EU	Rating	EU Description	Controls	Manufacturer	Model No.	Serial No.	SCC
Group 3A—Truck Unloading Station							
C.17	60 tons	Hoppers #1, #2	BH01				30502007
C.19		Conveyor System (4 Belts)					30501504
Group 5—Discharge Terminal							
E1		Stacker E.1					30501504
E.2		Conveyor System (5 Belts)					30501504
E.8.1		Silo #1	BV01				30501503
E.8.2		Silo #2	BV02				30501503
E.9		Conveyor System (2 Belts)					30501504
E.9.2		Emergency Hopper					30502007
E.9.3		Silo #3	BV03				30501503
E.11	37 MMBtu/hr	CP Mill	BH02	Maxon	140KDZERL E-NFS	18903163	30501513
E.12	55 ton/hr	Stucco Cooler	BH02				30501514
Group 6—Rolling Mills							
F.1(a-e)	55 ton/hr	Rock Bin #1-5	BH04-BH08				30501509
F.1.1	1.8 MMBtu/hr	Flash Dryer #1	BH04				30501501
F.1.2	1.8 MMBtu/hr	Flash Dryer #2	BH05				30501501
F.1.3	1.8 MMBtu/hr	Flash Dryer #3	BH06				30501501
F.1.4	1.8 MMBtu/hr	Flash Dryer #4	BH07				30501501
F.1.5	1.8 MMBtu/hr	Flash Dryer #5	BH08				30501501
F.2(a-e)	55 ton/hr	Roller Mill #1-5	BH04-BH08				30501502
F.3(a-e)		Collection Screw Conveyor	BH04-BH08				30501504
F.4(a-e)		LP Collection Screw Conveyor	BH04-BH08				30501504
F.6		LP Bin (400 tons)	BH09				30501510
Group 6 (Alternate)							
F.1(a-b)	55 ton/hr	Rock Bin #1 – 2	BH04-BH05				30501509
F1.1	1.8 MMBtu/hr	Flash Dryer #1	BH04				30501501

EU	Rating	EU Description	Controls	Manufacturer	Model No.	Serial No.	SCC
F1.2	1.8 MMBtu/hr	Flash Dryer #2	BH05				30501501
F.2(a-b)	55 ton/hr	Rock Mill #1 – 2	BH04-BH05				30501502
F.3(a-b)		Collection Screw Conveyor	BH04-BH05				30501504
F.4(a-b)		LP Collection Screw Conveyor	BH04-BH05				30501504
F.6		LP Bin (400 tons)	BH09				30501510
Group 7—Plaster Production/Kettles							
G.1	55 ton/hr	Bucket Elevator #1	BH09				30501504
G.2		LP Distribution Screw Conveyor	BH09				30501504
G.3(a-g)	55 ton/hr	LP Bins #1-7	BH09				30501510
G.8.4(a-g)	87.5 ton/hr	Kettle Calciner#1-7	BH10-BH16				30501511
G.8.4a(1)	9 MMBtu/hr	Kettle Calciner #1 (Burner)					30501511
G.8.4b(2)	9 MMBtu/hr	Kettle Calciner #2 (Burner)					30501511
G.8.4c(3)	9 MMBtu/hr	Kettle Calciner #3 (Burner)					30501511
G.8.4d(4)	9 MMBtu/hr	Kettle Calciner #4 (Burner)					30501511
G.8.4e(5)	9 MMBtu/hr	Kettle Calciner #5 (Burner)					30501511
G.8.4f(6)	9 MMBtu/hr	Kettle Calciner #6 (Burner)					30501511
G.8.4g(7)	9 MMBtu/hr	Kettle Calciner #7 (Burner)					30501511
G.9(a-g)	87.5 ton/hr	Hot Pits #1-7	BH10-BH16				30501503
G.10		Stucco Collection Screw Conveyor	BH17				30501504
G.11	87.5 ton/hr	Bucket Elevator #2	BH17				30501504
G.12		Stucco Distribution Screw Conveyor	BH17				30501504
G.14	50 ton/hr	Truck Loading	BH17				30501503
Group 7 (Alternate)							
G.1	55 ton/hr	Bucket Elevator #1	BH09				30501504
G.2		LP Distribution Screw Conveyor	BH09				30501504
G.3(f-g)	55 ton/hr	LP Bins #6-7	BH09				30501510
G.8.4(f-g)	87.5 ton/hr	Kettle Calciner#6-7	BH15-BH16				30501511
G.8.4f(6)	9 MMBtu/hr	Kettle Calciner #6 (Burner)					30501511

EU	Rating	EU Description	Controls	Manufacturer	Model No.	Serial No.	SCC
G.8.4g(7)	9 MMBtu/hr	Kettle Calciner #7 (Burner)					30501511
G.9(f-g)	87.5 ton/hr	Hot Pits #6-7	BH15-BH16				30501503
G.10		Stucco Collection Screw Conveyor	BH09				30501504
G.11	87.5 ton/hr	Bucket Elevator #2	BH09				30501504
G.12		Stucco Distribution Screw Conveyor	BH09				30501504
Group 8—Plaster Operations							
H.1		Hardwall Screw Conveyor	BH17				30501504
H.2.1	50 ton/hr	Hardwall Bin System (Bins #6HR, #5HR)	BH17				30501510
H.3.1		Screw Conveyor H.3.1	BH17				30501504
H.4	20 ton/hr	Hopper	BH17				30501503
H.6	20 ton/hr	Ball Mill	BH17				30501515
H.7	20 ton/hr	Bucket Elevator #3	BH17				30501504
H.8		Screw Conveyor	BH17				30501504
H.9	20 ton/hr	Bin #3HF	BH17				30501510
H2.2	20 ton/hr	Casting Bin System (Bins #1CR - 4CR)	BH17				30501514
H.3.2		Screw Conveyor	BH17				30501504
H.3.3		Screw Conveyor	BH17				30501504
H.10.4	10 ton/hr	Entoleter	BH17				30501502
H.10.5		Screw Conveyor	BH17				30501504
H.10.6	10 ton/hr	Bucket Elevator #4	BH17				30501504
H.10.7		Casting Screw Conveyor	BH17				30501504
H.13		Screw Conveyor	BH17				30501504
H.13.1		Air Classifier	BH17				30501503
H.14.2		Screw Conveyor	BH17				30501504
H.15	20 ton/hr	Bucket Elevator #5	BH17				30501504
H.16		Finish Bin Feed Screw Conveyor System (2 Screw Conveyors)	BH17				30501504
H.17		Finish Bin System (6 Bins)	BH17				30501510
H.18		Mixer Feed Screw Conveyor System (5 Screw Conveyors)	BH17				30501504

EU	Rating	EU Description	Controls	Manufacturer	Model No.	Serial No.	SCC
H.19.1		Mixer #3	BH18				30501516
H.19.2		Bucket Elevator #6	BH18				30501504
H.20.1		Sacker	BH18				30501517
H.19.3		Mixer #5	BH19				30501516
H.19.4		Bucket Elevator #7	BH19				30501504
H.20.2		Sacker	BH19				30501517
H.19.5		Bucket Elevator #8	BH17				30501504
H.19.6		Mixer #6	BH20				30501516
H.20.4		Supersacker	BH20				30501517
H.21		Bulk Loading Bin	BH21				30501510
H.20.3		Truck Loading	BH21				30501503
H.22		Cement Bin	BV04				30501510
Group 8 (Alternate)							
H.10.6	10 ton/hr	Bucket Elevator #4	BH09				30501504
H.16		Finish Bin Feed Screw Conveyor System (2 Screw Conveyors)	BH09				30501504
H.17		Finish Bin System (6 Bins)	BH09				30501510
H.18		Mixer Feed Screw Conveyor System (5 Screw Conveyors)	BH09				30501504
H.21		Bulk Loading Bin	BH21				30501510
H.20.3		Truck Loading	BH21				30501503
Group 9—Stucco Storage Bins							
I.1		Stucco Screw Conveyor System (2 Screw Conveyors)	BH23				30501504
I.2	55 ton/hr	Cooling Bins System (2 Bins)	BV05				30501514
I.3		Stucco Screw Conveyor 3	BH23				30501504
I.4	55 ton/hr	Bucket Elevator #9	BH23				30501504
I.6	55 ton/hr	Stucco Storage Bin System (4 Bins)	BH23				30501514
I.7		Stucco Screw Conveyor 4	BH23				30501504
I.8	55 ton/hr	Surge Bin	BH23				30501514
I.9		Stucco Screw Conveyor 5	BH23				30501504
I.10		Metering Screw Conveyor	BH23				30501504

EU	Rating	EU Description	Controls	Manufacturer	Model No.	Serial No.	SCC
I.11	55 ton/hr	Recirculation Elevator # 10	BH23				30501504
I.13		Mixing Screw Conveyor	BH23				30501504
I.14		Stucco Transfer	BH03				30501504
Group 10—Board Plant							
J.1	50 ton/hr	Pin Mixer	BH23				30501516
J.1.1	50 ton/hr	Edge Mixer	BH23				30501516
J.2.1	1.2 MMBtu/hr	Paper Heater #1					30901599
J.2.2	1.2 MMBtu/hr	Paper Heater #2					30901599
J.3	148 MMBtu/hr	AKI Board Dryer					30501520
J.3.1		Wallboard Raw Materials - Inks					30501599
J.3.1.1		Wallboard Raw Materials - Silicone					30501503
J.4		Radial Center Saw	BH24				30501521
J.5		End Saws (4 Saws)	BH24				30501521
J.6		Slutter Machine	BH24				30501503
J.7		STMP Feed System	BH25				30501503
Group 11—Accelerator System							
K.1	0.3 ton/hr	LP Bin w/Additive Bin	BV06				30501510
K.2		Screw Conveyor K.2	BH22				30501504
K.3	0.3 ton/hr	Bucket Elevator #11	BH22				30501504
K.4		Screw Conveyor System (2 Screw Conveyors)	BH22				30501504
K.6	0.3 ton/hr	Ball Mill System (8 Mills)	BH22				30501515
K.7		Screw Conveyor	BH22				30501504
K.8	0.3 ton/hr	Bucket Elevator #12	BH22				30501504
K.9		Screw Conveyor System (2 Screw Conveyors)	BH22				30501504
K.12	0.3 ton/hr	Accelerator Bin	BV06				30501514
K.13		Mixing Screw Conveyor	BH22				30501504

EU	Rating	EU Description	Controls	Manufacturer	Model No.	Serial No.	SCC
Group 14—Wallboard Recycling System							
L.14		Recycle Stockpile Transfer					30502504
L.17	10 ton/hr	Recycle Feeder					30501503
L.20		Screw Conveyor					30501504
L.18	10 ton/hr	Bucket Elevator #13					30501504
N.1	100 ton/hr	Grinder		Komptech	Crambo 6000	G2D00222	30501502
N.2		Conveyor					30501504
N.3	50 ton/hr	Screen		Komptech	Nemus 2700	28054	30501507
N.4		Conveyor System (4 Belts)					30501504
N.8	100 ton/hr	Grinder		Rotochopper	B66-E	18-3060	
N.9		Conveyor					
Engines							
N.5	575 hp	Diesel Engine; DOM: 2017		Caterpillar	C18	WRH09907	20200101
N.6	95 hp	Diesel Engine; DOM: 2016		CAT/Perkins	C4.4/1104 D-44T	U262427A	20200101
P.01		Fire Pump		Clarke	JU4H-UFADRO	S0131953P	20200101
	136 hp	Diesel Engine; DOM: 2018		John Deere	4050HFC28	PE4045N017106	20200101
Miscellaneous							
T.1	1,000 gal	Aboveground Storage Tank; Gasoline					40400311
Fugitives – Haul Roads/Stockpiles							
C.16	2.5 miles	Paved Haul Road					30502504
C.18	3 acres	Gypsum Rock Storage Pile					30501508
L.1	15 acres	Recycle Stockpile					30501508
L.10	1 acre	Finished Product Stockpile					30501508
L.13	0.46 miles	Unpaved Haul Roads					30502504

Table III-2: Insignificant Activities

Description	Rating
Aboveground Storage Tank; Diesel	1,500 Gallon

The units in Table III-2 are present at this source, but are insignificant activities pursuant to AQR 12.5.2.5. The emissions from these units or activities, when added to the PTE of the source, will not make the source major for any additional pollutant.

