CLARK COUNTY
DEPARTMENT OF AIR QUALITY AND ENVIRONMENTAL MANAGEMENT
500 South Grand Central Parkway, Box 555210, Las Vegas, Nevada 89155
Part 70 Operating Permit
Source: 593
Issued in accordance with the
Clark County Air Quality Regulations (AQR)

ISSUED TO: Georgia-Pacific Gypsum LLC

SOURCE LOCATION:
11401 US Highway 91
Apex, Nevada 89165
T18S, R63E, Section 34 & 35
Hydrographic Basin Numbers: 216

COMPANY ADDRESS:
P.O. Box 337350
Las Vegas, Nevada 89033

NATURE OF BUSINESS:
SIC Code 3275: Gypsum Products
NAICS: 327420: Gypsum Products Manufacturing

RESPONSIBLE OFFICIAL:

Name:	David J. Neal
Title:	Plant Manager
Phone:	(702) 643-8100
Fax Number:	(702) 643-2049

Issuance Date: **November 3, 2009** **Expiration Date:** **November 2, 2014**

ISSUED BY: CLARK COUNTY DEPARTMENT OF AIR QUALITY AND ENVIRONMENTAL MANAGEMENT

Tina Gingras
Assistant Director, Clark County DAQEM

EXECUTIVE SUMMARY

Georgia-Pacific Gypsum LLC (G-P) is located twenty miles North of the City of Las Vegas, Nevada, along U.S. Highway 91, in the Apex Valley airshed, hydrographic basin number 216. Hydrographic basin 216 is unclassified nonattainment area for ozone (regulated through NO_x and VOC) and PSD for PM_{10}, CO and SO_x. G-P processes gypsum ore and manufactures wallboard and alpha and beta plaster. All manufacturing and support processes at the site are grouped under the Standard Industrial Classification 3275 – Gypsum Products (NAICS: 327420 – Gypsum Products Manufacturing). The emission units at the source include rock crushing and screening, transport of raw rock, mill operations, plaster operations, and wallboard and plaster manufacturing.

The following table summarizes the source potential to emit (PTE) for each regulated air pollutant. G-P is a major source for NO_x and CO; and a non-major source for PM_{10}, SO_x, VOC, and HAP:

Source-Wide PTE (tons per year)

Pollutant	PM_{10}	NO_x	CO	SO_x	VOC	HAP
PTE Totals	**61.11**	**99.87**	**256.37**	**2.52**	**30.72**	**2.64**
Major Source Threshold	**100**	**100**	**100**	**100**	**100**	**25[1]**

[1]Ten tons for any individual HAP or 25 tons for combination of all HAPs.

Pursuant to AQR 19.4.2, all terms and conditions in Sections I through IV and Attachments 1 and 2 in this permit are federally enforceable unless explicitly denoted otherwise.

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I. ACRONYMS

Table I-1: List of Acronyms

Acronym	Term
AQIA	Air Quality Impact Analysis
AQR	Clark County Air Quality Regulations
ATC	Authority to Construct
ATC/OP	Authority to Construct/Operating Permit
BCC	Clark County Board of County Commissioners
BHP	Brake Horse Power
CAO	Field Corrective Action Order
CE	Control Efficiency
CF	Control Factor
CFR	United States Code of Federal Regulations
CO	Carbon Monoxide
CPI	Urban Consumer Price Index
DAQEM	Clark County Department of Air Quality & Environmental Management
EF	Emission Factor
EPA	United States Environmental Protection Agency
EU	Emission Unit
g/dscm	Grams/dry standard cubic meter
gr/dscf	Grains/dry standard cubic foot
HAP	Hazardous Air Pollutant
HP	Horse Power
MMcf	Million cubic feet
Msf	Thousand square feet
NAC	Nevada Administrative Code
NAICS	North American Industry Classification System
NCA #1	Nevada Cogeneration Associates #1
NEI	Net Emission Increase
NO_X	Nitrogen Oxides
NOV	Notice of Violation
NRS	Nevada Revised Statutes
NSPS	New Source Performance Standards
NSR	New Source Review
OP	Operating Permit
PEP	Potential to Emit Particulate
$PM_{2.5}$	Particulate Matter less than 2.5 microns
PM_{10}	Particulate Matter less than 10 microns
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
scf	Standard Cubic Feet
SCC	Source Classification Codes
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_X	Sulfur Oxides
TCS	Toxic Chemical Substance
TSD	Technical Support Document
VE	Visible Emissions
VOC	Volatile Organic Compound
Δp	Pressure Differential

II. GENERAL CONDITIONS

A. GENERAL REQUIREMENTS

1. The Permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Air Act (Act) and is grounds for enforcement action; for permit termination, revocation and reissuance or modification; or for denial of a permit renewal application. *[AQR 19.4.1.6.a]*
2. If any term or condition of this permit becomes invalid as a result of a challenge to a portion of this permit, the other terms and conditions of this permit shall not be affected and shall remain valid. *[AQR 19.4.1.5]*
3. The Permittee shall pay all permit fees pursuant to AQR Section 18. Failure to pay Part 70 permit fees may result in citations or suspensions or revocation of the Part 70 Permit. *[AQR 19.4.1.7]*
4. The permit does not convey any property rights of any sort, or any exclusive privilege. *[AQR 19.4.1.6.d]*
5. The Permittee shall not hinder, obstruct, delay, resist, interfere with, or attempt to interfere with the Control Officer, or any individual to whom authority has been duly delegated for the performance of any duty by the AQR. *[AQR 5.1]*
6. The Permittee owning, operating, or in control of any equipment or property who shall cause, permit, or participate in any violation of the AQR shall be individually and collectively liable to any penalty or punishment imposed by and under the AQR. *[AQR 8.1]*
7. The Permittee shall continue to comply with applicable requirements for which the Permittee is in compliance. *[AQR 19.3.3.8.b]*
8. Any Permittee who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information. *[AQR 19.3.2]*
9. The Permittee may request confidential treatment of any records in accordance with AQR Section 19. Emission data, standards or limitations [all terms as defined in 40 CFR 2.301(a)] or other information as specified in 40 CFR 2.301 shall not be considered eligible for confidential treatment. The Administrator and the Control Officer shall each retain the authority to determine whether information is eligible for confidential treatment on a case-by-case basis. *[AQR 19.3.1.3 and 40 CFR 2.301]*

B. MODIFICATION, REVISION, RENEWAL REQUIREMENTS

1. The Permittee shall not make a modification, as defined in AQR Section 0, to the existing source prior to receiving an Authority to Construct (ATC) from the Control Officer. *[AQR 12.1.1.1]*
2. The permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the Permittee for the permit modification, revocation, reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[AQR 19.4.1.6.c]*
3. Any request for a permit modification must comply with the requirements of AQR Section 19. *[AQR 19.5.5.1]*
4. The Permittee shall not build, erect, install or use any article, machine, equipment or process, the use of which conceals an emission, which would otherwise constitute a violation of an applicable requirement. *[AQR 80.1 and 40 CFR 60.12]*

5. No permit revisions shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in the permit, provided the Permittee conforms to the applicable requirements of AQR Sections 12 and 58. *[AQR 19.4.1.11]*
6. For purposes of permit renewal, the Permittee shall submit a timely and complete application. A timely application is one submitted between six (6) months and 18 months prior to the date of permit expiration. *[AQR 19.3.1.1.c]*
7. Permit expiration terminates the Permittee's right to operate unless a timely and complete renewal application has been submitted consistent with AQR Subsections 19.3.1.1.c and 19.5.2 in which case the permit shall not expire and all terms and conditions of the permit shall remain in effect until the renewal permit has been issued or denied. *[AQR 19.5.3.2]*

C. REPORTING/NOTIFICATIONS/PROVIDING INFORMATION REQUIREMENTS

1. The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit or, for information claimed to be confidential, the Permittee may furnish such records directly to the Control Officer along with a claim of confidentiality. *[AQR 19.4.1.6]*
2. The Permittee shall allow the Control Officer or an authorized representative, upon presentation of credentials *[AQR 4.3 and 19.4.3.2]*:
   a. entry upon the Permittee's premises where the source is located, or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
   b. access to inspect and copy, at reasonable times, any records that must be kept under conditions of the permit;
   c. access to inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
   d. access to sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. *[AQR 4.3 and 19.4.3.2]*
3. Upon request of the Control Officer, the Permittee shall provide such information or analyses as will disclose the nature, extent, quantity or degree of air contaminants which are or may be discharged by such source, and type or nature of control equipment in use, and such disclosures be certified by a professional engineer registered in the state. In addition to such report, the Control Officer may designate an authorized agent to make an independent study and report as to the nature, extent, quantity or degree of any air contaminants which are or may be discharged from source. An authorized agent so designated is authorized to inspect any article, machine, equipment, or other contrivance necessary to make the inspection and report. *[AQR 4.4]*

D. COMPLIANCE REQUIREMENTS

1. The Permittee shall not use as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity to maintain compliance with the terms and conditions of this permit. *[AQR 19.4.1.6.b]*