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.

Due to the fact that CertainTeed is neither a categorical stationary source as defined in AQR 12.2.2(j) nor belongs to any other 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.

As shown in Tables IV-1 and IV-2, the source is a major source for NO_x and CO, a synthetic minor source for PM₁₀, and PM_{2.5}, and a minor source for all other regulated pollutants. It is also a source of GHG pollutants.

Table IV-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	-	-
Major Source Thresholds	100	100	100	100	100	100	10/25 ²	-
Major Source Thresholds (Serious Nonattainment)	100	100	50	100	100	50	10/25 ²	-
PSD Thresholds	250	250	250	250	250	250	-	-
Applicability Emissions	2,411.73	1,608.43	99.90	207.20	0.75	28.46	6.93	107,158.72

¹Expressed in units of CO₂e (metric tons)

²10 tons for single HAP pollutant or 25 tons for any combination of HAP pollutants

PTE

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

PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAP	GHG ¹
63.09	32.02	82.70	193.06	0.73	26.65	6.88	104,933.69

¹Expressed in units of CO₂e (metric tons)

Table IV-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	63.09	32.02	82.70	193.06	0.73	26.65	6.88	104,933.69
PTE from Permit Issued 10/11/2023	63.54	32.48	84.86	171.28	0.79	27.16	3.40 ²	141,561
Difference	-0.45	-0.46	-2.16	21.78	-0.06	-0.51	-0.16 ³	-36,627.31
Total Source Emissions Increase	0	0	0	0	0	0	0	0
AQR 12.2.2(uu) Significance Thresholds	15	10	40	100	40	40	10	N/A
AQR 12.5.1(d) Minor NSR Significance (nonattainment areas)	7.5	5	12.5	50	20	12.5	10	N/A

¹Expressed in units of CO₂e (metric tons)

²The OP issued 10/11/2023 omitted the HAP emissions from inks (EU: J.3.1). The true value should have been 7.04 tpy.

³This value represents the difference if the HAP emissions from EU: J.3.1 had been included in the 10/11/2023 OP.

V. 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. The calculated emission increases are 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, which remain enforceable, along with new control requirements required by AQR 122.

Baghouses

Table V-1: Summary of Baghouse Control Devices

Control Device		Description	ΔP Range (in. H ₂ O)	Corresponding Emission Unit	Control Efficiency
Number	Type				
BH01	Baghouse	Rock Unloading	0.5 – 8.0	C.17, C.19	99.5%
BH02	Baghouse	CP Mill	0.5 – 8.0	E.11, E.12	99.5%
BH03	Baghouse	Stucco Cooler /Transfer	0.5 – 8.0	I.14	99.5%
BH04	Baghouse	Roller Mill #1	0.5 – 8.0	F.1 through F.4	99.5%
BH05	Baghouse	Roller Mill #2	0.5 – 8.0		99.5%
BH06	Baghouse	Roller Mill #3	0.5 – 8.0		99.5%
BH07	Baghouse	Roller Mill #4	0.5 – 8.0		99.5%
BH08	Baghouse	Roller Mill #5	0.5 – 8.0		99.5%
BH09	Baghouse	LP Bins	0.5 – 8.0	F.6, G.1, G.2, G.3	99.5%
BH10	Baghouse	Kettle #1	0.5 – 8.0	G.8.4a(1), 4b(2), 4c(3), 4d(4), 4e(5), 4f(6), 4f(7)	99.5%
BH11	Baghouse	Kettle #2	0.5 – 8.0		99.5%
BH12	Baghouse	Kettle #3	0.5 – 8.0		99.5%
BH13	Baghouse	Kettle #4	0.5 – 8.0		99.5%
BH14	Baghouse	Kettle #5	0.5 – 8.0		99.5%
BH15	Baghouse	Kettle #6	0.5 – 8.0		99.5%
BH16	Baghouse	Kettle #7	0.5 – 8.0		99.5%
BH17*	Baghouse	Finish Bin	1.0 – 9.0	G.9 through G.14; H.1 through H.18	99.5%
BH18	Baghouse	Mixer #3	0.5 – 8.0	H.19.1, H.19.2	99.5%
BH19	Baghouse	Mixer #5	0.5 – 8.0	H.19.3, H.19.4, H.20.2	99.5%
BH20	Baghouse	Mixer #6	0.5 – 8.0	H.19.6, H.20.4	99.5%
BH21	Baghouse	Bulk Plaster Loading	0.2 – 8.0	H.21, H.20.3	99.5%
BH22	Baghouse	Accelerator Ball Mills	0.5 – 8.0	K.2 through K.9, K.13	99.5%
BH23	Baghouse	Board Plant Stucco Bins	0.5 – 8.0	I.1, I.3 through I.13, J.1, J.1.1	99.5%
BH24*	Baghouse	End Trim	0.2 – 5.0	J.4 through J.6	99.5%
BH25	Baghouse	STMP Feed System	0.5 – 8.0	J.7 (Inside building)	99%

* CAM applicable.

1. Each baghouse identified in Table V-1 shall be operated at all times the associated emission unit is operating and shall be maintained in good working order consistent with manufacturer specifications to meet the minimum particulate control efficiency, as listed, at all times the baghouse is in operation.
2. The permittee shall operate each baghouse so the pressure drops are maintained within the limits specified in Table V-1.

Bin Vents

Table V-2: Summary of Bin Vent Control Devices

EU	Device	Description	Manufacturer	Model No.	Serial No.	Air Flow (scfm)	Control Efficiency
E.8.1	BV01	Rock Silo #1	CP Environmental	58BF025C	8289-2	500	99.5%
E.8.2	BV02	Rock Silo #2	CP Environmental	58BF025IIG	3376-2	500	99.5%
E.9.3	BV03	CP Mill Feed Silo	CP Environmental	58BF025C	8289-3	500	99.5%
H.22	BV04	Cement Bin	CP Environmental	58BF025IIG	3419	500	99.5%
I.2	BV05	Stucco Cooling Bins	CP Environmental	58BF016C	8293	300	99.5%
K.1	BV06	LP Bins (Accelerator)	Pneu-Con	N/A	N/A	300	99.5%

3. The permittee shall operate each bin vent identified in Table V-2 at all times the associated emission unit is operating and shall be maintained in good working order, so all are operated consistent with manufacturer specifications.

Wallboard Manufacturing/Recycling

4. Fugitive dust emissions from conveyors, storage piles, transfer points, drop points, stacker points, and nonmetallic mineral processing equipment, not connected to baghouse controls or part of the wet process shall be controlled by operational water sprays as needed to prevent exceeding opacity standards. The permittee shall utilize the water spray system at all times during the processing of materials.
5. Fugitive dust emissions from conveyors, the useable gypsum rock storage pile (EU: C.18) and the storage piles (EUs: L.1 and L.10), transfer points, and nonmetallic mineral processing equipment not connected to baghouse controls shall be controlled by maintaining a minimum moisture content of 0.5% moisture by weight in materials less than ¼ inch in diameter.

Haul Roads

6. Unpaved roads shall be controlled by stabilizing loose materials to ensure visible emissions are within allowable opacity limits. Maintenance may consist of watering, chemical or organic dust suppression, or equivalent control measures (EU: L.13).
7. Paved roads shall be controlled by immediately removing road debris and mud or dirt from trackout. Maintenance may consist of washing, sweeping, vacuuming, or equivalent control measures (EU: C.16).

Gasoline Dispensing

8. Fugitive VOC emissions from fuel dispensing activities shall be minimized by using the best available equipment, good operating practices, dispensing spillage cleanup and mitigation practices, as specified in 40 CFR Part 63, Subpart CCCCCC.

Diesel Engines

9. Each diesel engine shall be maintained and operated in accordance with the manufacturer's O&M manual for emissions-related components and shall only combust 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 (EUs: N.5, N.6, and P.01).
10. The diesel-powered generator shall be operated and maintained with a turbocharger and aftercooler (EU: N.5). [AQR 122.12.1(c)(1)]

Fuel Burning Equipment

11. The permittee shall maintain and operate each natural gas-fired emission unit in accordance with the manufacturer's O & M manual for emissions-related components and good combustion practices (EUs: E.11, F1.1 through F1.5, J2.1, J2.2, J.3 and G8.1 through G8.7).
12. The permittee shall maintain and operate the CP mill with burners that have a manufacturer's maximum emission concentration of 40 ppm for NO_x and 150 ppm for CO, corrected to 3% oxygen (EU: E.11).

VI. OPERATIONAL LIMITS

The permittee requested the following operational limitations, which have not changed since the previous Part 70 Operating Permit:

1. The processing of usable gypsum rock and recycled reject wallboard shall be limited to a combined total of 800,000 tons in any consecutive 12-month period.
2. The processing of reject and/or recycled wallboard shall be limited to a combined throughput of 120,000 tons in any consecutive 12-month period.
3. The processing of the STMP feed system shall be limited to 131,400 tons in any consecutive 12-month period.
4. The processing of gypsum rock at the truck unloading station shall be limited to 800,000 tons in any consecutive 12-month period.
5. The consumption of wallboard inks, etc., containing VOCs shall be limited to 2,340 gallons in any consecutive 12-month period, based on a weighted average VOC content of 6.62 pounds per gallon. The permittee may alter the VOC content and usage in gallons to ensure the PTE for each pollutant is not exceeded (EU: J.3.1).
6. The permittee shall limit the consumption of silicone in the wallboard manufacturing process to 950,000 pounds in any consecutive 12-month period (EU: J.3.1.1).
7. Gasoline fuel dispensing shall be limited to 16,000 gallons in any consecutive 12-month period (EU: T.1).
8. The operation of each diesel-powered continuous-duty generator shall be limited to 2,400 hours in any consecutive 12-month period (EUs: N.5 and N.6).
9. The operation of the emergency fire pump shall be limited to 100 hours per year for testing and maintenance purposes. The fire pump may be operated up to 50 hours per year for nonemergency situations, but those hours count towards the 100 hours provided for testing and maintenance (EU: P.01).

10. The combined area for all stockpiles shall be limited to 19.0 acres at any given time (EUs: C.18, L.1, and L.10).
11. The VMT on unpaved roads shall be limited to 2,562 miles in any consecutive 12-month period (EU: L.13).
12. The VMT on paved roads shall be limited to 43,478 miles in any consecutive 12-month period (EU: C.16).
13. The primary and alternate operating scenarios shall not be operated concurrently. This includes Rolling Mills (Group 6 and Group 6 Alternate), Plaster Production/Kettles (Group 7 and Group 7 Alternate), and Plaster Operations (Group 8 and Group 8 Alternate). [AQR 12.5.2.6(a)]

VII. MONITORING

Compliance with permit requirements shall be met through the following:

Visible Emissions

1. Daily visible emissions checks on each emission unit and PM control device (e.g., baghouses and bin vents) while in operation.
2. Visual emissions checks on each diesel engine each day the unit is operated (EUs: N.5 and N.6).
3. Quarterly visual emissions checks on the diesel-powered fire pump while it is in operation (EU: P.01).

Wallboard Manufacturing/Recycling

4. Monitoring the processing of usable gypsum rock in tonnage and calculate, on a monthly basis, the throughput as a consecutive 12-month total.
5. Monitoring the processing of reject and/or recycled wallboard in tonnage and calculate, on a monthly basis, the throughput as a consecutive 12-month total.
6. Monitoring the processing of material at the STMP feed system in tonnage and calculate, on a monthly basis, the throughput as a consecutive 12-month total.
7. Monitoring the processing of gypsum rock at the truck unloading station in tonnage and calculate, on a monthly basis, the throughput as a consecutive 12-month total.

Wallboard Raw Materials

8. Monitoring the consumption of each VOC-containing compound (e.g., wallboard inks) in gallons as a consecutive 12-month total (EU: J.3.1).
9. Monitoring the consumption of silicone in pounds as a consecutive 12-month total (EU: J.3.1.1).

Gasoline Dispensing

10. Monitoring the throughput of gasoline in gallons and calculate, on a monthly basis, the throughput as a consecutive 12-month total (EU: T.1).

11. Monitoring the fuel storage and dispensing system to determine if components of the system are in compliance with the control requirements of this permit. Monitoring inspections shall be recorded and consist of daily inspections for gasoline spills, and recording the times and dates the source became aware of a spill and cleaned it up and daily inspections of covers on gasoline containers and fill pipes after each respective delivery.

Diesel Engines

12. Monitoring the sulfur content and cetane index or aromatic content of the fuel burned in each generator (EUs: N.5 and N.6) and fire pump (EU: P.01) by retaining a copy of vendor fuel specifications.
13. Operating each diesel-powered generator (EUs: N.5 and N.6) and fire pump (EU: P.01) with a nonresettable hour meter.
14. Monitoring the hours of operation of each diesel-powered continuous duty generator and calculating, on a monthly basis, their duration of operation as a consecutive 12-month total (EUs: N.5 and N.6).
15. Monitoring the hours of operation of the diesel-powered fire pump for testing and maintenance, and separately for emergencies (EU: P.01).

Moisture Sampling

16. Compliance with the minimum moisture content specified in this permit for materials less than ¼ inch in diameter shall be demonstrated by conducting weekly moisture testing in accordance with ASTM Standard C 566-97 from the Group 5 discharge terminal at the fold belt/crossover belt area (EU: E.2) and Group 24 wallboard recycling system at the grinder area (EUs: N.1 or N.2).

Haul Roads/Stockpiles

17. Daily monitoring of the VMT of haul trucks on paved and unpaved haul roads on a monthly basis and a consecutive 12-month total.
18. Monthly monitoring of the total stockpile areas (EUs: C.18, L.1, and L.10).

Baghouses

19. Conducting daily monitoring of the pressure drop across each baghouse cell, while in operation, with the installation and operation of a pressure differential (Magnehelic) gauge per manufacturer's specifications identified in the operating permit.
20. Maintaining a manual of standard operating procedures for baghouses. The procedures for maintenance specified in the manual shall, at a minimum, include a preventative maintenance schedule and type of bags guaranteed to maintain the filter efficiency in this permit that is consistent with the baghouse manufacturer's instructions for routine and long-term maintenance, and have it available for inspection.
21. Conducting daily visual observations of baghouse and/or stack discharges to verify that visible emissions are not present in excess of allowable opacity limits.
22. Conducting monthly external inspections of each baghouse while it is running to ensure that the equipment is maintained in good working order and operated according to manufacturer's specifications.

23. Conducting annual visual inspections of each baghouse interior for internal mechanical integrity of the unit and for any defects.

Bin Vents

24. Conducting daily visual observations of the bin vent while operating, to verify that visible emissions are not present in excess of allowable opacity limits.
25. Conducting monthly external inspections of each bin vent while it is running to ensure that the equipment is maintained in good working order and operated according to manufacturer's specifications.
26. Annual visual inspections of each bin vent interior for internal mechanical integrity of the unit and for any defects.
27. Developing, following, and maintaining a preventative maintenance schedule that is consistent with the manufacturer's specifications for routine and long-term maintenance, and have it available for inspection.

Compliance Assurance Monitoring (CAM)

Table VII-1: Emission Units Subject to CAM

EU ID	Description	Control Device	PM ₁₀ Pre-Control Emissions
H.6, H.10.4	Plaster Ball Mill	BH17	161.6 tons/year
J.4, J.5, J.6	End Trim Saw, Center Saws, Slutter Machine	BH24	693.9 tons/year

Table VII-2: Monitoring Approach

CAM Element	Indicator 1	Indicator 2
Indicator	Pressure differential (Δp) for PM ₁₀ across baghouses BH17 and BH24.	Visible emissions for opacity.
Measurement Approach	Daily Δp shall be measured across the baghouse with a Magnehelic gauge or equivalent; the time of reading and measured value will be recorded.	Daily visual observations of baghouse stack discharges shall be made to verify that visible emissions are not present. If visible emissions are observed, a Method 9 opacity reading will be performed.
Indicator Range	BH:17 - The indicator range for Δp is 2–8 inches of water for EUs: H.6 and H.10.4. An excursion is defined as any measured Δp outside the range of 2–8 inches of water. BH:24 - The indicator range for Δp is 1.2–4 inches of water for EUs: J.4, J.5, and J.6. An excursion is defined as any measured Δp outside the range of 1.2 and 4 inches of water. Excursions trigger an investigation, corrective actions, and a reporting requirement.	For opacity, the indicator is no visible emissions. An excursion is defined as any visible emission observation. Excursions trigger an investigation, corrective actions, and a reporting requirement.
Quality Improvement Plan Threshold	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	Measurements shall be performed at the baghouse exhaust while the baghouse is operating.	Measurements shall be performed at the baghouse exhaust while the baghouse is operating.
Verification of Operational Status	The Δp Magnehelic gauge or equivalent shall be installed, calibrated, and operated per manufacturer's recommendations.	Not applicable.
QA/QC Practices and Criteria	The Magnehelic gauge or equivalent shall be calibrated no less than annually.	The visible opacity observations shall be made by a certified observer.
Monitoring Frequency	Daily Δp measures shall be made.	Daily 6-minute observations will be made
Data Collection Procedures	Differential pressure (Δp) will be measured with a Magnehelic pressure gauge or equivalent device and recorded daily.	Visual checks shall comprise two observations about 15 seconds apart. Visual checks shall be recorded upon observation.
Averaging Period	Not applicable.	VE checks are 6-minutes duration. Method 9 is one 6-minute average.

28. Monitoring the baghouses subject to CAM listed in Table VII-1 in accordance with 40 CFR Part 64 and the following conditions:
- Daily monitoring of the opacity of the exhaust from the baghouses.
 - Daily measurements of the pressure differential between the inlet and outlet of each baghouse.
 - Opacity monitoring of each baghouse in accordance with the monitoring requirements itemized in Table VII-2.
 - Maintaining a written QIP, if required, and have it available for inspection. The plan shall include procedures for evaluating the control performance problems and based on the results of the evaluation procedures. The permittee shall modify the plan to include procedures for improving preventative maintenance, improving existing control measures, process operation changes, etc.
 - Following implementation of a QIP, upon any subsequent determination pursuant to §64.7(d)(2) the Administrator or the permitting authority may require that an owner or operator make reasonable changes to the QIP if it failed to address the cause of the control device performance problems or failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

VIII. PERFORMANCE TESTING

New performance testing requirements have been added for the CP Mill (EU: E.11) and the AKI board dryer (EU: J.3). These are identified in Table VIII-1. Performance testing methods and frequencies established with previous permitting actions are identified in Table VIII-2.

- The permittee shall submit to the Control Officer for approval a performance testing protocol that contains testing, reporting, and notification schedules, test protocols, and anticipated test dates no less than 45 days, but no more than 90 days, before the anticipated date of the performance test unless otherwise specified in this permit.

2. The permittee shall conduct and pass subsequent performance tests on specified units every five years, and no later than 90 days after the anniversary date of the previous successful test.
3. The permittee shall submit a report describing the results of each performance test to the Control Officer within 60 days of the end of the test.
4. The Control Officer may require additional performance testing when operating conditions appear inadequate to demonstrate compliance with the emissions and/or limitations in this permit.
5. The permittee shall conduct performance testing on the CP mill (EU: E.11) and AKI board dryer (EU: J.3) in accordance the applicable test methods identified in Table VIII-1.
 - a. Initial testing shall be conducted within 180 days of the issuance date of this permit.
 - b. The permittee shall conduct and pass subsequent performance tests every five years, and within the same calendar quarter of the previous successful test.

Table VIII-1: Performance Testing Requirements for CP Mill and AKI Board Dryer

EU	Pollutant	Test Method
J.3 & E.11	NO _x	EPA Method 7E
J.3	CO	EPA Method 10
J.3 & E.11	Stack Gas Parameters	EPA Methods 1, 2, 3 or 4

Table VIII-2: Performance Testing Requirements for Particulate Matter

EU	Description	NSPS/AQR Applicability	Pollutant	Compliance Standard	Performance Test Method	Subsequent Testing Frequency
C.17, C.19	Baghouse: BH01 Gypsum Handling, Rock Unloading Hoppers #1 and #2, Rock Unloading Hopper Discharge Belts #1 and #2	40 CFR 60, Subpart OOO	PM	0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E.11, E.12	Baghouse: BH02 CP Mill	40 CFR 60, Subpart UUU AQR 12	PM PM ₁₀	0.092 g/dscm (0.040 gr/dscf) 0.00873 gr/dscf	Method 5 or Method 17 Method 201 or Method 202	Every 5 years
G.10, G.11, G.12, G.14, H.1, H.2.1, H.2.2, H.3.1– H.3.3, H.4, H.6–H.9, H.10.4– H.10.7, H.13, H.13.1, H.14.2,	Baghouse: BH17 Finish Bins	40 CFR 60, Subpart OOO	PM	0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years

EU	Description	NSPS/AQR Applicability	Pollutant	Compliance Standard	Performance Test Method	Subsequent Testing Frequency
H.15–H.18, H.19.5						
H.20.3, H.21	Baghouse: BH21 Bulk Plaster Loading	40 CFR 60, Subpart OOO	PM	0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
I.1, I.3, I.4, I.6–I.11, I.13, J.1, J.1.1	Baghouse: BH23 Board Plant Stucco Bins	40 CFR 60, Subpart OOO	PM	0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
K.2–K.4, K.6–K.9, K.13	Baghouse: BH22 Accelerator Ball Mill	40 CFR 60, Subpart OOO	PM	0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years

IX. REVIEW OF APPLICABLE REGULATIONS

A. LOCAL REGULATORY REQUIREMENTS

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

- Chapter 445 of the Nevada Revised Statutes, Sections 401 through 601;
- 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
- Portions of the AQR's 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 IX-1: Clark County AQRs and Nevada State Implementation Plan

Applicable AQR Title	Applicable Subsection	SIP	Affected EU
00: "Definitions"	Applicable definitions	Yes	Entire source
02: "State Implementation Plan"	Applicable definitions	Yes	Entire source
04: "Control Officer"	All subsections	Yes	Entire source
05: "Interference with Control Officer"	All subsections	Yes	Entire source

Applicable AQR Title	Applicable Subsection	SIP	Affected EU
06: "Injunctive Relief"	All subsections	Yes	Entire source
08: "Persons Liable for Penalties - Punishment: Defense"	All subsections	Yes	Entire source
09: "Civil Penalties"	All 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
13: "National Emission Standards for Hazardous Air Pollutants"	13.1(b)(1): "Subpart A - General Provisions"	No	Entire source
	13.2(b)(82): "Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"		Diesel engines (EUs: N.5, N.6, and P.01)
	AQR 13.2(b)(106), "Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities"		Gasoline Storage Tank (EU: T1)
14: "New Source Performance Standards"	14.1(b)1: "General Provisions"	No	Entire Source
	AQR 14.1(b)(69), "Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants"		Various mineral processing emission units
	AQR 14.1(b)(75), "Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries"		Dryers & Calciners
	14.1(b)(82): "Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines"		Diesel Engines (EUs: N.5, N.6, and P.01)
18: "Permit and Technical Service Fees"	18.1: "Operating Permit Issuance Fees"	Yes	Entire source
	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"		
26: "Emission of Visible Air Contaminants"	AQR 26.1: "Opacity Limits" ($\leq 20\%$ 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

Applicable AQR Title	Applicable Subsection	SIP	Affected EU
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
122: "Reasonably Available Control Technology for Major Sources in HA 212"	122.12.1: RACT Control Requirements	Yes	CP Mill (EU: E.11), Board Dryer (EUJ.3), and Diesel Engine (EU: N.5)
	122.12.2: RACT Monitoring Requirements		
	122.12.3: RACT Recordkeeping and Reporting Requirements		

B. APPLICABLE FEDERAL REGULATIONS

DAQ has determined that the following federal regulations are applicable:

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

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

Subpart A—General Provisions

40 CFR 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. The source has completed all initial performance testing. However, the control officer reserves the right to require performance testing when operating conditions appear inadequate to demonstrate compliance with the emissions and/or limitations in this permit.