2. Any person who violates any provision of this Operating Permit, including, but not limited to, any application requirement; any permit condition; any fee or filing requirement; any duty to allow or carry out inspection, entry or monitoring activities or any requirements by DAQEM is guilty of a civil offense and shall pay civil penalty levied by the Air Pollution Control Hearing Board/Hearing Officer of not more than $10,000. Each day of violation constitutes a separate offense. *[AQR 9.1]*
3. Any person aggrieved by an order issued pursuant to AQR 9.1 is entitled to review as provided in Chapter 233B of Nevada Revised Statutes (NRS). *[AQR 9.12]*
4. The Permittee of any stationary source or emission unit that fails to demonstrate compliance with the emissions standards or limitations shall submit a compliance plan to the Control Officer pursuant to AQR Section 10. *[AQR 10.1]*
5. The Permittee shall comply with the requirements of 40 CFR 61, Subpart M, of the National Emission Standard for Asbestos for all demolition and renovation projects. *[AQR 13.1.7]*
6. Requirements for compliance certification with terms and conditions contained in the Operating Permit, including emission limitations, standards, or work practices, are as follows:
   a. the Permittee shall submit compliance certifications annually in writing to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) and the Administrator at USEPA Region IX (Director, Air and Toxics Divisions, 75 Hawthorne St., San Francisco, CA 94105). A compliance certification for each year will be due 30 days after the Operating Permit issuance anniversary date;
   b. compliance shall be determined in accordance with the requirements detailed in AQR 19.4.1.3, record of periodic monitoring, or any credible evidence; and
   c. the compliance certification shall include:
      i. identification of each term or condition of the permit that is the basis of the certification;
      ii. the Permittee's compliance status and whether compliance was continuous or intermittent;
      iii. methods used in determining the compliance status of the source currently and over the reporting period consistent with Subsection 19.4.1.3;
      iv. identification as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 occurred *[40 CFR 64.7]*; and
      v. other specific information required by the Control Officer to determine the compliance status of the source. *[AQR 19.4.3.5]*
7. The Permittee shall submit annual emissions inventory reports based on the following: *[AQR 18.6.1]*
   a. The annual emissions inventory shall be received by DAQEM no later than March 31 after the reporting year.
   b. The report shall include the emission factors and calculations used to determine the emissions from each permitted emission unit, even when an emission unit is not operated.
8. The Permittee shall report to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) any upset, breakdown, malfunction, emergency or deviation which cause emissions of regulated air pollutants in excess of any limits set by regulation or by this permit. The report shall be in two parts as specified below *[AQR 25.2]*:
   a. within one (1) hour of the onset of the event, the report shall be communicated by phone (702) 455-5942, or by fax (702) 383-9994.

b. as soon as practicable but not exceeding ten (10) calendar days from the onset of the event, the detailed written report shall be submitted. Such reports shall include the probable cause of the excess emissions, emission calculations and any corrective actions taken.

9. The Permittee shall report to the Control Officer deviations that do not result in excess emission, with the quarterly reports. Such reports shall include the probable cause of deviations and any corrective actions or preventative measures taken. *[AQR 19.4.1.3]*

10. The Permittee shall include a certification of truth, accuracy, and completeness by a responsible official when submitting any application form, report, or compliance certification pursuant to this Operating Permit. This certification and any other certification required shall state, "Based on the information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete." This statement shall be followed by the signature and printed name of the responsible official certifying compliance and the date of signature. *[AQR 19.3.4]*

E. PERFORMANCE TESTING REQUIREMENTS

1. Upon request of the Control Officer, the Permittee shall test or have tests performed to determine the emissions of air contaminants from any source whenever the Control Officer has reason to believe that an emission in excess of that allowed by the DAQEM regulations is occurring. The Control Officer may specify testing methods to be used in accordance with good professional practice. The Control Officer may observe the testing. All tests shall be conducted by reputable, qualified personnel. *[AQR 4.5]*

2. Upon request of the Control Officer, the Permittee shall provide necessary holes in stacks or ducts and such other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices, as may be necessary for proper determination of the emission of air contaminants. *[AQR 4.6]*

3. The Permittee shall submit for approval a performance testing protocol which contains testing, reporting, and notification schedules, test protocols, and anticipated test dates to the Control Officer (500 Grand Central Parkway, Box 555210, Las Vegas, NV 89155) not less than 45 or more than 90 days prior to the anticipated date of the performance test. *[AQR 14.10]*

4. The Permittee shall submit to EPA for approval any alternative test methods that are not already approved by EPA. *[AQR 14.1 and 40 CFR 60.8(b)]*

5. The Permittee shall submit a report describing the results of the performance test to the Control Officer within 60 days from the end of the performance test. *[AQR 14.12]*

6. The Control Officer may require additional or more frequent performance testing. *[AQR 4.5]*

III. EMISSION UNITS AND APPLICABLE REQUIREMENTS

A. EMISSION UNITS AND PTE

1. The stationary source covered by this Part 70 OP is defined to consist of the emission units and associated appurtenances summarized in Tables III-A-1 through III-A-9. *[NSR ATC/OP Modification 5, Revision 0 (05/16/2006), NSR ATC/OP Modification 6, Revision 0 (10/13/2006), and NSR ATC Modification 7, Revision 1 (07/13/2009)]*

Table III-A-1: Wallboard Plant PM_{10} PTE for Non-Combustion Emission Units

EU	Description	SCC	Throughput		EF (lbs/ tons)[1]	CF[2]	Control Method	PTE
			tons/ hour	tons/ year				tons/ year
A03	Rock/Recycle Feeder System	30501509	5.0	43,800	0.02	0.01	Enclosed Process connected to Baghouse: BH-W01	0.01
B01	Crushing Area Conveyor	30501504	80.0	700,800	0.20	0.01		0.70
B02	Primary Crusher	30501505	80.0	700,800	0.13	0.01		0.46
B03	200 Ton Rock Bin	30501509	80.0	700,800	0.04	0.01		0.14
F01	End Trim/Bundler	30501521	43.0	376,680	0.75	0.01		1.41
F02	Re-cut Machine	30501521	5.0	43,800	0.75	0.01		0.16
F03	Riser Machine	30501521	5.0	43,800	0.75	0.01		0.16
D17	Milling Area Conveyors	30501518	50.0	438,000	0.20	0.01		0.44
B04	Secondary Crusher	30501506	80.0	700,800	0.13	0.01		0.46
G02	Bucket Elevator - Cemco Feed	30501504	50.0	438,000	0.01	0.01		0.02
G03	Bucket Elevator - Rock Tank	30501504	50.0	438,000	0.01	0.01		0.02
G04	Bucket Elevator -Rock Supply	30501504	50.0	438,000	0.01	0.01		0.02
							Total PM_{10} for BH-W01	**4.00**
C01	Imp Mill No. 1	30501513	10.0	87,600	100	0.001	Enclosed/BH-02	4.38
							Total PM_{10} for BH-W02	**4.38**
C02	Imp Mill No. 2	30501513	10.0	87,600	100	0.001	Enclosed/BH-03	4.38
							Total PM_{10} for BH-W03	**4.38**
C03	Imp Mill No. 3	30501513	10.0	87,600	100	0.001	Enclosed/BH-04	4.38
							Total PM_{10} for BH-W04	**4.38**
C04	Imp Mill No. 4	30501513	10.0	87,600	100	0.001	Enclosed/BH-05	4.38

EU	Description	SCC	Throughput		EF (lbs/ tons)[1]	CF[2]	Control Method	PTE
			tons/ hour	tons/ year				tons/ year
							Total PM_{10} for BH-W05	**4.38**
C05	Imp Mill No. 5	30501513	10.0	87,600	100	0.001	Enclosed/BH-06	4.38
							Total PM_{10} for BH-W06	**4.38**
D01a	Stucco Area Conveyor	30501518	50.0	438,000	0.05	0.01	Enclosed/BH-07	0.11
							Total PM_{10} for BH-W07	**0.11**
D01b	Stucco Area Conveyor	30501518	50.0	438,000	0.05	0.01	Enclosed/BH-08	0.11
							Total PM_{10} for BH-W08	**0.11**
D01c	Stucco Area Conveyor	30501518	50.0	438,000	0.05	0.01	Enclosed/BH-W09	0.11
G05	Bucket Elevator - Stucco Transfer	30501504	50.0	438,000	0.01	0.01		0.02
							Total PM_{10} for BH-W09	**0.13**
D01d	Stucco Area Conveyor	30501518	50.0	438,000	0.05	0.01	Enclosed/BH-10	0.11
							Total PM_{10} for BH-W10	**0.11**
D01e	Stucco Area Conveyor	30501518	50.0	438,000	0.05	0.01	Enclosed Process connected to Baghouse: BH-W13	0.11
G06	Bucket Elevator - Stucco Tank	30501504	50.0	438,000	0.01	0.01		0.02
G07	Bucket Elevator - Stucco Supply	30501504	50.0	438,000	0.01	0.01		0.02
G08	Bucket Elevator - Stucco Recirculating	30501504	50.0	438,000	0.01	0.01		0.02
D18	Hammermill	30501599	50.0	438,000	0.13	0.01		0.28
D06	Stucco Blender #2	30501518	50.0	438,000	0.01	0.01		0.02
							Total PM_{10} for BH-W13	**0.47**
D03	North Stucco Storage Bin	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-W11	0.35
							Total PM_{10} for BH-W11	**0.35**
D04	South Stucco Storage Bin	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-W12	0.35
							Total PM_{10} for BH-W12	**0.35**
D07	Pin Mixer	30501516	50.0	438,000	0.01	0.01	Enclosed Process	0.02
D08	Vermiculite Bin	30501599	2.0	17,520	0.16	0.01		0.01
D09	Landplaster Bin #1	30501510	2.0	17,520	0.16	0.01		0.01
D10	Landplaster Bin #2	30501510	2.0	17,520	0.16	0.01		0.01
D11	Ball Mill #1	30501515	5.0	43,800	0.13	0.01		0.03

EU	Description	SCC	Throughput		EF (lbs/ tons)[1]	CF[2]	Control Method	PTE
			tons/ hour	tons/ year				tons/ year
D12	Ball Mill #2	30501515	5.0	43,800	0.13	0.01	connected to Baghouse: BH-W14	0.03
D13	Interior Baghouse Conveyors	30501504	50.0	438,000	0.20	0.01		0.44
D14	Interior Baghouse Hopper	30501514	0.00	0.00	0.00	0.01		0.00
D15	Fiberglass Feed Hopper	30501599	0.00	0.00	0.00	0.01		0.00
D16	Concrete Basin	30501599	0.00	0.00	0.00	0.01		0.00
G09	Bucket Elevator - Land Plaster	30501504	2.0	17,520	0.01	0.01		0.01
G10	Bucket Elevator - Vermiculite	30501504	2.0	17,520	0.01	0.01		0.01
Total PM_{10} for BH-W14								**0.57**
TOTAL PM_{10} PTE for Non-Combustion Emission Units for the Wallboard Plant								**28.10**

[1] Emission factors are based on AP-42 emissions rated for Gypsum Manufacturing Chapter 11.16.
[2] Control factor values: 0.01 is equivalent to 99.0 percent control from a baghouse and 0.001 is equivalent to 99.9 percent control from a baghouse.