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, Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants." 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., $PM > 0.040 \text{ gr/dscm}$] 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: The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) with a

displacement less than 30 liters per cylinder where the model year is 2007 or later, for engines that are not fire pumps, and July 1, 2006, for ICE certified by National Fire Protection Association as fire pump engines. This subpart applies to the diesel engine (EUs: N.5 and N.6) and the diesel-powered fire pump (EU: P.01).

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. This subpart applies to the diesel engines (EUs: N.5 and N.6) and the diesel-powered fire pump (EU: P.01).

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: The provisions of this subpart are applicable to owners and operators of stationary reciprocating internal combustion engines at major or area sources of HAP. The permittee operates two diesel engines (EUs: N.5 and N.6) and a fire pump (EU: P.01) that are subject to this regulation.

40 CFR Part 63.6590 What this subpart covers.

Discussion: All existing, new, or reconstructed stationary RICE are subject to this subpart (EUs: N.5, N.6, and P.01).

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.

Subpart CCCCCC—Gasoline Dispensing Facilities

40 CFR 63.11111 – Applicability

Discussion: This section defines the various requirements for automotive and aviation gasoline dispensing facilities.

40 CFR 63.11112 – Affected Emission Units

Discussion: This subpart applies to gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at the GDF are also included. The equipment used for the refueling of motor vehicles is not covered by this subpart. The aboveground storage tank (EU: T.1) is subject to this subpart.

40 CFR 63.11113 – Compliance Dates

Discussion: This section establishes the dates for which all existing, reconstructed, and new affected sources must comply with the requirements of this subsection.

40 CFR 63.11115 – General Duties for Minimizing Emissions

Discussion: The permittee shall, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

40 CFR 63.11116 – Requirements for Facilities with Monthly Throughputs of less than 10,000 Gallons

Discussion: This section addresses the means by which gasoline shall be handled to minimize vapor releases to the atmosphere. All pertinent requirements are contained in the Part 70 OP.

40 CFR PART 64—COMPLIANCE ASSURANCE MONITORING

40 CFR Part 64.2 Applicability.

Discussion: The requirements of this part shall apply to a pollutant-specific emissions unit at a major source that is required to obtain a part 70 permit if the unit satisfies all of the following criteria: (1) The unit is subject to an emission limitation or standard for the applicable regulated air pollutant; (2) The unit uses a control device to achieve compliance with any such emission limitation or standard; and (3) The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. The emission units subject to the CAM rule are identified in Table VII-1 of this document.

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 because the source does not meet the applicability requirements of 40 CFR Part 72.6

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.

X. COMPLIANCE SUMMARY

Table X-1: AQR Compliance Summary

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 0	Definitions	Applicable. CertainTeed will comply with all applicable definitions as they apply.	CertainTeed will meet all applicable test methods if new definitions apply.	CertainTeed complies with applicable requirements.
AQR 4	Control Officer	Applicable. The Control Officer or representative may enter into CertainTeed property, with or without prior notice, at any reasonable time to establish compliance.	CertainTeed will allow the Control Officer to enter its property as required.	CertainTeed complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 5	Interference with Control Officer	Applicable. CertainTeed shall not hinder, obstruct, delay, resist, or interfere with the Control Officer.	CertainTeed will allow Control Officer to operate as needed.	CertainTeed complies with applicable requirements.
AQR 8	Persons Liable for Penalties	Applicable. CertainTeed and employees will be individually and collectively liable to any penalty or punishment from DAQ	CertainTeed will adhere to the rules stipulated in applicable AQR.	CertainTeed complies with applicable requirements.
AQR 9	Civil Penalties	Applicable. This rule stipulates penalties for AQR violations.	CertainTeed will adhere to the rules stipulated in applicable AQR.	CertainTeed complies with applicable requirements.
AQR 12.4	ATC application and Permit Requirements for Part 70 Sources	Applicable. The owner or operator of an existing or new Part 70 source shall obtain an Authority to Construct Permit from the Control Officer before beginning actual construction.	CertainTeed applied for, and received, ATC permits from DAQ.	CertainTeed complies with applicable requirements.
AQR 12.5	Part 70 Operating Permit Requirements	Applicable. CertainTeed 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.	CertainTeed 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.	CertainTeed complies with applicable requirements.
AQR 12.9	Annual Emissions Inventory	Applicable. A source that emits more than 25 tons of NOx or VOC shall complete and submit an annual emissions inventory.	Annual emission inventories shall be submitted by March 31 each year.	CertainTeed complies with applicable requirements.
AQR 12.10	Continuous Monitoring Requirements	Applicable. Any owner or operator of a stationary source listed in 40 CFR 51, Appendix P, Sections 1.1.1 through 1.1.4 shall install, calibrate, operate, and maintain all monitoring equipment necessary for continuously monitoring the pollutants specified in Appendix P, Sections 1.1.1 through 1.1.4, for each applicable source category.	CertainTeed submitted all required protocols/test plans per the issued ATC permit prior to CEMS certification. CEMS certification was approved by DAQ.	CertainTeed 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. The diesel engines (EUs: N.5 and N.6) and fire pump (EU: P.01) are subject to this AQR	Applicable monitoring, recordkeeping & reporting requirements.	CertainTeed 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 gasoline tank (EU: T.01) is an affected unit.	Applicable monitoring requirements.	CertainTeed complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
AQR 14.1(b)(69)	"Subpart OOO – Standards of Performance for Nonmetallic Mineral Processing Plants	Applicable. CertainTeed operates crushers processing more than 25 tons/hour of nonmetallic mineral material.	Applicable performance tests, opacity tests, and monitoring, recordkeeping & reporting requirements.	CertainTeed complies with applicable requirements.
AQR 14.1(b)(75)	"Subpart UUU – Standards of Performance for Calciners and Dryers in Mineral Industries"	Applicable. CertainTeed operates calciners and dryers subject to this regulation.	Applicable performance tests, opacity tests, and monitoring, recordkeeping & reporting requirements.	CertainTeed complies with applicable requirements.
AQR 14.1(b)(82)	Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Applicable. The diesel engines (EUs: N.5 and N.6) and fire pump (EU: P.01) are subject to this AQR.	Applicable monitoring, recordkeeping & reporting requirements.	CertainTeed complies with applicable requirements.
AQR 18	Permit and Technical Service Fees	Applicable. Required permit and technical service fees.	CertainTeed is required to pay all required & applicable permit and technical service fees.	CertainTeed 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, breakdown, emergency condition, or malfunction which causes emissions of regulated air pollutants in excess of any permit limits shall be reported to the Control Officer. 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.	CertainTeed complies with applicable requirements.
AQR 26	Emission of Visible Air Contaminants	Applicable. Opacity for the combustion units shall not exceed 20% for more than 3 min. in any 60-min. period.	Compliance determined by EPA Method 9.	CertainTeed 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.	CertainTeed 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.	CertainTeed air contaminant emissions are controlled by pollution control devices or good combustion in order to not cause a nuisance.	CertainTeed complies with applicable requirements.
AQR 41	Fugitive Dust	Applicable. CertainTeed shall take necessary actions to abate fugitive dust from becoming airborne.	CertainTeed utilizes appropriate best practices to not allow airborne fugitive dust.	CertainTeed complies with applicable requirements.
AQR 42	Open Burning	Applicable. If CertainTeed burns combustible material in open areas, the Control Officer will approve it in advance. Locally enforceable rule only.	CertainTeed will contact DAQ and obtain advance approval for burning activities identified in AQR 42.	CertainTeed 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.	CertainTeed is not expected to cause odors.	CertainTeed complies with applicable requirements.
AQR 70.4	Emergency Procedures	Applicable		CertainTeed complies with applicable requirements.
AQR 80	Circumvention	Applicable. CertainTeed shall not build, erect, install or use any article, machine, equipment or other contrivance which conceals an emission which would otherwise constitute a violation of these Regulations.	CertainTeed will disclose all emissions as required by state and federal regulations.	CertainTeed complies with applicable requirements.
AQR 94	Permitting and Dust Control for Construction Activities.	Applicable. Stationary sources shall apply for a dust control permit in the event of engaging in a construction activity greater than 0.25 acre.	CertainTeed shall apply for a dust control permit in the event of engaging in a construction activity greater than 0.25 acre.	CertainTeed complies with applicable requirements.
AQR 122	"Reasonably Available Control Technology for Major Sources in HA 212"	Applicable. CertainTeed shall implement specific control requirements, monitoring requirements, and recordkeeping and reporting requirements for EUs: E.11, J.3, and N.5	CertainTeed shall continue to adhere to applicable RACT requirements for emission control, monitoring, recordkeeping, and reporting.	CertainTeed complies with applicable SIP requirements, including control, monitoring, recordkeeping, and reporting.

Table X-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. CertainTeed will comply with all applicable definitions.	CertainTeed will continue to meet BACT and other impact analysis requirements by monitoring & keeping records of emission data.	CertainTeed 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. CertainTeed is a Title V source, so SIP rules apply.	CertainTeed shall continue to comply with the federally enforceable monitoring, testing, recordkeeping, and reporting requirements stipulated in the SIP.	CertainTeed complies with applicable requirements.
40 CFR 60, Subpart A	Standards of Performance for New Stationary Sources – General Provisions	Applicable. CertainTeed is an affected facility under this rule.	CertainTeed shall continue to adhere to applicable monitoring, testing, recordkeeping, and reporting regulations.	CertainTeed complies with applicable requirements.
40 CFR 60, Subpart OOO	"Standards of Performance for Nonmetallic Mineral Processing Plants"	Applicable. CertainTeed is an affected facility under this rule.	Applicable monitoring, recordkeeping & reporting requirements.	CertainTeed complies with applicable requirements.
40 CFR 60, Subpart UUU	"Standards of Performance for Calciners and Dryers in Mineral Industries"	Applicable. CertainTeed is an affected facility under this rule.	Applicable monitoring, recordkeeping & reporting requirements.	CertainTeed complies with applicable requirements.