Table III-A-2: Wallboard Plant PTE for Combustion Emission Units

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons)	PTE tons/ year
C01[1]	IMP Mill #1 7.5MMBtu/hr BH-W02	30501513	10 tons/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	Included in PM emissions tables	
				NO_x	0.127 lb/MMBtu	4.16
				CO	0.473 lb/MMBtu	15.55
				SO_x	0.003 lb/MMBtu	0.08
				VOC	0.009 lb/MMBtu	0.30
				HAP	0.003 lb/MMBtu	0.10
C02[1]	IMP Mill #2 7.5MMBtu/hr BH-W03	30501513	10 tons/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	Included in PM emissions tables	
				NO_x	0.127 lb/MMBtu	4.16
				CO	0.473 lb/MMBtu	15.55
				SO_x	0.003 lb/MMBtu	0.08
				VOC	0.009 lb/MMBtu	0.30
				HAP	0.003 lb/MMBtu	0.10
C03[1]	IMP Mill #3 7.5MMBtu/hr BH-W04	30501513	10 tons/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	Included in PM emissions tables	
				NO_x	0.127 lb/MMBtu	4.16
				CO	0.473 lb/MMBtu	15.55
				SO_x	0.003 lb/MMBtu	0.08
				VOC	0.009 lb/MMBtu	0.30
				HAP	0.003 lb/MMBtu	0.10
C04[1]	IMP Mill #4 7.5MMBtu/hr BH-W05	30501513	10 tons/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	Included in PM emissions tables	
				NO_x	0.127 lb/MMBtu	4.16
				CO	0.473 lb/MMBtu	15.55
				SO_x	0.003 lb/MMBtu	0.08
				VOC	0.009 lb/MMBtu	0.30
				HAP	0.003 lb/MMBtu	0.10
C05[1]	IMP Mill #5 7.5MMBtu/hr BH-W06	30501513	10 tons/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	Included in PM emissions tables	
				NO_x	0.127 lb/MMBtu	4.16
				CO	0.473 lb/MMBtu	15.55

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons)	PTE tons/ year
				SO_x	0.003 lb/MMBtu	0.08
				VOC	0.009 lb/MMBtu	0.30
				HAP	0.003 lb/MMBtu	0.10
E01	Paper Heaters 1.75 MMBtu/hr	30501599	0.002MMcf/hr 24 hrs/day 8,760 hrs/year	PM_{10}	5.7 lb/MMcf	0.04
				NO_x	100.0 lb/MMcf	0.73
				CO	84.0 lb/MMcf	0.61
				SO_x	0.6 lb/MMcf	0.01
				VOC	5.5 lb/MMcf	0.04
				HAP	1.9 lb/MMcf	0.01
E02[2]	Forming Line:	30501519	43 tons/hr	VOC/HAP	Included in EU: E03	

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons)	lbs/ hour	tons/ year
E03	Board Dryer: Heat supplied by NCA #1 or Natural Gas Heaters: Zone 1 & 2: 30.0 MMBtu/hr Zone 3: 15 MMBtu/hr [includes emissions from EU: E02]	30501599	43.0 Msf/hr 24 hrs/day 8,760 hrs/year	PM_{10}	0.04 lb/Msf	1.73	7.57
				NO_x	0.26 lb/ton	11.23	49.20
				CO	1.29E-04 lb/lb	35.09	153.70
				SO_x	0.01 lb/ton	0.43	1.89
				VOC†	low VOC	15.74	27.49
				HAP†	None	0.53	1.53

Totals PTE for Combustion Emission Units for the Wallboard Plant	tons/year
PM_{10}	**7.61**
NO_x	**70.73**
CO	**232.06**
SO_x	**2.30**
VOC	**29.03**
HAP	**2.04**

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

[2] Forming Line emissions are on Table III-A-3 and accounted for in E03: Board Dryer.

Table III-A-3: VOC and HAP Emissions Associated with the Board Dryer (EU: 03)[1]

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

[1] Table III-A-3 provides detailed calculations for VOC and HAP emissions for the Forming Line (EU: E02) and the Board Dryer (EU: E03). All the emissions for the Forming Line are accounted for in the Board Dryer.

Table III-A-4: VOC and HAP Emissions Associated with the Plaster Mill Ink (EU: G32)[1]

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

[1] Table III-A-4 provides detailed calculations for VOC and HAP emissions for the Plaster Mill Ink (EU: G32).

Table III-A-5: Plaster Plant PM_{10} PTE for Non-Combustion Emission Units

EU	Description	SCC	Throughput		EF (lbs/ tons)[1]	CF[2]	Control Method	PTE
			tons/ hour	tons/ year				tons/ year
E101	Roll Crusher	30501506	50.0	438,000	0.13	0.01	Enclosed Process connected to Baghouse: BH-01	0.28
E102	Rock Conveyors	30501504	100.0	879,000	0.05	0.01		0.22
E164	Alpha Rock Screen	30501507	50.0	438,000	0.08	0.01		0.18
E174	North Beta Rock Grizzly Feed Screen	30501599	50.0	438,000	0.08	0.01		0.18
E175	South Beta Rock Grizzly Feed Screen	30501599	50.0	438,000	0.08	0.01		0.18
							Total for BH-01	**1.04**
E103	West Beta Rock Bin	30501509	50.0	438,000	0.16	0.01	Enclosed/BH-02	0.35
							Total for BH-02	**0.35**
E104	East Beta Rock Bin	30501509	50.0	438,000	0.16	0.01	Enclosed/BH-03	0.35
							Total for BH-03	**0.35**
E105	West Roller Mill	30501502	25.0	219,000	2.60	0.005	Enclosed/BH-04	1.42
							Total for BH-04	**1.42**
E106	East Roller Mill	30501502	25.0	219,000	2.60	0.005	Enclosed/BH-05	1.42
							Total for BH-05	**1.42**
E108	West LP Bin	30501599	25.0	219,000	0.16	0.01	Enclosed/BH-06	0.18
							Total for BH-06	**0.18**
E109	East LP Bin	30501599	25.0	219,000	0.16	0.01	Enclosed/BH-07	0.18
							Total for BH-07	**0.18**
E110	West Kettle (w/out combustion added)	30501511	15.0	131,400	26.0	0.001	Enclosed/BH-08	1.71
							Total for BH-08	**1.71**
E111	East Kettle (w/out combustion added)	30501511	15.0	131,400	26.0	0.001	Enclosed/BH-09	1.71
							Total for BH-09	**1.71**
E142	Alpha Rock Conveyors	30501504	50.0	438,000	0.05	0.01	Enclosed Process connected to Baghouse:	0.11
E143	South Alpha Rock Bin	30501509	50.0	438,000	0.16	0.01		0.35
E144	North Alpha Rock Bin	30501509	50.0	438,000	0.16	0.01		0.35
E176	South Alpha Rock Bin Grizzly Feed Screen	30501599	50.0	438,000	0.08	0.01		0.18
E177	North Alpha Rock Bin Grizzly Feed Screen	30501599	50.0	438,000	0.08	0.01		0.18
E178	Alpha Rock Elevator Screen	30501599	50.0	438,000	0.08	0.01		0.18

EU	Description	SCC	Throughput		EF (lbs/ tons)[1]	CF[2]	Control Method	PTE
			tons/ hour	tons/ year				tons/ year
E149	Pan Dryer #1	30501599	2.0	17,520	0.04	0.01	BH-13	0.01
E150	Pan Dryer #2	30501599	2.0	17,520	0.04	0.01		0.01
E151	Pan Dryer #3	30501599	2.0	17,520	0.04	0.01		0.01
G24	Bucket Elevator - Alpha Basket	30501514	20.0	175,200	0.01	0.01		0.01
							Total for BH-13	**1.39**
E179	Autoclave #1	30501512	1.0	8,760	Enclosed Batch Process			0.00
E180	Autoclave #2	30501512	1.0	8,760	Enclosed Batch Process			0.00
E181	Autoclave #3	30501512	1.0	8,760	Enclosed Batch Process			0.00
E182	Autoclave #4	30501512	1.0	8,760	Enclosed Batch Process			0.00
E183	Autoclave #5	30501512	1.0	8,760	Enclosed Batch Process			0.00
E184	Autoclave #6	30501512	1.0	8,760	Enclosed Batch Process			0.00
E185	Autoclave #7	30501512	1.0	8,760	Enclosed Batch Process			0.00
E186	Autoclave #8	30501512	1.0	8,760	Enclosed Batch Process			0.00
E152	Alpha IMPACT Mill #1	30501599	6.0	52,560	0.13	0.01	Enclosed Process connected to Baghouse: BH-14	0.03
E161	Alpha Crusher #1	30501515	6.0	52,560	0.13	0.01		0.03
E162	Alpha Crusher #2	30501515	6.0	52,560	0.13	0.01		0.03
E160	Alpha Hammermill	30501599	6.0	52,560	0.13	0.01		0.03
E154	Alpha Hummer Screen	30501599	6.0	52,560	0.08	0.01		0.02
E155	Alpha Air Separator	30501599	6.0	52,560	0.08	0.01		0.02
E157	South Alpha Storage Bin	30501514	6.0	52,560	0.16	0.01		0.04
E158	North Alpha Storage Bin	30501514	6.0	52,560	0.16	0.01		0.04
G11	Alpha Surge Bin	30501514	6.0	52,560	0.16	0.01		0.04
G25	Bucket Elevator - Alpha Surge Bin	30501514	20.0	175,200	0.01	0.01		0.01
G26	Bucket Elevator - Alpha Reheater Feed	30501514	6.0	52,560	0.01	0.01		0.01
G27	Bucket Elevator - Alpha Reheater Disch.	30501514	6.0	52,560	0.01	0.01		0.01
G28	Bucket Elevator - Alpha Storage Bin	30501514	6.0	52,560	0.01	0.01		0.01
							Total for BH-14	**0.32**
E156	Alpha Reject Screens	30501599	6.0	52,560	0.08	0.01		0.02

EU	Description	SCC	Throughput		EF (lbs/ tons)[1]	CF[2]	Control Method	PTE
			tons/ hour	tons/ year				tons/ year
E107	LP Bulk Loadout Bin w/ Enclosed Screw Conveyor	30501510	30.0	262,800	0.16	0.01	Enclosed Process connected to Baghouse: BH-10 and BH-33	0.21
E165	LP Bulk Loadout	30501517	16.0	140,160	0.16	0.01		0.11
G12	Ag Gyp Packer	30501517	20.0	175,200	0.16	0.01		0.14
E173	LP Bin Airvy System	30501599	30.0	262,800	0.16	0.01		0.21
							Total for BH-10 and 33	**0.69**
G13	LP Bulk Bagging	30501517	12.0	105,120	0.04	0.01	Enclosed/BH-11	0.02
E113	Reject Bin	30501514	20.0	175,200	0.16	0.01		0.14
							Total for BH-11	**0.16**
E166	Stucco Sweeco Screen	30501599	20.0	175,200	0.08	0.01	Enclosed Process connected to Baghouse: BH-12	0.07
E114	Stucco Bulk Loadout Bin	30501514	25.0	219,000	0.16	0.01		0.18
E167	Stucco Bulk Loadout	30501517	25.0	219,000	0.16	0.01		0.18
							Total for BH-12	**0.43**
E115	West Hummer Screen	30501599	25.0	219,000	0.08	0.01	Enclosed Process connected to Baghouse: BH-15	0.09
E117	West Stucco Bin	30501514	25.0	219,000	0.16	0.01		0.18
E121	West Air Separator	30501599	15.0	131,400	0.08	0.01		0.05
E119	West Beta IMPACT Mill #1	30501515	10.0	87,600	0.13	0.01		0.06
G14	West Beta IMPACT Mill #2	30501515	10.0	87,600	0.13	0.01		0.06
G29	Bucket Elevator - East Finish Stucco	30501514	20.0	175,200	0.01	0.01		0.01
							Total for BH-15	**0.45**
E118	East Stucco Bin	30501514	25.0	219,000	0.16	0.01	Enclosed Process connected to Baghouse: BH-16	0.18
E116	East Hummer Screen	30501599	25.0	219,000	0.08	0.01		0.09
E120	East Beta IMPACT Mill #1	30501515	10.0	87,600	0.13	0.01		0.06
G16	East Beta IMPACT Mill #2	30501515	10.0	87,600	0.13	0.01		0.06
G30	Bucket Elevator - West Finish Stucco	30501514	20.0	175,200	0.01	0.01		0.01
							Total for BH-16	**0.40**
E122	Split Finish Bin #1 South	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-17	0.35
							Total for BH-17	**0.35**
E123	Split Finish Bin #1 North	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-18	0.35

EU	Description	SCC	Throughput		EF (lbs/ tons)[1]	CF[2]	Control Method	PTE
			tons/ hour	tons/ year				tons/ year
							Total for BH-18	**0.35**
E124	Split Finish Bin #2 South	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-19	0.35
							Total for BH-19	**0.35**
E125	Split Finish Bin #2 North	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-20	0.35
							Total for BH-20	**0.35**
E126	Split Finish Bin #3 South	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-21	0.35
							Total for BH-21	**0.35**
E127	Split Finish Bin #3 North	30501514	50.0	438,000	0.16	0.01	Enclosed/BH-22	0.35
							Total for BH-22	**0.35**
E128	South Alpha Bin	30501514	20.0	175,200	0.16	0.01	Enclosed/BH-23	0.14
							Total for BH-23	**0.14**
E130	Cement Bin	30501599	20.0	175,200	0.16	0.01	Enclosed/BH-24	0.14
							Total for BH-24	**0.14**
E129	North Alpha Bin	30501514	20.0	175,200	0.16	0.01	Enclosed/BH-25	0.14
							Total for BH-25	**0.14**
E172	HiVAC Vacuum System	30501599	50.0	438,000	0.08	0.01	Enclosed/BH-32	0.18
							Total for BH-32	**0.18**
E169	MP Bulk Bagging	30501517	12.0	105,120	0.04	0.01	Enclosed/BH-28	0.02
E140	MP Bulk Load Out Bin	30501514	30.0	262,800	0.16	0.01		0.21
							Total for BH-28	**0.23**
E139	FP Bulk Load Out Bin	30501514	20.0	175,200	0.16	0.01	Enclosed/BH-29	0.14
							Total for BH-29	**0.14**
E168	FP Bulk Bagging	30501517	12.0	105,120	0.04	0.01	Enclosed Process connected to Baghouse: BH-30	0.02
E112	Stucco Conveyors	30501518	50.0	438,000	0.20	0.01		0.44
G15	West Beta IMPACT Mill #3	30501515	15.0	131,400	0.13	0.01		0.09
G17	East Beta IMPACT Mill #3	30501515	15.0	131,400	0.13	0.01		0.09
G22	Bucket Elevator - West Hot Pit	30501514	50.0	438,000	0.01	0.01		0.02
G23	Bucket Elevator - East Hot Pit	30501514	50.0	438,000	0.01	0.01		0.02
							Total for BH-30	**0.68**

EU	Description	SCC	Throughput		EF (lbs/ tons)[1]	CF[2]	Control Method	PTE
			tons/ hour	tons/ year				tons/ year
E137	South Bag Packer	30501517	30.0	262,800	0.04	0.01	Enclosed Process connected to Baghouse: BH-31	0.05
E138	North Bag Packer	30501517	30.0	262,800	0.04	0.01		0.05
E131	South Weigh Hopper	30501599	30.0	262,800	0.02	0.01		0.03
E133	South Mixer	30501516	30.0	262,800	0.04	0.01		0.05
E132	North Weigh Hopper	30501599	30.0	262,800	0.02	0.01		0.03
E134	North Mixer	30501516	30.0	262,800	0.04	0.01		0.05
E170	North MP Bulk Loadout	30501599	30.0	262,800	0.16	0.01		0.21
E171	South MP Bulk Loadout	30501599	30.0	262,800	0.16	0.01		0.21
E135	South Bag Packer Feed Hopper	30501514	30.0	262,800	0.02	0.01		0.03
E136	North Bag Packer Feed Hopper	30501514	30.0	262,800	0.02	0.01		0.03
G31	Bucket Elevator - Mixed Product	30501514	30.0	262,800	0.01	0.01		0.01
							Total for BH-31	**0.75**
G18	Hamilton Surge Bin	30501514	30.0	262,800	0.16	0.01	Enclosed Process connected to Baghouse: BH-34	0.21
G19	Hamilton Bulk Loadout Bin	30501514	30.0	262,800	0.16	0.01		0.21
G20	Hamilton Bulk Loadout	30501599	30.0	262,800	0.16	0.01		0.21
G21	Hamilton Rotary Screens	30501599	30.0	262,800	0.08	0.01		0.11
							Total for BH-34	**0.74**
Total PM_{10} Emissions of Non-Combustion Emission Units for the Plaster Plant								**17.44**

[1] Emission factors are based on AP-42 emissions rated for Gypsum Manufacturing Chapter 11.16.
[2] Control factor values: 0.01 is equivalent to 99.0 percent control from a baghouse and 0.005 is equivalent to 99.5 percent control from a baghouse. Enclosed batch process has 100 percent control.