Citation	Title	Applicability	Applicable Test Method	Compliance Status
40 CFR 60, Subpart IIII	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	Applicable. The diesel engines (EUs: N.5 and N.6) and fire pump (EU: P.01) are subject to this AQR	Applicable monitoring, recordkeeping & reporting requirements.	CertainTeed complies with applicable requirements.
40 CFR Part 63, Subpart ZZZZ	"National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines"	Applicable. The diesel engines (EUs: N.5 and N.6) and fire pump (EU: P.01) are subject to this AQR.	Applicable monitoring, recordkeeping & reporting requirements.	CertainTeed complies with applicable requirements.
40 CFR Part 63, Subpart CCCCCC	"National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities"	Applicable. The gasoline tank (EU: T.01) is subject to the requirements of this rule.	Applicable monitoring, recordkeeping & reporting requirements.	CertainTeed complies with applicable requirements.
40 CFR Part 64	"Compliance Assurance Monitoring"	Applicable. CertainTeed has PM ₁₀ emissions that use an active control device.	CertainTeed monitors pressure differential and opacity to demonstrate compliance with PM ₁₀ emission limits.	CertainTeed complies with applicable requirements.
40 CFR Part 70	State Operating Permit Programs	Applicable. CertainTeed 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 06/02/2021. The current renewal application was submitted on 10/02/2025, which is within the required timeframe.	CertainTeed complies with applicable requirements.
40 CFR Part 72	Acid Rain Permit Regulations	Not Applicable.	Not applicable.	Not applicable.
40 CFR Part 73	Acid rain Sulfur Dioxide Allowance System	Not Applicable.	Not applicable.	Not applicable.
40 CFR Part 75	Acid Rain Continuous Emission Monitoring	Not Applicable.	Not applicable.	Not applicable.

XI. PERMIT SHIELD

The permittee did not request a permit shield.

XII. INCREMENT ANALYSIS

CertainTeed Gypsum Manufacturing is a major source in Hydrographic Area 212 (the Las Vegas Valley). Permitted emission units include a mill, 6 dryers, 7 calciners, 2 paper heaters, one fire pump and other gypsum manufacturing equipment. Since minor source baseline dates for NO_x (October 21, 1988) and SO₂ (June 29, 1979) 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 XII-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 XII-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)
SO ₂	3-hour	2.93 ¹	645275	3991315
SO ₂	24-hour	0.64 ¹	645727	3991531
SO ₂	Annual	0.31	645660	3991530
NO _x	Annual	24.92	645727	3991531

¹ Highest Second High Concentration.

XIII. PUBLIC PARTICIPATION

This is a renewal of the OP. Therefore, pursuant to AQR 12.5.2.17, public participation is required.

XIV. ATTACHMENTS

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

Group	Process Description	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs	GHG
Group 3A	Truck Unloading	6.16	0.92	0	0	0	0	0	0
Group 5	Discharge Terminal	11.66	1.90	0	0	0	0	0	0
	CP Mill	8.52	8.52	7.88	17.97	0.10	0.88	0.31	0
Group 6	Rolling Mills	0.68	0.66	0	0	0	0	0	0
	Flash Dryers	0.30	0.30	3.85	3.25	0.05	0.20	0.05	4,188.38
Group 7	Plaster Production	0.72	0.49	0	0	0	0	0	0
	Kettle Calciners	2.10	2.10	27.02	22.75	0.14	1.47	0.49	29,318.63
Group 8	Plaster Operations	0.70	0.66	0	0	0	0	0	0
Group 9	Stucco Storage Bins	0.39	0.12	0	0	0	0	0	0
Group 10	Mixers/Saws	3.51	3.49	0	0	0	0	0	0
	Raw Materials - Inks	0	0	0	0	0	7.75	3.64	0
	Raw Materials - Silicone	4.80	4.80	0	0	0	12.54	1.09	0
	Paper Heaters	0.08	0.08	1.04	0.86	0.02	0.06	0.02	1,116.90
	AKI Board Dryer	4.86	4.86	36.24	145.47	0.39	3.50	1.23	68,875.51
Group 11	Accelerator System	0.10	0.10	0	0	0	0	0	0
Group 14	Wallboard Recycling System	8.21	1.23	0	0	0	0	0	0
Engines	EU: N.5 (575 hp)	0.23	0.23	5.73	2.04	0.01	0.06	0.02	720.74
	EU: N.6 (95 hp)	0.04	0.04	0.75	0.65	0.01	0.08	0.01	119.08
	EU: P01 (136 hp)	0.01	0.01	0.19	0.07	0.01	0.01	0.01	35.51
Storage Tank	Gasoline Storage Tank	0	0	0	0	0	0.10	0.01	0

Group	Process Description	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs	GHG
Fugitives	Haul Roads	4.26	0.64	0	0	0	0	0	0
	Stockpiles	5.76	0.87	0	0	0	0	0	0
Total		63.09	32.02	82.70	193.06	0.73	26.65	6.88	104,374.74

Table XIV-2: Applicability Emissions Summary (tons/yr)

Group	Process Description	PM ₁₀	PM _{2.5}	NO _x	CO	SO ₂	VOC	HAPs	GHG
Group 3A	Truck Unloading	105.12	39.42	0	0	0	0	0	0
Group 5	Discharge Terminal	83.80	13.07	0	0	0	0	0	0
	CP Mill	8.52	8.52	7.88	17.97	0.10	0.88	0.31	0
Group 6	Rolling Mills	326.66	300.88	0	0	0	0	0	0
	Flash Dryers	0.30	0.30	3.85	3.25	0.05	0.20	0.05	4,188.38
Group 7	Plaster Production	480.84	319.92	0	0	0	0	0	0
	Kettle Calciners	2.10	2.10	27.02	22.75	0.14	1.47	0.49	29,318.63
Group 8	Plaster Operations	483.38	210.18	0	0	0	0	0	0
Group 9	Stucco Storage Bins	78.77	11.92	0	0	0	0	0	0
Group 10	Mixers/Saws	671.85	667.66	0	0	0	0	0	0
	Raw Materials - Inks	0	0	0	0	0	7.75	3.64	0
	Raw Materials - Silicone	4.80	4.80	0	0	0	12.54	1.09	0
	Paper Heaters	0.08	0.08	1.04	0.86	0.02	0.06	0.02	1,116.90
	AKI Board Dryer	4.86	4.86	36.24	145.47	0.39	3.50	1.23	68,875.51
Group 11	Accelerator System	1.99	0.09	0	0	0	0	0	0
Group 14	Wallboard Recycling System	157.68	23.65	0	0	0	0	0	0
Engines	EU: N.5 (575 hp)	0.83	0.83	20.93	14.44	0.03	1.67	0.07	2,630.70
	EU: N.6 (95 hp)	0.14	0.14	2.75	2.39	0.01	0.28	0.01	434.64
	EU: P01 (136 hp)	0.01	0.01	0.19	0.07	0.01	0.01	0.01	35.51
Storage Tank	Gasoline Storage Tank	0	0	0	0	0	0.10	0.01	0
Total		2,411.73	1,608.43	99.90	207.20	0.75	28.46	6.87	106,600.27

Table XIV-3: PTE Calculations – Truck Unloading Station (Group 3A)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
C.17	Hoppers #1 & 2	300	800,000	0.006	0.04	0.005	0.01	0.08
C.19	Conveyor System (4 Belts)	300	800,000	0.006	0.04	0.38	0.91	6.08
Total							0.92	6.16

Table XIV-4: PTE Calculations – Discharge Terminal (Group 5)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
E.1	Stacker	100	200,000	0.006	0.04	0.38	0.23	1.52
E.2	Conveyor System (5 Belts)	100	800,000	0.0075	0.05	0.38	1.14	7.60
E.8.1	Silo #1	300	600,000	0.0002	0.0002	1	0.06	0.06
E.8.2	Silo #2	300	600,000	0.0002	0.0002	1	0.06	0.06
E.9	Conveyor System (2 Belts)	300	600,000	0.003	0.02	0.38	0.34	2.28
E.9.2	Emergency Hopper	100	4,320	0.006	0.04	1	0.01	0.09
E9.3	Silo #3	65	569,400	0.0002	0.0002	1	0.06	0.06
E.11	CP Mill	55	481,800	PTE Calculated by Grain Loading			8.52	8.52
E.12	Stucco Cooler	55	481,800	Included with E.11			0	0
Total							10.42	20.18

Grain Loading Calculations for EU: E.11 (Table XIV-4)

$26,000 \text{ dscfm} * 0.00873 \text{ gr/dscf} = 226.98 \text{ gr/min}$
 $\rightarrow 226.98 \text{ gr/min} * 525,600 \text{ min/yr} = 119,300,688 \text{ gr/yr}$
 $\rightarrow 119,300,688 \text{ gr/yr} * 1 \text{ lb}/7,000 \text{ gr} = 17,043 \text{ lb/yr}$
 $\rightarrow 17,043 \text{ lb/yr} * 1 \text{ ton}/2,000 \text{ lb} = \mathbf{8.52 \text{ ton/yr}}$

Table XIV-5: PTE Calculations – Rolling Mills (Group 6)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
F.1(a-e)	Rock Bins #1-5	55	200,000	0.006	0.04	0.005	0.01	0.02
F.2(a-e)	Roller Mills #1-5	55	200,000	1.23	1.23	0.005	0.62	0.62
F.3(a-e)	Collection Screw Conveyor	55	200,000	0.0035	0.023	0.005	0.01	0.01
F.4(a-e)	LP Collection Screw Conveyor	55	1,000	0.0035	0.023	0.005	0.01	0.01
F.6	LP Bin	55	200,000	0.006	0.04	0.005	0.01	0.02
Total							0.66	0.68

Table XIV-6: PTE Calculations – Group 6 Alternate

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
F.1(a-b)	Rock Bins #1-2	22	93,529	0.006	0.04	0.005	0.01	0.01
F.2(a-b)	Roller Mills #1-2	22	93,529	1.23	1.23	0.005	0.29	0.29
F.3(a-b)	Collection Screw Conveyor	22	93,529	0.0035	0.023	0.005	0.01	0.01
F.4(a-b)	LP Collection Screw Conveyor	22	93,529	0.0035	0.023	0.005	0.01	0.01
F.6	LP Bin	22	93,529	0.006	0.04	0.005	0.01	0.01
Total							0.33	0.32

Table XIV-7: PTE Calculations – Plaster Production (Group 7)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
G.1	Bucket Elevator #1	55	200,000	0.0035	0.023	0.005	0.01	0.01
G.2	LP Distribution Screw Conveyor	55	200,000	0.0035	0.023	0.005	0.01	0.01
G.3(a-g)	LP Bins #1-7	55	200,000	0.006	0.04	0.005	0.01	0.02
G.8.4(a-g)	Kettle Calciner #1-7	87.5	200,000	0.76	0.76	0.005	0.38	0.38
G.9(a-g)	Hot Pits #1-7	87.5	170,000	0.0035	0.023	0.005	0.01	0.01
G.10	Stucco Collection Screw Conveyor	87.5	170,000	0.0035	0.023	0.005	0.01	0.01
G.11	Bucket Elevator #2	87.5	170,000	0.0035	0.023	0.005	0.01	0.01
G.12	Stucco Distribution Screw Conveyor	87.5	170,000	0.0035	0.023	0.005	0.01	0.01
G.14	Truck Loading	50	170,000	0.092	0.61	0.005	0.04	0.26
Total							0.49	0.72

Table XIV-8: PTE Calculations – Group 7 Alternate

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/yr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
G.1	Bucket Elevator #1	22	93,529	0.0035	0.023	0.005	0.01	0.01
G.2	LP Distribution Screw Conveyor	22	93,529	0.0035	0.023	0.005	0.01	0.01
G.3(f-g)	LP Bins #1-7	22	93,529	0.006	0.04	0.005	0.01	0.01
G.8.4(f-g)	Kettle Calciner #1-7	25	79,500	0.76	0.76	0.005	0.15	0.15
G.9(f-g)	Hot Pits #1-7	25	79,500	0.0035	0.023	0.005	0.01	0.01
G.10	Stucco Collection Screw Conveyor	25	79,500	0.0035	0.023	0.005	0.01	0.01
G.11	Bucket Elevator #2	25	79,500	0.0035	0.023	0.005	0.01	0.01
G.12	Stucco Distribution Screw Conveyor	25	79,500	0.0035	0.023	0.005	0.01	0.01
Total							0.22	0.21