Table III-A-6: Plaster Plant PTE for Combustion Emission Units

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons)	PTE
						tons/year
E105	West Roller Mill 5.7 MMBtu/hr BH-04 (flue gas)	30501502	5.4E-3 MMcf/hr 24 hrs/day 8,760 hrs/day	PM_{10}	5.7 lb/MMcf	0.01
				NO_x	100.0 lb/MMcf	2.38
				CO	84.0 lb/MMcf	2.00

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons)	PTE tons/year
				SO_x	0.6 lb/MMcf	0.01
				VOC	5.5 lb/MMcf	0.13
				HAP	1.9 lb/MMcf	0.05
E106	East Roller Mill 5.7 MMBtu/hr BH-05 (flue gas)	30501502	5.4E-3 MMcf/hr 24 hrs/day 8,760 hrs/day	PM_{10}	5.7 lb/MMcf	0.01
				NO_x	100.0 lb/MMcf	2.38
				CO	84.0 lb/MMcf	2.00
				SO_x	0.6 lb/MMcf	0.01
				VOC	5.5 lb/MMcf	0.13
				HAP	1.9 lb/MMcf	0.05
E110	West Kettle 20.0 MMBtu/hr (flue gas)	30501511	19.0E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	5.7 lb/MMcf	0.48
				NO_x	100.0 lb/MMcf	8.34
				CO	84.0 lb/MMcf	7.01
				SO_x	0.6 lb/MMcf	0.05
				VOC	5.5 lb/MMcf	0.46
				HAP	1.9 lb/MMcf	0.16
E111	East Kettle 20.0 MMBtu/hr (flue gas)	30501511	19.0E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	5.7 lb/MMcf	0.48
				NO_x	100.0 lb/MMcf	8.34
				CO	84.0 lb/MMcf	7.01
				SO_x	0.6 lb/MMcf	0.05
				VOC	5.5 lb/MMcf	0.46
				HAP	1.9 lb/MMcf	0.16

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons)	PTE lbs/hour	PTE tons/year
E145	Alpha Boiler 12.0 MMBtu/hr	20200202	11.4E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	5.7 lb/MMcf	0.07	0.29
				NO_x	100.0 lb/MMcf	1.14	5.01
				CO	84.0 lb/MMcf	0.96	4.20

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons)	PTE tons/year	
				SO_x	0.6 lb/MMcf	0.01	0.03
				VOC	5.5 lb/MMcf	0.06	0.28
				HAP	1.9 lb/MMcf	0.02	0.10
EU	**Description**	**SCC**	**Production Rate**	**Pollutant**	**EF (lbs/tons)**	**PTE tons/year**	
E146	Paratherm Boiler #1 1.2 MMBtu/hr	20200202	1.1E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	5.7 lb/MMcf	0.03	
				NO_x	100.0 lb/MMcf	0.50	
				CO	84.0 lb/MMcf	0.42	
				SO_x	0.6 lb/MMcf	0.01	
				VOC	5.5 lb/MMcf	0.03	
				HAP	1.9 lb/MMcf	0.01	
E147	Paratherm Boiler #2 1.2 MMBtu/hr	20200202	1.1E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	5.7 lb/MMcf	0.03	
				NO_x	100.0 lb/MMcf	0.50	
				CO	84.0 lb/MMcf	0.42	
				SO_x	0.6 lb/MMcf	0.01	
				VOC	5.5 lb/MMcf	0.03	
				HAP	1.9 lb/MMcf	0.01	
E148	Paratherm Boiler #3 1.2 MMBtu/hr	20200202	1.1E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	5.7 lb/MMcf	0.03	
				NO_x	100.0 lb/MMcf	0.50	
				CO	84.0 lb/MMcf	0.42	
				SO_x	0.6 lb/MMcf	0.01	
				VOC	5.5 lb/MMcf	0.03	
				HAP	1.9 lb/MMcf	0.01	
E153	Alpha Multiscrew Heater; 1.2 MMBtu/hr	20200202	1.1E-3 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	5.7 lb/MMcf	0.03	
				NO_x	100.0 lb/MMcf	0.50	
				CO	84.0 lb/MMcf	0.42	

EU	Description	SCC	Production Rate	Pollutant	EF (lbs/tons)	PTE tons/year
				SO_x	0.6 lb/MMcf	0.01
				VOC	5.5 lb/MMcf	0.03
				HAP	1.9 lb/MMcf	0.01
E159	Alpha Duct Burner 1.0 MMBtu/hr	20200202	952.4E-6 MMcf/hr 24 hrs/day 8,760 hrs/yr	PM_{10}	5.7 lb/MMcf	0.02
				NO_x	100.0 lb/MMcf	0.42
				CO	84.0 lb/MMcf	0.35
				SO_x	0.6 lb/MMcf	0.01
				VOC	5.5 lb/MMcf	0.02
				HAP	1.9 lb/MMcf	0.01
G32[2]	Plaster Mill Ink	30501599	1.0 lbs/hr 158.0 lbs/yr	VOC†	low VOC	0.02
				HAP†	none	0.01
Total PTE for Combustion Emission Units for the Plaster Plant						**tons/year**
					PM_{10}	**1.41**
					NO_x	**28.87**
					CO	**24.25**
					SO_x	**0.20**
					VOC	**1.62**
					HAP	**0.58**

[1] The combustion emission factors for the combustion units are based on emissions factors based on AP-42 1.4-1, 1.4-2 and 1.4-3.
[2] Plaster Mill Ink emissions are on Table III-A-4.

Table III-A-7: Emergency Generator and Fire Pump PTE

EU	Description	SCC	Parameters	Pollutant[1]	EF (lbs/hp-hr)	PTE (tons/yr)
G33	Emergency Generator: Perkins	20200102	**HP**	PM_{10}	2.20E-03	0.01
			59	NO_x	3.10E-02	0.03
				CO	6.68E-03	0.01
			Hours	SO_2	3.63E-04	0.01
			30	VOC	2.47E-03	0.01
				HAP	4.63E-04	0.01
G34	Fire Pump: CAT 3412	20200401	**HP**	PM_{10}	7.000E-04	0.01
			660	NO_x	2.400E-02	0.24
				CO	5.500E-03	0.05
			Hours	SO_2	4.045E-04	0.01
			30	VOC	6.416E-03	0.06
				HAP	1.860E-04	0.01
Total PTE for Diesel Generator and Fire Pump						**PTE (tons/yr)**
					PM_{10}	**0.02**
					NO_x	**0.27**
					CO	**0.06**
					SO_2	**0.02**
					VOC	**0.07**
					HAP	**0.02**

[1] Emission factors based on manufacturer's data.

Table III-A-8: Fugitive Sources: PTE for Haul Roads

EU	Description	Length (miles)	Trips/day	VMT/yr	Weight (tons)	% Control	EF (lbs/VMT)[1]	PTE (tons/yr)
Haul Roads - PAVED								
A01	Wallboard Trucks	0.08	50	1,489	29.0	98.0	7.57	0.11
FE100	Rock Trucks (weighted)	0.16	16	964	42	98.0	7.57	0.07
	Rock Trucks (south route)	0.26	74	7,008	42	98.0	7.57	0.53
	Bulk Plaster Trucks (plaster loop)	0.58	5	1,051	37.5	98.0	7.57	0.08
	Bulk Plaster Trucks (north road)	0.20	10	701	37.5	98.0	7.57	0.05
	Plaster Trucks (flatbed)	0.58	15	3,154	37.5	98.0	7.57	0.24
Haul Roads - UNPAVED								
FE100	Rock Trucks	0.20	45	3,329	42	90.0	7.57	1.26
FE200	Loaders	0.038	130	1,840	30	90.0	7.57	0.70
Subtotals PM_{10} Fugitive Emission - Haul Roads								**3.04**

[1] Emission factors are based on DAQEM default emission factors.

Table III-A-9: Fugitive Source: PTE for Batch/Truck Dumping and Total Fugitive PTE

EU	Description	Rate (tons/day)	Moisture	Wind Speed (mph)	EF lbs/ton[1]	Control	PTE (tons/yr)
Batch/Truck Dumping & Storage Piles							
FE300	Batch Dumping Beta Rock	720	0.50%	4.5	0.0068	85%	0.13
FE141	Batch Dumping Alpha Rock	175	0.50%	4.5	0.0068	85%	0.03
FE200a	Truck Dumping	1,890	0.50%	4.5	0.0068	0%	2.35
FE200b	Batch Dumping Board Rock	1,200	0.50%	4.5	0.0068	85%	0.22
		Acres		**EF (lbs/Acre-Day)**			
A02	Stockpiles Area	2.5		1.66		Moisture	0.76
Subtotal PM_{10} Fugitive Emissions - Batch/Truck Dumping							**3.49**
Total PM_{10} PTE for Fugitive Sources: Haul Roads and Batch/Truck Dumping							**6.53**

[1] Calculation based on AP-42 Section 13.2.4 emission factors lb/tons = $(0.35)(0.0032)(U/5)^{1.3}(M/2)^{1.4}$, where: U = wind speed (mph), M = moisture content (%).

B. EMISSION LIMITATIONS AND STANDARDS

[Authority for all values, limits, and conditions in this section, unless otherwise specified: NSR ATC/OP Modification 5, Revision 0 (05/16/2006), NSR ATC/OP Modification 6, Revision 0 (10/13/2006), and NSR ATC Modification 7, Revision 1 (07/13/2009)]

1. Emission Limits

a. The actual and allowable annual emissions shall not exceed the calculated PTE for each emission unit in Tables III-A-1 through III-A-9 inclusive.

b. Unless specified below, the Permittee shall not discharge into the atmosphere, from any emission unit, any air contaminant in excess of an average of 20 percent opacity for a period of more than 6 consecutive minutes. *[AQR 26.1.1]*

c. The Permittee shall not allow visible emissions from exhaust stacks from the Imp Mills, Paper Heater, Board Dryer, Roller Mills, Kettle calciners, Alpha Boiler, the Paratherm boilers, Alpha Multiscrew Heater, and Alpha Duct Burner to exceed 20 percent opacity when viewed in accordance with EPA Method 9. *[AQR 19.4.1.1]*

d. The Permittee shall not allow the baghouses in the Wallboard Plant: BH-W01 through BH-W06, BH-W13 in Table III-A-1 and baghouses in the Plaster Plant: BH-01 through BH-05, BH-08, BH-09, BH-13 through BH-16, BH-28, BH-30, BH-31, and BH-34 in Table III-A-5, to exhibit visible emissions greater than seven (7) percent opacity. *[40 CFR 60, Subpart OOO (60.672)]*

e. The Permittee shall not allow the baghouses in the Wallboard Plant: BH-W01 through BH-W06, BH-W13 in Table III-A-1 and baghouses in the Plaster Plant: BH-01 through BH-05, BH-08, BH-09, BH-13 through BH-16, BH-28, BH-30, BH-31, and BH-34 in Table III-A-5, to discharge into the atmosphere emissions from any stack which contains particulate matter in excess of 0.05 g/dscm (0.022 gr/dscf). *[40 CFR 60, Subpart OOO (60.672)]*

f. The Permittee shall not allow the baghouses in the Wallboard Plant: BH-W07 through BH-W12 and BH-W14 in Table III-A-1 and baghouses in the Plaster Plant: BH-06, BH-07, BH-10 through BH-12, BH-17 through BH-25, BH-29, BH-32, and BH-33 in Table III-A-5, that are enclosed in buildings, shall not exhibit any visible fugitive emissions or discharge into the atmosphere from any opening from the building, except from a vent as defined in 40 CFR 60.671. *[40 CFR 60 Subpart OOO (60.672)]*

g. The Permittee shall not allow the autoclave calciners (EUs: E179 through E186 inclusive) in Table III-A-5 to exhibit any visible emissions. *[NSR ATC Modification 7, Revision 1, Condition IV-B(1)(b) (07/13/2009)]*

2. Production Limits

a. The Permittee shall limit processing of gypsum rock at the Wallboard Plant to 1,200 tons per day and 438,000 tons per rolling 12-month period.

b. The Permittee shall limit the use of VOC and HAP containing materials for Wallboard Plant to the throughput listed in Table III-A-3.

c. The Permittee shall limit the maximum production of Plaster Plant to 332,880 tons per rolling 12-month period.

d. The Permittee shall limit the use of NCA #1 turbine exhaust gas to 400,000 pounds per hour and 1,752,000 tons per rolling 12-month period.

e. The Permittee shall limit operation of the Perkins diesel emergency generator and Caterpillar diesel fire pump (EUs: G33 and G34) to one hour per day and a total of 30 hours per rolling, 12-month period each for testing and maintenance purposes. These limits do not apply during emergencies. *[NSR ATC/OP Modification 5, Revision 0, Condition III-A-2, (5/16/2006)]*

f. The Permittee shall burn (combust) only low sulfur diesel fuel (0.05 percent or less sulfur by weight) in diesel engines (EUs: G33 and G34).

g. The Permittee shall burn (combust) only natural gas when using the Board Dryer (EU: E03) and Imp Mills (EUs: C01 through C05 inclusive) when exhaust gas from NCG #1 is not being used as heat source. *[NSR ATC/OP Modification 5, Revision 0, Conditions III-A-6 and III-B-23 (5/16/2006)]*

h. The Permittee shall allow only burn (combust) natural gas in the Paper Heaters, Roller Mills, Kettles, Alpha boiler, Paratherm boilers, Alpha Multiscrew Heater, and Alpha Duct Burner (EUs: E01, E105, E106, E110, E111, E145 through E148, E153, and E159). *[NSR ATC/OP Modification 5, Revision 0, Condition III-B-23 (5/16/2006)]*

3. Emission Controls

a. The Permittee shall take continual measures to control fugitive dust (e.g. wet, chemical or organic suppression, enclosures) at all mining and aggregate processing operations, materials transfer points, stockpiles, truck loading stations, and haul roads throughout the source. The Control Officer may at any time require additional water sprays or other controls at pertinent locations if an inspection indicates that opacity limits are being exceeded. *[AQR 19.4.1.1]*

b. The Permittee shall operate the baghouses on all gypsum handling equipment, Imp Mills, Pin Mixer, Hammermill, Ball Mills, Roller Mills, Kettles, and Pan Dryers at all times the processing equipment is operating. *[40 CFR 60, Subpart OOO and 40 CRF 60, Subpart UUU]*

c. The Permittee shall operate the baghouses on the Imp Mills (EUs: C01 through C05 inclusive) and Kettles (EUs: E110 and E111) to maintain a particulate control efficiency of at least 99.9 percent on each baghouse. *[AQR 19.4.1.1]*

d. The Permittee shall operate the baghouses on the Roller Mills (EUs: 105 and E106) to maintain a particulate control efficiency of at least 99.5 percent on each baghouse. *[AQR 19.4.1.1]*

e. The Permittee shall operate the baghouses on all remaining gypsum handling equipment to maintain a particulate control efficiency of at least 90.0 percent on each baghouse. *[AQR 19.4.1.1]*

f. The Permittee shall insure no fugitive emissions are generated from a baghouse and that the pressure drop across each baghouse is maintained within the limits specified by the manufacturer. A copy of the manufacturer's specifications shall be kept on site. *[AQR 19.4.1.1]*

g. The Permittee shall maintain a water spray system in good operating condition, as verified by a daily inspection, and be used at as necessary during the processing of the material. This shall include but not be limited to transfer points, drop points and stacker points excluding washed product processing. The Permittee shall investigate and correct any problems before resuming operations. The Control Officer at any time may require additional water sprays at pertinent locations if an inspection indicates that the specified opacity limits are being exceeded. *[AQR 19.4.1.1]*

h. The Permittee shall control fugitive dust emissions from conveyors, storage piles, transfer points, screens, and non-metallic mineral processing equipment not connected to baghouse controls by water sprays at emission points and/or maintenance of at least 0.5 percent moisture by weight in materials less than ¼ inch in diameter. *[AQR 19.4.1.1]*

i. The Permittee shall not discharge from any source whatsoever quantities of air contaminants or other material which case a nuisance. *[AQR 40.1]*

j. The Permittee shall equip the Caterpillar fire pump (EU: G34) with turbocharge and aftercooler. *[AQR 29.1]*

k. The Permittee shall operate and maintain the Perkins emergency generator and Caterpillar fire pump (EUs: G33 and G34) in accordance with the manufacturer's specifications. A copy of the manufacturer's specifications shall be kept on site. *[AQR 19.4.1.1]*

l. The Permittee shall not cause or allow the discharge of fugitive dust in excess of 100 yards from the point of origin or beyond the lot line of the property on which the emissions originate whichever is less. *[AQR 19.4.1.1]*

m. The Permittee shall sweep and/or rinse as necessary paved roads accessing or located on the site to remove all observable deposits and so as not to exhibit opacity greater than 20 percent as determined by observations based on EPA Method 9, or an instantaneous opacity greater than 50 percent. *[AQR 19.4.1.1]*

n. The Permittee shall not exceed silt loading on paved roads of 0.33 ounces per square foot regardless of the average number of vehicles per day. *[AQR 19.4.1.1]*

o. The Permittee shall insure that all unpaved roads accessing or located on the site will be treated with chemical or organic dust suppressant and watered as necessary, or paved, or graveled, or have an alternate, Control Officer-approved control measure applied so as not to exhibit opacity greater than 20 percent or an instantaneous opacity greater than 50 percent. In addition, silt content shall not exceed six (6) percent or silt loading shall not exceed 0.33 ounces per square foot (depending on the control method chosen) regardless of the average number of vehicles per day. *[AQR 19.4.1.1]*

p. The Permittee shall not allow mud or dirt to be tracked out onto a paved road where such mud or dirt extends 50 feet or more in cumulative length from the point of origin, nor shall any trackout be allowed to accumulate to a depth greater than 0.25 inches. Notwithstanding the preceding, all accumulations of mud or dirt on curbs, gutters, sidewalks or paved roads including trackout less than 50 feet in length and/or less than 0.25 inches in depth shall be cleaned of all observable deposits and maintained to eliminate emissions of fugitive dust. *[AQR 19.4.1.1]*

q. The Permittee shall ensure that all loaded trucks, regardless of ownership, shall be properly covered to prevent visible emissions. *[AQR 19.4.1.1]*

r. The Permittee shall control fugitive dust emissions from any disturbed open area or disturbed vacant lot that are owned or operated by the Permittee by using appropriate control measures. Areas deemed disturbed shall be determined using the Drop Ball Test as described in AQR Section 90. *[AQR 19.4.1.1 and AQR 90.4]*

s. The Permittee shall control particulate matter emissions from any unpaved parking lot owned or operated by the Permittee by paving, applying a dust palliative or by an alternate method pre-approved by the Control Officer regardless of the number of days of use. *[AQR 19.4.1.1]*

t. Where a stationary source, or a portion thereof, is to be closed or idled for a period of 30 days or more, the Permittee shall insure that long-term stabilization of disturbed areas shall be implemented within ten (10) days following the cessation of active operations. Long-term stabilization includes, but is not limited to, one or more of the following: applying water to form a crust, applying palliatives, applying gravel, paving, denying unauthorized access or other effective control measure to prevent fugitive dust from becoming airborne. *[AQR 19.4.1.1]*