Table XIV-9: PTE Calculations – Plaster Operations – Group 8 Alternate

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
H.10.6	Bucket Elevator #4	10	79,500	0.0035	0.023	0.005	0.01	0.00
H.16	Finish Bin Feed Screw Conveyor System (2 Screws)	10	79,500	0.007	0.046	0.005	0.01	0.01
H.17	Finish Bin System (6 Bins)	10	79,500	0.006	0.04	0.005	0.01	0.01
H.18	Mixer Bin Feed Screw Conveyor System (5 Screws)	10	79,500	0.0175	0.115	0.005	0.01	0.02
H.21	Bulk Loading Bin	10	79,500	0.006	0.04	0.005	0.01	0.01
H.20.3	Truck Loading	100	79,500	0.092	0.61	0.005	0.02	0.12
Total							0.07	0.18

Table XIV-10: PTE Calculations – Group 8

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
H.1	Hardwall Screw Conveyor	70	170,000	0.0035	0.023	0.005	0.01	0.01
H.2.1	Hardwall Bin System (Bins #6HR, #5HR)	20	60,000	0.006	0.04	0.005	0.01	0.01
H.3.1	Screw Conveyor	20	60,000	0.0035	0.023	0.005	0.01	0.01
H.4	Hopper	20	60,000	0.006	0.04	0.005	0.01	0.01
H.6	Ball Mill	20	50,000	1.23	1.23	0.005	0.15	0.15
H.7	Bucket Elevator #3	20	50,000	0.0035	0.023	0.005	0.01	0.01
H.8	Screw Conveyor	20	50,000	0.0035	0.023	0.005	0.01	0.01
H.9	Bin #3 HF	20	50,000	0.006	0.04	0.005	0.01	0.01
H.2.2	Casting Bin System (Bins #1CR - 4CR)	20	100,000	0.006	0.04	0.005	0.01	0.01
H.3.2	Screw Conveyor	20	50,000	0.0035	0.023	0.005	0.01	0.01
H.3.3	Screw Conveyor	20	50,000	0.0035	0.023	0.005	0.01	0.01
H10.4	Entoleter	10	60,000	1.23	1.23	0.005	0.18	0.18
H.10.5	Screw Conveyor	10	60,000	0.0035	0.023	0.005	0.01	0.01
H.10.6	Bucket Elevator #4	10	60,000	0.0035	0.023	0.005	0.01	0.01
H.10.7	Casting Screw Conveyor	10	60,000	0.0035	0.023	0.005	0.01	0.01
H.13	Screw Conveyor	10	60,000	0.0035	0.023	0.005	0.01	0.01
H.13.1	Air Classifier	10	60,000	0.0035	0.023	0.005	0.01	0.01
H.14.2	Screw Conveyor	10	60,000	0.0035	0.023	0.005	0.01	0.01
H.10.15	Bucket Elevator #5	10	60,000	0.0035	0.023	0.005	0.01	0.01
H.16	Finish Bin Feed Screw Conveyor System (2 Screws)	10	60,000	0.007	0.046	0.005	0.01	0.01
H.17	Finish Bin System (6 Bins)	10	60,000	0.006	0.04	0.005	0.01	0.01
H.18	Mixer Bin Feed Screw Conveyor System (5 Screws)	10	60,000	0.0175	0.115	0.005	0.01	0.02
H.19.1	Mixer #3	5	57,600	0.006	0.04	0.005	0.01	0.01
H.19.2	Bucket Elevator #6	5	43,800	0.0035	0.023	0.005	0.01	0.01
H.20.1	Sacker	5	43,800	0.0035	0.023	0.005	0.01	0.01
H.19.3	Mixer #5	5	43,800	0.006	0.04	0.005	0.01	0.01
H.19.4	Bucket Elevator #7	5	43,800	0.0035	0.023	0.005	0.01	0.01
H.20.2	Sacker	5	43,800	0.0035	0.023	0.005	0.01	0.01
H.19.5	Bucket Elevator #8	5	43,800	0.0035	0.023	0.005	0.01	0.01
H.19.6	Mixer #6	5	43,800	0.006	0.04	0.005	0.01	0.01
H.20.4	Supersacker	5	43,800	0.0035	0.023	0.005	0.01	0.01
H.21	Bulk Loading Bin	10	35,000	0.006	0.04	0.005	0.01	0.01
H.20.3	Truck Loading	100	35,000	0.092	0.61	0.005	0.01	0.05
H.22	Cement Bin	1	2,000	0.006	0.04	0.005	0.01	0.01
Total							0.66	0.70

Table XIV-11: PTE Calculations – Stucco Storage Bins (Group 9)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
I.1	Stucco Screw Conveyor System (2 Screws)	55	481,800	0.0035	0.023	0.005	0.01	0.03
I.2	Cooling Bins System (2 Bins)	55	481,800	0.006	0.04	0.005	0.01	0.05
I.3	Stucco Screw Conveyor 3	55	481,800	0.0035	0.023	0.005	0.01	0.03
I.4	Bucket Elevator #9	55	481,800	0.0035	0.023	0.005	0.01	0.03
I.6	Stucco Storage Bin System (4 Bins)	55	481,800	0.006	0.04	0.005	0.01	0.05
I.7	Stucco Screw Conveyor 4	55	481,800	0.0035	0.023	0.005	0.01	0.03
I.8	Surge Bin	55	481,800	0.006	0.04	0.005	0.01	0.05
I.9	Stucco Screw Conveyor 5	55	481,800	0.0035	0.023	0.005	0.01	0.03
I.10	Metering Screw Conveyor	55	481,800	0.0035	0.023	0.005	0.01	0.03
I.11	Recirculation Elevator #10	55	481,800	0.0035	0.023	0.005	0.01	0.03
I.13	Mixing Screw Conveyor	55	481,800	0.0035	0.023	0.005	0.01	0.03
I.14	Stucco Transfer	55	481,800	0.0035	0.023	0.005	0.01	0.03
Total							0.12	0.39

Table XIV-12: PTE Calculations – Board Plant (Group 10)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
J.1	Pin Mixer	50	438,000	0.0015	0.01	0.005	0.01	0.01
J.1.1	Edge Mixer	Included with EU: J.1					0	0
J.4	Radial Center Saw	0.089	780	570	570	0.005	1.11	1.11
J.5	End Saws (4 Saws)	0.089	780	1,140	1,140	0.005	2.22	2.22
J.6	Slutter Machine	0.00091	8	34.2	34.2	1	0.14	0.14
J.7	STMP Machine	15	131,400	0.006	0.04	0.01	0.00	0.03
Total							3.49	3.51

Table XIV-13: PTE Calculations – Accelerator System (Group 11)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
K.1	LP Bin with Additive Bin	0.3	2,628	0.006	0.04	0.005	0.01	0.01
K.2	Screw Conveyor	0.3	2,628	0.0035	0.023	0.005	0.01	0.01
K.3	Bucket Elevator #11	0.3	2,628	0.0035	0.023	0.005	0.01	0.01
K.4	Screw Conveyor System (2 Screws)	0.3	2,628	0.007	0.046	0.005	0.01	0.01
K.6	Ball Mill System (8 Mills)	0.3	2,628	1.23	1.23	0.005	0.01	0.01
K.7	Screw Conveyor	0.3	2,628	0.0035	0.023	0.005	0.01	0.01
K.8	Bucket Elevator #12	0.3	2,628	0.0035	0.023	0.005	0.01	0.01
K.9	Screw Conveyor System (2 Screws)	0.3	2,628	0.007	0.046	0.005	0.01	0.01
K.12	Accelerator Bin	0.3	2,628	0.006	0.04	0.005	0.01	0.01
K.13	Mixing Screw Conveyor	0.3	2,628	0.0035	0.023	0.005	0.01	0.01
Total							0.10	0.10

Table XIV-14: PTE Calculations – Wallboard Recycling System (Group 14)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
L.17	Recycle Feeder	100	120,000	0.006	0.04	0.38	0.14	0.91
L.20	Screw Conveyor	100	120,000	0.0015	0.01	0.38	0.03	0.23
L.18	Bucket Elevator #13	100	120,000	0.0015	0.01	0.38	0.03	0.23
L.14	Recycle Stockpile Transfer	100	120,000	0.006	0.04	0.38	0.14	0.91
N.1	Grinder	100	120,000	0.0195	0.13	0.38	0.44	2.96
N.8	Grinder							
N.2	Conveyor	100	120,000	0.0015	0.01	0.38	0.03	0.23
N.9	Conveyor							
N.3	Screen	100	120,000	0.012	0.08	0.38	0.27	1.82
N.4	Conveyor System (4 Belts)	100	120,000	0.006	0.04	0.38	0.14	0.91
Total							1.23	8.21

Table XIV-15: PTE Calculations – Diesel Engine

EU#	N.5		Horsepower:	575		Emission Factor (lb/hp-hr)	Potential Emissions		
Make:	Caterpillar		Hours/Day:	24.0			lb/hr	lb/day	ton/yr
Model:	C18		Hours/Year	2400	PM10	3.31E-04	0.19	4.56	0.23
S/N:	WRH09907				NOx	8.31E-03	4.78	114.70	5.73
					CO	2.95E-03	1.70	40.77	2.04
					SO ₂	1.21E-05	0.01	0.17	0.01
					VOC	8.82E-05	0.05	1.22	0.06
					HAP	2.71E-05	0.02	0.37	0.02
Manufacturer Guarantees									
PM10	0.15	g/hp-hr ▼							
NOx	3.77	g/hp-hr ▼							
CO	1.34	g/hp-hr ▼							
SO ₂		g/hp-hr ▼							
VOC	0.04	g/hp-hr ▼							
Engine Type: Diesel ▼									
Diesel Fuel Sulfur Content is 15 ppm (0.0015%)									

Table XIV-16: PTE Calculations – Diesel Engine

EU#	N.6		Horsepower:	95		Emission Factor (lb/hp-hr)	Potential Emissions		
Make:	Caterpillar		Hours/Day:	24.0			lb/hr	lb/day	ton/yr
Model:	C4.4		Hours/Year	2400	PM10	3.31E-04	0.03	0.75	0.04
S/N:	U262427A				NOx	6.61E-03	0.63	15.08	0.75
					CO	5.73E-03	0.54	13.07	0.65
					SO ₂	1.21E-05	0.01	0.03	0.01
					VOC	6.61E-04	0.06	1.51	0.08
					HAP	2.71E-05	0.01	0.06	0.01
Manufacturer Guarantees									
PM10	0.15	g/hp-hr ▼							
NOx	3	g/hp-hr ▼							
CO	2.6	g/hp-hr ▼							
SO ₂		g/hp-hr ▼							
VOC	0.3	g/hp-hr ▼							
Engine Type: Diesel ▼									
Diesel Fuel Sulfur Content is 15 ppm (0.0015%)									

Table XIV-17: PTE and Applicability Calculations – Diesel Engine

EU#	P.01		Horsepower:	136		Emission Factor (lb/hp-hr)	Potential Emissions		
Make:	John Deere		Hours/Day:	24.0			lb/hr	lb/day	ton/yr
Model:	4050HFC28		Hours/Year	500		PM10	2.79E-04	0.04	0.01
S/N:	PE4045N017106					NOx	5.52E-03	0.75	18.03
						CO	2.14E-03	0.29	6.98
						SO₂	1.21E-05	0.01	0.04
						VOC	2.47E-04	0.03	0.80
						HAP	2.71E-05	0.01	0.09
Manufacturer Guarantees									
PM10	0.17	g/kW-hr ▼							
NOx	3.36	g/kW-hr ▼							
CO	1.3	g/kW-hr ▼							
SO ₂		g/hp-hr ▼							
VOC	0.15	g/kW-hr ▼							
Engine Type: Diesel ▼									
Diesel Fuel Sulfur Content is 15 ppm (0.0015%)									