C. MONITORING

1. The Permittee shall demonstrate compliance with the minimum moisture content (0.5 percent for screens, crushers, conveyors, storage piles, transfer points, and nonmetallic mineral

processing equipment not connected to baghouse controls or part of the wet process) by conducting moisture testing and recording the results at least once each week on materials less than ¼ inches in diameter in accordance with ASTM Standard C 566-97: Standard Test Method for Total Moisture Content of Aggregate by Drying. *[AQR 12.8 and 19.4.1.3]*

2. On-site personnel familiar with EPA Method 9 shall perform visible emissions checks on all operations at least once per day, or more if meteorological conditions warrant it. *[AQR 12.8 and AQR 19.4.1.3]*
3. If the observer, during the visible emissions check, does not see any plume that, on an instantaneous basis, appears to exceed the opacity standard, then the observer shall keep a record of the name of the observer, the date on which the observation was made, the location, and the results of the observation. *[AQR 19.4.1.3]*
4. If the observer sees a plume that, on an instantaneous basis, appears to exceed the opacity standard, then the Permittee shall have a certified VE observer take an EPA Method 9 observation of the plume and record the results. *[AQR 19.4.1.3]*
5. If Method 9 readings cannot be obtained, the observer shall also indicate in the log: a) the reason why a Method 9 could not be performed, b) the color of the emissions, c) whether the emissions were light or heavy, d) the cause of the abnormal emissions, and e) any corrective action taken. *[AQR 19.4.1.3]*
6. The Permittee shall investigate any occurrence of visible fugitive dust. Corrective actions shall be immediately taken to correct causes of fugitive dust in excess of allowable opacity limits. *[AQR 19.4.1.3]*
7. The Permittee shall conduct daily monitoring of the pressure drop across each baghouse cell with the installation and operation of a pressure differential (Magnehelic) gauge per manufacturer's specifications. A copy of the manufacturer's specifications shall be kept on site. *[AQR 12.8 and AQR 19.4.1.3]*
8. The Permittee shall make annual visual inspections of the baghouse interior for air leaks. Defective baghouse compartments shall be sealed off and repairs completed within five (5) working days of the discovery of the malfunction. Should the malfunction cause the baghouse to be ineffective in controlling particulate emissions, the processing of material shall cease until such repairs to the baghouse are completed. *[AQR 12.8 and AQR 19.4.1.3]*
9. Compliance Assurance Monitoring:
    a. Only emission units depicted in Table III-C-1 with pre-control emission exceeding 100 tons per year of PM_{10} are subject to the CAM rule. *[AQR 19.4.1.3]*:

Table III-C-1: Emission Units Subject to CAM

EU	Description	Control Device	PM_{10} Pre-control Emission (tpy)
A03, B01-B04, D17, F01-F03, & G02-G04	Rock/Recycle Feeder System, Crushing Area Conveyor, Primary Crushing, 200 Ton Rock Bin, End Trim/Bundler, Re-cut Machine, Riser Machine, Milling Area Conveyors, Secondary Crusher, Bucket Elevator – Cemco Feed, Bucket Elevator – Rock Tank and Bucket Elevator – Rock Supply	Baghouse: BH-W01	400.0
C01	IMP Mill #1	Baghouse: BH-W02	4,380
C02	IMP Mill #2	Baghouse: BH-W03	4,380

EU	Description	Control Device	PM_{10} Pre-control Emission (tpy)
C03	IMP Mill #3	Baghouse: BH-W04	4,380
C04	IMP Mill #4	Baghouse: BH-W05	4,380
C05	IMP Mill #5	Baghouse: BH-W06	4,380
E101, E102, E164, E174, & E175	Roll Crusher, Rock Conveyors, Alpha Rock Screen, North Beta Rock Grizzly Feed Screen, and South Beta Rock Grizzly Feed Screen	Baghouse: BH-01	103.0
E105	West Roller Mill	Baghouse: BH-04	284.0
E106	East Roller Mill	Baghouse: BH-05	284.0
E110	West Kettle (w/out combustion added)	Baghouse: BH-08	171.0
E111	East Kettle (w/out combustion added)	Baghouse: BH-09	171.0
E142-E144, E149-E151, E176-E178, & G24	Alpha Rock Conveyors, South Alpha Rock Bin, North Alpha Rock Bin, South Alpha Bin Grizzly Feed Screen, North Alpha Rock Bin Grizzly Feed Screen, Alpha Rock Elevator Screen, Pan Dryer #1, Pan Dryer #2, Pan Dryer #3, and Bucket Elevator – Alpha Basket	Baghouse: BH-13	136.0

b. Daily measurements of pressure differential between inlet and outlet of the baghouse (Δp) for PM_{10} and visible emissions for opacity were selected as CAM indicators. For opacity readings, the absence of visible emissions demonstrates compliance. The key elements of the monitoring approach are presented in Table III-C-2 *[AQR 19.4.1.3]*:

Table III-C-2: Monitoring Approach

CAM Element	Indicator 1	Indicator 2
Indicator	Pressure differential (Δp) for PM_{10}	Visual emissions for opacity
Measurement Approach	The Δp will be measured daily; the time of reading and the Δp will be recorded.	Visible emission (VE) from the baghouse exhaust will be monitored and documented on a daily basis during routine conditions.
Indicator Range: Excursion	An excursion is defined as a pressure drop less than ½ inches and greater than 6 inches of water for the baghouses connected to EUs: A03, B01-B04, C01-C05, D17, E101, E102, E105, E106, E110, E111, E142-E144, E149-E151, E164, E174-178, F01-F03, G02-G04, & G24. Excursions trigger an inspection, correction action, and a reporting requirement.	An excursion is defined as the presence of visible emissions. Excursions trigger an inspection, corrective action, and a reporting requirement. In addition, if VE's are observed, the equipment will be shut down.
Action Threshold	The action threshold for Δp is between 1-5 inches of water. Action thresholds trigger an inspection and corrective action, or documentation that the system is operating normally	Not applicable
QIP Thresholds	None selected	More than three (3) excursions within a quarterly reporting period

CAM Element	Indicator 1	Indicator 2
Performance Criteria Data Representativeness	Pressure taps are located on the high pressure and low pressure sides of the bag filters. A differential pressure gauge measures and displays the Δp with a minimum accuracy of ± 0.25 inches of water column.	Observations are made at the baghouse exhaust.
Verification of Operational Status	Not applicable	Not applicable
QA/QC Practices and Criteria	The Δp gauge will be calibrated or replaced annually	The VE observer will be familiar with baghouse operations and visible emissions
Monitoring Frequency	Daily	Daily
Data Collection Procedures	Δp is manually recorded daily	The VE observation is documented by the observer and recorded daily.
Averaging Period	Not applicable	Not applicable

D. TESTING

1. The Permittee shall conduct initial performance test on emission units listed in Table III-D-1 within 60 days after achieving the maximum production rate at which the source will be operated by no later than 180 days after initial startup. *[AQR 12.8 and AQR 19.4.1.3]*
2. The Permittee shall demonstrate compliance with the opacity standards and particulate emission standards expressed in g/dscm or gr/dscf, as listed in Table III-D-1, by conducting performance tests on emission units listed in Table III-D-1 in accordance with 40 CFR 60 Reference Method 9 (Standards for Opacity) or Method 22 and Reference Method 5 or Method 17. *[AQR 12.8 and AQR 19.4.1.3]*
3. Regardless of the date of issuance of his permit, the Performance Testing shall be performed as delineated in Table III-D-1 *[AQR 12.8 and AQR 19.4.13]*:

Table III-D-1: Performance Testing Protocol Requirements

EU	Description	NSPS/AQR Applicability	Compliance Standard	Performance Test	Frequency
A03, B01-B04, D17, F01-F03, & G02-G04	Baghouse: BH-W01	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
C01	Baghouse: BH-W02	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
C02	Baghouse: BH-W03	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years

EU	Description	NSPS/AQR Applicability	Compliance Standard	Performance Test	Frequency
C03	Baghouse: BH-W04	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
C04	Baghouse: BH-W05	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
C05	Baghouse: BH-W06	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
D01a	Baghouse: BH-W07	Section 34	No visible emissions	Method 22	Annual
D01b	Baghouse: BH-W08	Section 34	No visible emissions	Method 22	Annual
D01c & G05	Baghouse: BH-W09	Subpart OOO	No visible emissions	Method 22	Annual
D01d	Baghouse: BH-W10	Section 34	No visible emissions	Method 22	Annual
D03	Baghouse: BH-W11	Subpart OOO	No visible emissions	Method 22	Annual
D04	Baghouse: BH-W12	Subpart OOO	No visible emissions	Method 22	Annual
D01e, D06, D18, & G06-, G08	Baghouse: BH-W13	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
D07-D16, G09, & G10	Baghouse: BH-W14	Subpart OOO	No visible emissions	Method 22	Annual
E101, E102, E164, E174, & E175	Baghouse: BH-01	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E103	Baghouse: BH-02	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
E104	Baghouse: BH-03	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
E105	Baghouse: BH-04	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E106	Baghouse: BH-05	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E108	Baghouse: BH-06	Subpart OOO	No visible emissions	Method 22	Annual
E109	Baghouse: BH-07	Subpart OOO	No visible emissions	Method 22	Annual
E110	Baghouse: BH-08	Subpart OOO Section 34	7 percent opacity	Method 9	Annual