Table XIV-18: PTE Calculations for Natural Gas-Fired CP Mill

EU#:	E.11		Emission Factor (lb/mmBtu)	PTE		
Make:	Maxon			lb/hr	lb/day	ton/yr
Model:	140KDZERLE-NFS		PM10* Grain	1.946	46.70	8.52
S/N:	18903163		PM2.5* Loading	1.946	46.70	8.52
			NOx	0.0486	1.80	7.88
37.00 mmBtu/hr			CO	0.1109	4.10	17.97
24.0 hr/day			SO₂	6.00E-04	0.02	0.10
8760 hr/yr			VOC	0.0054	0.20	0.88
			HAP	1.90E-03	0.07	1.69
			Lead	4.90E-07	1.81E-05	7.94E-05
Concentrations:	%O₂		*PTE Calculated by Grain Loading			
40 ppm NOx	3.0					
150 ppm CO	3.0					
Fuel: Natural Gas ▼	2					

Grain Loading Calculations for Table XIV-18

$26,000 \text{ dscfm} * 0.00873 \text{ gr/dscf} = 226.98 \text{ gr/min}$
 $\rightarrow 226.98 \text{ gr/min} * 525,600 \text{ min/yr} = 119,300,688 \text{ gr/yr}$
 $\rightarrow 119,300,688 \text{ gr/yr} * 1 \text{ lb}/7,000 \text{ gr} = 17,043 \text{ lb/yr}$
 $\rightarrow 17,043 \text{ lb/yr} * 1 \text{ ton}/2,000 \text{ lb} = \mathbf{8.52 \text{ ton/yr}}$

Table XIV-19: PTE Calculations for Natural Gas-Fired Flash Dryers

EU#:	F.1.1 - F.1.5			Emission Factor (lb/mmBtu)	PTE (per unit)		
Make:	Flash Dryers 1-5				lb/hr	lb/day	ton/yr
Model:				PM10	0.0075	0.01	0.06
S/N:				PM2.5	0.0075	0.01	0.06
				NOx	0.098	0.18	0.77
1.8 mmBtu/hr				CO	0.0824	0.15	0.65
24.0 hr/day				SO ₂	6.00E-04	0.01	0.01
8760 hr/yr				VOC	0.0054	0.01	0.04
				HAP	1.900E-03	0.01	0.01
Concentrations:		%O2		Lead	4.90E-07	8.82E-07	3.86E-06
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas	2					

Table XIV-20: PTE Calculations for Natural Gas-Fired Kettle Calciners

EU#:	G.8.4(a)(1) - G.4.8(g)(7)			Emission Factor (lb/mmBtu)	PTE (per unit)		
Make:	Kettle Calciners 1-7				lb/hr	lb/day	ton/yr
Model:				PM10	0.0075	0.07	0.30
S/N:				PM2.5	0.0075	0.07	0.30
				NOx	0.098	0.88	3.86
9.0 mmBtu/hr				CO	0.0824	0.74	3.25
24.0 hr/day				SO ₂	6.00E-04	0.01	0.02
8760 hr/yr				VOC	0.0054	0.05	0.21
				HAP	1.900E-03	0.02	0.07
Concentrations:		%O2		Lead	4.90E-07	4.41E-06	1.93E-05
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas	2					

Table XIV-21: PTE Calculations for Natural Gas-Fired Paper Heaters

EU#:	J.2.1 & J.2.2			Emission Factor (lb/mmBtu)	PTE (per unit)		
Make:	Paper Heaters 1 & 2				lb/hr	lb/day	ton/yr
Model:				PM10	0.0075	0.01	0.04
S/N:				PM2.5	0.0075	0.01	0.04
				NOx	0.0980	0.12	0.52
1.20 mmBtu/hr				CO	0.0824	0.10	0.43
24.0 hr/day				SO ₂	6.00E-04	0.01	0.01
8760 hr/yr				VOC	0.0054	0.01	0.03
				HAP	1.90E-03	0.01	0.01
Concentrations:		%O2		Lead	4.90E-07	5.88E-07	2.58E-06
	ppm NOx	3.0					
	ppm CO	3.0					
Fuel:	Natural Gas	2					

Table XIV-22: PTE Calculations for Natural Gas-Fired AKI Heater

EU#:	J.3			Emission Factor (lb/mmBtu)	Potential Emissions		
Make:	AKI Board Dryer				lb/hr	lb/day	ton/yr
Model:				PM10	0.0075	1.11	4.86
S/N:				PM2.5	0.0075	1.11	4.86
				NOx	0.0559	8.27	36.24
148.0 mmBtu/hr				CO*	0.2244	33.21	145.47
24.0 hr/day				SOx	0.0006	0.09	0.39
8760 hr/yr				VOC	0.0054	0.80	3.50
				HAP	1.900E-03	0.28	1.23
Concentrations:		%O2					
46 ppm NOx**		3.0		*EF fom 1998 Performance test plus 20% buffer			
ppm CO		3.0		**Concentration required by AQR 122.12.1(b)			
Fuel:	Natural Gas	2					

Table XIV-23: PTE Calculations for Ink Consumption

EU	Description	Throughput (gal/yr)	VOC Content (lb/gal)	HAP Content (lb/gal)	PTE (VOC)	PTE (HAP)
J.3.1	Inks (Wallboard Raw Materials)	2,340	6.62	3.11	7.75	3.64

Table XIV-24: PTE Calculations for Silicone Consumption

EU	Description	Throughput (lb/yr)	Pollutant Content (lb/lb)			PTE		
			PM _{2.5} /PM ₁₀	VOC	HAP	PM _{2.5} /PM ₁₀	VOC	HAP
J.3.1.1	Silicone (Wallboard Raw Materials)	950,000	0.0101	0.0264	0.0023	4.80	12.54	1.09

Table XIV-25: PTE Calculations for Storage Piles

EU	Description	Acreage	EF (lb-acre/day)		PTE	
			PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀
C.18	Gypsum Rock Storage Pile	3	0.25	1.66	0.14	0.91
L.1	Recycle Stockpile	15	0.25	1.66	0.68	4.54
L.10	Finished Product Stockpile	1	0.25	1.66	0.05	0.30
Total					0.87	5.76

Table XIV-26: PTE Calculations for Haul Roads

EU	Description	VMT/yr	EF		CF	PTE	
			PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
L.13	Unpaved Haul Roads	2,562	1.14	7.57	0.1	0.15	0.97
L.1	Paved Haul Road	43,478	1.14	7.57	0.02	0.50	3.29
Total						0.64	4.26

Table XIV-27: GHG PTE and Applicability Calculations for Natural Gas-Fired EUs

EU	Description	Rating (MMBtu/hr)	Operation (hr/yr)	Pollutant	EF (lb/MMBtu)	GWP	CO ₂ e (ton/yr)	Number of Units	Total GHG (ton/yr)	Metric Tons
F.1.1 - F.1.5	Flash Dryers #1 - 5	1.8	8,760	CO ₂	117	1	922.43	5	4616.89	4188.38
		1.8	8,760	CH ₄	0.0022	25	0.43			
		1.8	8,760	N ₂ O	0.00022	298	0.52			
G.8.4(a)(1) - G.8.4(g)(7)	Kettle Calciners #1 - 7	9	8,760	CO ₂	117	1	4612.14	7	32318.25	29318.63
		9	8,760	CH ₄	0.0022	25	2.17			
		9	8,760	N ₂ O	0.00022	298	2.58			
J.2.1 & J.2.2	Paper Board Heaters #1 & 2	1.2	8,760	CO ₂	117	1	614.95	2	1231.17	1116.9
		1.2	8,760	CH ₄	0.0022	25	0.29			
		1.2	8,760	N ₂ O	0.00022	298	0.34			
J.3	AKI Board Dryer	148	8,760	CO ₂	117	1	75844.08	1	75922.23	68875.51
		148	8,760	CH ₄	0.0022	25	35.65			
		148	8,760	N ₂ O	0.00022	298	42.50			
Total									114088.54	103499.41

Table XIV-28: GHG PTE Calculations for Diesel Engines

EU	Description	hp	Operation (hr/yr)	Pollutant	EF (lb/hp-hr)	GWP	CO ₂ e (ton/yr)	GHG (ton/yr)	Metric Tons
N.5	Diesel-Powered Generator	575	2,400	CO ₂	1.15	1	793.50	794.48	720.74
		575	2,400	CH ₄	0.0000168	25	0.29		
		575	2,400	N ₂ O	0.00000336	298	0.69		
N.6	Diesel-Powered Generator	95	2,400	CO ₂	1.15	1	131.10	131.26	119.08
		95	2,400	CH ₄	0.0000168	25	0.05		
		95	2,400	N ₂ O	0.00000336	298	0.11		
P.01	Diesel-Powered Fire Pump	136	500	CO ₂	1.15	1	39.10	39.15	35.51
		136	500	CH ₄	0.0000168	25	0.01		
		136	500	N ₂ O	0.00000336	298	0.03		
Total								964.89	875.33

Table XIV-29: GHG Applicability Calculations for Diesel Engines

EU	Description	hp	Operation (hr/yr)	Pollutant	EF (lb/hp-hr)	GWP	CO ₂ e (ton/yr)	GHG (ton/yr)	Metric Tons
N.5	Diesel-Powered Generator	575	8,760	CO ₂	1.15	1	2896.28	2899.85	2630.70
		575	8,760	CH ₄	0.0000168	25	1.06		
		575	8,760	N ₂ O	0.00000336	298	2.52		
N.6	Diesel-Powered Generator	95	8,760	CO ₂	1.15	1	478.52	479.11	434.64
		95	8,760	CH ₄	0.0000168	25	0.17		
		95	8,760	N ₂ O	0.00000336	298	0.42		
P.01	Diesel-Powered Fire Pump	136	500	CO ₂	1.15	1	39.10	39.15	35.51
		136	500	CH ₄	0.0000168	25	0.01		
		136	500	N ₂ O	0.00000336	298	0.03		
Total								3418.11	3100.86

Table XIV-30: Applicability Calculations – Truck Unloading Station (Group 3A)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
C.17	Hoppers #1 & 2	300	2,628,000	0.006	0.04	1	7.88	52.56
C.19	Conveyor System (4 Belts)	300	2,628,000	0.006	0.04	1	31.54	52.56
Total							39.42	105.12

Table XIV-31: Applicability Calculations – Discharge Terminal (Group 5)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
E.1	Stacker	100	876,000	0.006	0.04	1	2.63	17.52
E.2	Conveyor System (5 Belts)	100	876,000	0.0075	0.05	1	3.29	21.90
E.8.1	Silo #1	300	2,628,000	0.0002	0.0002	1	0.26	0.26
E.8.2	Silo #2	300	2,628,000	0.0002	0.0002	1	0.26	0.26
E.9	Conveyor System (2 Belts)	300	2,628,000	0.003	0.02	1	3.94	26.28
E.9.2	Emergency Hopper	100	876,000	0.006	0.04	1	2.63	17.52
E9.3	Silo #3	65	569,400	0.0002	0.0002	1	0.06	0.06
E.11	CP Mill	55	481,800	PTE Calculated in Group 5			0	0
E.12	Stucco Cooler	55	481,800	Included with E.11			0	0
Total							13.07	83.80

Table XIV-32: Applicability Calculations – Rolling Mills (Group 6)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
F.1(a-e)	Rock Bins #1-5	55	481,800	0.006	0.04	1	1.45	9.64
F.2(a-e)	Roller Mills #1-5	55	481,800	1.23	1.23	1	296.31	296.31
F.3(a-e)	Collection Screw Conveyor	55	481,800	0.0035	0.023	1	0.84	5.54
F.4(a-e)	LP Collection Screw Conveyor	55	481,800	0.0035	0.023	1	0.84	5.54
F.6	LP Bin	55	481,800	0.006	0.04	1	1.45	9.64
Total							300.88	326.66

Table XIV-33: Applicability Calculations – Group 6 Alternate

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
F.1(a-b)	Rock Bins #1-2	22	192,720	0.006	0.04	1	0.58	3.85
F.2(a-b)	Roller Mills #1-2	22	192,720	1.23	1.23	1	118.52	118.52
F.3(a-b)	Collection Screw Conveyor	22	192,720	0.0035	0.023	1	0.34	2.22
F.4(a-b)	LP Collection Screw Conveyor	22	192,720	0.0035	0.023	1	0.34	2.22
F.6	LP Bin	22	192,720	0.006	0.04	1	0.58	3.85
Total							120.35	130.66

Table XIV-34: Applicability Calculations – Plaster Production (Group 7)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
G.1	Bucket Elevator #1	55	481,800	0.0035	0.023	1	0.84	5.54
G.2	LP Distribution Screw Conveyor	55	481,800	0.0035	0.023	1	0.84	5.54
G.3(a-g)	LP Bins #1-7	55	481,800	0.006	0.04	1	1.45	9.64
G.8.4(a-g)	Kettle Calciner #1-7	87.5	766,500	0.76	0.76	1	291.27	291.27
G.9(a-g)	Hot Pits #1-7	87.5	766,500	0.0035	0.023	1	1.34	8.81
G.10	Stucco Collection Screw Conveyor	87.5	766,500	0.0035	0.023	1	1.34	8.81
G.11	Bucket Elevator #2	87.5	766,500	0.0035	0.023	1	1.34	8.81
G.12	Stucco Distribution Screw Conveyor	87.5	766,500	0.0035	0.023	1	1.34	8.81
G.14	Truck Loading	50	438,000	0.092	0.61	1	20.15	133.59
Total							319.92	480.84

Table XIV-35: Applicability Calculations – Group 7 Alternate

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
G.1	Bucket Elevator #1	22	192,720	0.0035	0.023	1	0.34	2.22
G.2	LP Distribution Screw Conveyor	22	192,720	0.0035	0.023	1	0.34	2.22
G.3(f-g)	LP Bins #1-7	22	192,720	0.006	0.04	1	0.58	3.85
G.8.4(f-g)	Kettle Calciner #1-7	25	219,000	0.76	0.76	1	83.22	83.22
G.9(f-g)	Hot Pits #1-7	25	219,000	0.0035	0.023	1	0.38	2.52
G.10	Stucco Collection Screw Conveyor	25	219,000	0.0035	0.023	1	0.38	2.52
G.11	Bucket Elevator #2	25	219,000	0.0035	0.023	1	0.38	2.52
G.12	Stucco Distribution Screw Conveyor	25	219,000	0.0035	0.023	1	0.38	2.52
Total							86.01	101.58

Table XIV-36: Applicability Calculations – Plaster Operations (Group 8)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
H.1	Hardwall Screw Conveyor	70	613,200	0.0035	0.023	1	1.07	7.05
H.2.1	Hardwall Bin System (Bins #6HR, #5HR)	20	175,200	0.006	0.04	1	0.53	3.50
H.3.1	Screw Conveyor	20	175,200	0.0035	0.023	1	0.31	2.01
H.4	Hopper	20	175,200	0.006	0.04	1	0.53	3.50
H.6	Ball Mill	20	175,200	1.23	1.23	1	107.75	107.75
H.7	Bucket Elevator #3	20	175,200	0.0035	0.023	1	0.31	2.01
H.8	Screw Conveyor	20	175,200	0.0035	0.023	1	0.31	2.01
H.9	Bin #3 HF	20	175,200	0.006	0.04	1	0.53	3.50
H.2.2	Casting Bin System (Bins #1CR - 4CR)	20	175,200	0.006	0.04	1	0.53	3.50
H.3.2	Screw Conveyor	20	175,200	0.0035	0.023	1	0.31	2.01
H.3.3	Screw Conveyor	20	175,200	0.0035	0.023	1	0.31	2.01
H10.4	Entoleter	10	87,600	1.23	1.23	1	53.87	53.87
H.10.5	Screw Conveyor	10	87,600	0.0035	0.023	1	0.15	1.01
H.10.6	Bucket Elevator #4	10	87,600	0.0035	0.023	1	0.15	1.01
H.10.7	Casting Screw Conveyor	10	87,600	0.0035	0.023	1	0.15	1.01
H.13	Screw Conveyor	10	87,600	0.0035	0.023	1	0.15	1.01
H.13.1	Air Classifier	10	87,600	0.0035	0.023	1	0.15	1.01
H.14.2	Screw Conveyor	10	87,600	0.0035	0.023	1	0.15	1.01
H.10.15	Bucket Elevator #5	10	87,600	0.0035	0.023	1	0.15	1.01
H.16	Finish Bin Feed Screw Conveyor System (2 Screws)	10	87,600	0.007	0.046	1	0.31	2.01
H.17	Finish Bin System (6 Bins)	10	87,600	0.006	0.04	1	0.26	1.75
H.18	Mixer Bin Feed Screw Conveyor System (5 Screws)	10	87,600	0.0175	0.115	1	0.77	5.04
H.19.1	Mixer #3	5	43,800	0.006	0.04	1	0.13	0.88
H.19.2	Bucket Elevator #6	5	43,800	0.0035	0.023	1	0.08	0.50
H.20.1	Sacker	5	43,800	0.0035	0.023	1	0.08	0.50
H.19.3	Mixer #5	5	43,800	0.006	0.04	1	0.13	0.88
H.19.4	Bucket Elevator #7	5	43,800	0.0035	0.023	1	0.08	0.50
H.20.2	Sacker	5	43,800	0.0035	0.023	1	0.08	0.50
H.19.5	Bucket Elevator #8	5	43,800	0.0035	0.023	1	0.08	0.50
H.19.6	Mixer #6	5	43,800	0.006	0.04	1	0.13	0.88
H.20.4	Supersacker	5	43,800	0.0035	0.023	1	0.08	0.50
H.21	Bulk Loading Bin	10	87,600	0.006	0.04	1	0.26	1.75
H.20.3	Truck Loading	100	876,000	0.092	0.61	1	40.30	267.18
H.22	Cement Bin	1	8,760	0.006	0.04	1	0.03	0.18
Total							210.18	483.38

Table XIV-37: Applicability Calculations – Group 8 Alternate

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
H.10.6	Bucket Elevator #4	10	87,600	0.0035	0.023	1	0.15	1.01
H.16	Finish Bin Feed Screw Conveyor System (2 Screws)	10	87,600	0.007	0.046	1	0.31	2.01
H.17	Finish Bin System (6 Bins)	10	87,600	0.006	0.04	1	0.26	1.75
H.18	Mixer Bin Feed Screw Conveyor System (5 Screws)	10	87,600	0.0175	0.115	1	0.77	5.04
H.21	Bulk Loading Bin	10	87,600	0.006	0.04	1	0.26	1.75
H.20.3	Truck Loading	100	87,600	0.092	0.61	1	4.03	26.72
Total							5.78	38.28

Table XIV-38: Applicability Calculations – Stucco Storage Bins (Group 9)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		lb/ton	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
I.1	Stucco Screw Conveyor System (2 Screws)	55	481,800	0.0035	0.023	1	0.84	5.54
I.2	Cooling Bins System (2 Bins)	55	481,800	0.006	0.04	1	1.45	9.64
I.3	Stucco Screw Conveyor 3	55	481,800	0.0035	0.023	1	0.84	5.54
I.4	Bucket Elevator #9	55	481,800	0.0035	0.023	1	0.84	5.54
I.6	Stucco Storage Bin System (4 Bins)	55	481,800	0.006	0.04	1	1.45	9.64
I.7	Stucco Screw Conveyor 4	55	481,800	0.0035	0.023	1	0.84	5.54
I.8	Surge Bin	55	481,800	0.006	0.04	1	1.45	9.64
I.9	Stucco Screw Conveyor 5	55	481,800	0.0035	0.023	1	0.84	5.54
I.10	Metering Screw Conveyor	55	481,800	0.0035	0.023	1	0.84	5.54
I.11	Recirculation Elevator #10	55	481,800	0.0035	0.023	1	0.84	5.54
I.13	Mixing Screw Conveyor	55	481,800	0.0035	0.023	1	0.84	5.54
I.14	Stucco Transfer	55	481,800	0.0035	0.023	1	0.84	5.54
Total							11.92	78.77

Table XIV-39: Applicability Calculations – Board Plant (Group 10)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
J.1	Pin Mixer	50	438,000	0.0015	0.01	1	0.33	2.19
J.1.1	Edge Mixer	Included with EU: J.1					0	0
J.4	Radial Center Saw	0.089	780	570	570	1	222.30	222.30
J.5	End Saws (4 Saws)	0.089	780	1,140	1,140	1	444.60	444.60
J.6	Slutter Machine	0.00091	8	34.2	34.2	1	0.14	0.14
J.7	STMP Machine	15	131,400	0.006	0.04	1	0.39	2.63
Total							667.76	671.85

Table XIV-40: Applicability Calculations – Accelerator System (Group 11)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
K.1	LP Bin with Additive Bin	0.3	2,628	0.006	0.04	1	0.01	0.05
K.2	Screw Conveyor	0.3	2,628	0.0035	0.023	1	0.01	0.03
K.3	Bucket Elevator #11	0.3	2,628	0.0035	0.023	1	0.01	0.03
K.4	Screw Conveyor System (2 Screws)	0.3	2,628	0.007	0.046	1	0.01	0.06
K.6	Ball Mill System (8 Mills)	0.3	2,628	1.23	1.23	1	0.00	1.62
K.7	Screw Conveyor	0.3	2,628	0.0035	0.023	1	0.01	0.03
K.8	Bucket Elevator #12	0.3	2,628	0.0035	0.023	1	0.01	0.03
K.9	Screw Conveyor System (2 Screws)	0.3	2,628	0.007	0.046	1	0.01	0.06
K.12	Accelerator Bin	0.3	2,628	0.006	0.04	1	0.01	0.05
K.13	Mixing Screw Conveyor	0.3	2,628	0.0035	0.023	1	0.01	0.03
Total							0.09	1.99

Table XIV-41: Applicability Calculations – Wallboard Recycling System (Group 14)

EU	Description	Throughput		EF (lb/ton)		CF	PTE (ton/yr)	
		ton/hr	ton/yr	PM _{2.5}	PM ₁₀		PM _{2.5}	PM ₁₀
L.17	Recycle Feeder	100	876,000	0.006	0.04	1	2.63	17.52
L.20	Screw Conveyor	100	876,000	0.0015	0.01	1	0.66	4.38
L.18	Bucket Elevator #13	100	876,000	0.0015	0.01	1	0.66	4.38
L.14	Recycle Stockpile Transfer	100	876,000	0.006	0.04	1	2.63	17.52
N.1	Grinder	100	876,000	0.0195	0.13	1	8.54	56.94
N.2	Conveyor	100	876,000	0.0015	0.01	1	0.66	4.38
N.3	Screen	100	876,000	0.012	0.08	1	5.26	35.04
N.4	Conveyor System (4 Belts)	100	876,000	0.006	0.04	1	2.63	17.52
Total							23.65	157.68