EU	Description	NSPS/AQR Applicability	Compliance Standard	Performance Test	Frequency
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
		Subpart UUU	10 percent opacity	Method 9	Annual
			0.092 g/dscm (0.040 gr/dscf)	Method 5 or Method 17	Every 5 years
E111	Baghouse: BH-09	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
		Subpart UUU	10 percent opacity	Method 9	Annual
			0.092 g/dscm (0.040 gr/dscf)	Method 5 or Method 17	Every 5 years
E107, E156, E165, E173, & G12	Baghouse: BH-10 & BH-33	Subpart OOO	No visible emissions	Method 22	Annual
E113 & G13	Baghouse: BH-11	Subpart OOO	No visible emissions	Method 22	Annual
E114, E166, & E167	Baghouse: BH-12	Subpart OOO	No visible emissions	Method 22	Annual
E142-E144, E149-151, E176-E178, & G24	Baghouse: BH-13	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
		Subpart UUU	10 percent opacity	Method 9	Annual
			0.092 g/dscm (0.040 gr/dscf)	Method 5 or Method 17	Every 5 years
E152, E154, E155, E157, E158, E160-E162, G11, & G25-G28	Baghouse: BH-14	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E115, E117, E119, E121, G14, & G29	Baghouse: BH-15	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E116, E118, E120, G16, & G30	Baghouse: BH-16	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E122	Baghouse: BH-17	Subpart OOO	No visible emissions	Method 22	Annual
E123	Baghouse: BH-18	Subpart OOO	No visible emissions	Method 22	Annual
E124	Baghouse: BH-19	Subpart OOO	No visible emissions	Method 22	Annual
E125	Baghouse: BH-20	Subpart OOO	No visible emissions	Method 22	Annual
E126	Baghouse: BH-21	Subpart OOO	No visible emissions	Method 22	Annual

EU	Description	NSPS/AQR Applicability	Compliance Standard	Performance Test	Frequency
E127	Baghouse: BH-22	Subpart OOO	No visible emissions	Method 22	Annual
E128	Baghouse: BH-23	Subpart OOO	No visible emissions	Method 22	Annual
E130	Baghouse: BH-24	Subpart OOO	No visible emissions	Method 22	Annual
E129	Baghouse: BH-25	Subpart OOO	No visible emissions	Method 22	Annual
E140 & E169	Baghouse: BH-28	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E139	Baghouse: BH-29	Subpart OOO	No visible emissions	Method 22	Annual
E112, E168, G15, G17, G22, & G23	Baghouse: BH-30	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E131-E138, E170, E171, & G31	Baghouse: BH-31	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E172	Baghouse: BH-32	Subpart OOO	No visible emissions	Method 22	Annual
G18-G21	Baghouse: BH-34	Subpart OOO Section 34	7 percent opacity	Method 9	Annual
			0.05 g/dscm (0.022 gr/dscf)	Method 5 or Method 17	Every 5 years
E179-E186	Autoclaves: Enclosed Batch Process	Subpart UUU	No visible emissions	Method 22	Annual

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

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

Test Point	Pollutant	Method
Boiler Exhaust Outlet Stack	NO_x	EPA Method 7E
Boiler Exhaust Outlet Stack	CO	EPA Method 10
Stack Gas Parameters	--	EPA Methods 1, 2, 3A, and 4

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

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

<u>NO_x and CO</u>

a. the exhaust gas from Nevada Cogeneration Associates #1 (NCA #1) shall be tested for NO_x, CO, and flow every thirty-six (36) months,

b. all exhaust gas performance test(s) shall be conducted while the emission unit (EU: E03) is operating between 80 percent and 100 percent of the design capacity,

c. each subsequent exhaust gas performance testing shall be conducted during the six (6) months prior to the previous performance test, and

d. stack emissions from the board dryer (EU: E03) shall be combined during stack testing and do not have to be tested individually to determine compliance with the board dryer emission limitations.

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

Test Point	Pollutant/ Parameter	Method
Exhaust Gas from NCA #1	NO_x	Pounds per hour and/or ppmvd @ reference conditions
Exhaust Gas from NCA #1	CO	Pounds per hour and/or ppmvd @reference conditions
Exhaust Gas from NCA #1	Flow	Pounds per hour

E. RECORD KEEPING

1. For all inspections, visible emission checks, and testing required under monitoring, logs, reports, and records shall include at least the date and time, the name of the person performing the action, the results or findings, and the type of corrective actions taken (if require). *[AQR 19.4.1.3]*

2. All records and logs (or a copy thereof) required by this permit shall be kept on-site for a minimum of five (5) years from the date the measurement or data was entered. *[AQR 19.4.1.3]*

3. Records and data required by this permit shall be maintained by the Permittee and may, at the Permittee's expense, be audited at any time by a third party selected by the Control Officer. *[AQR 19.4.1.3]*

4. Should this stationary source, as defined in 40 CFR 68.3, become subject to the accidental release prevention regulations in Part 68, then the Permittee shall submit a risk management plan (RMP) by the date specified in section 68.10 and shall certify compliance with the requirements of part 68 as part of the annual compliance certification as required by 40 CFR Part 70 or 71. *[AQR 19.4.1.3]*

5. All records associated with acquisition of aggregate material used in the manufacturing process shall be kept by the Permittee and made available to the Control Officer for inspection upon request. *[AQR 19.4.1.3]*

6. Records and logs shall contain, at minimum, the following information *[AQR 19.4.1.3]*:

   <u>Wallboard Plant - Records requiring quarterly reporting:</u>

   a. daily, monthly and annual production (based on a 12-month rolling total) of gypsum processed for the Wallboard Plant;
   b. monthly and annual (based on a 12-month rolling total) records of usage of all VOC-containing materials used in the manufacturing of wallboard;
   c. monthly and annual (based on a 12-month rolling total) hours of operation for each natural gas-fired emission units;
   d. monthly and annual (based on a 12-month rolling total) hours of operation for each emission unit that uses NCA #1 cogeneration exhaust gas;

e. hourly and annual (based on a 12-month rolling total) pounds of NCA #1 cogeneration exhaust gas used by the permittee;

Plaster Plant - Records requiring quarterly reporting:

f. monthly and annual production (based on a 12-month rolling total) of industrial plaster in the Plaster Plant;
g. monthly hours of operation for each natural gas-fired emission unit;

Emergency Generator and Fire Pump - Records requiring quarterly reporting:

h. hours of operation by the diesel emergency generator and fire pump in a daily log with annual (based on a 12-month rolling total) summations;

Fugitive Emissions - Records requiring quarterly reporting:

i. length of the on-site haul road(s);

Records maintained onsite or reported as required:

j. log of control device inspections, maintenance, and repairs;
k. log of daily pressure drop across each baghouse cell;
l. result of daily visible emission checks of the operations;
m. results of daily visual observations of baghouse;
n. results of boiler-tune ups for the Alpha boiler;
o. sulfur content of diesel fuel;
p. results of weekly moisture sampling;
q. MSDS records of all VOC-containing materials used in the manufacturing of wallboard.
r. log of dust control measures applied to the paved haul roads, unpaved haul roads, and storage piles; and
s. results of performance testing.

7. The Permittee shall maintain records of any malfunction of the air pollution control equipment; or any periods during which a monitoring device is inoperative. *[40 CFR 60.7(b)]*

8. The Permittee shall have a standard operating procedures (SOP) manual for baghouses. The procedures specified in the manual for maintenance shall, at a minimum, include a preventative maintenance schedule that is consistent with the baghouse manufacturer's instructions for routine and long-term maintenance. A copy of the maintenance schedule shall be kept on site. *[AQR 19.4.1.1]*

9. Sulfur content of diesel fuel shall be certified by the supplier with each fuel delivery. *[AQR 19.4.1.3]*

F. REPORTING

1. All report submissions shall be addressed to the attention of the Control Officer. *[AQR 14.3, 21.4, and 22.4]*

2. All reports shall contain the following: *[AQR 19.4.1.3(c) and 19.3.4]*

   a. a certification statement on the first page, i.e., "I certify that, based on information and belief formed after reasonable inquiry, the statements contained in this document are true, accurate and complete." (A sample form is available from DAQEM); and

   b. a certification signature from a responsible official of the company and the date certification.

3. The Permittee is responsible for submitting quarterly reports to DAQEM. *[AQR 19.4.1.3]*
4. Each quarterly report shall *[AQR 19.4.1.3]:*
   a. include quarterly summaries of items listed in Conditions III-E-6 (a through i)
   b. be based on the calendar quarter (including partial calendar quarters); and
   c. be submitted within 30 days after the end of the calendar quarter.
5. Regardless of the date of issuance of this permit, the schedule for the submittal of reports to the Control Officer shall be as follows *[AQR 12.8 and 19.4.1.3]:*

Table III-F-1: Required Submission Dates for Various Reports

Required Report	Applicable Period	Due Date[1]
Quarterly Report for 1st Calendar Quarter	January, February, March	April 30 each year
Quarterly Report for 2nd Calendar Quarter	April, May, June	July 30 each year
Quarterly Report for 3rd Calendar Quarter	July, August, September	October 30 each year
Quarterly Report for 4th Calendar Quarter, any additional annual records required.	October, November, December	January 30 each year
Annual Compliance Certification Report	12 Months	30 days after the Operating Permit issuance anniversary date
Annual Emission Inventory Report	Calendar Year	March 31 each year
Excess Emission Notification	As Required	Within one (1) hour of the onset of the event
Excess Emission Report	As Required	As soon as practicable but not to exceed ten (10) calendar days from onset of the event
Deviation Report	As Required	Along with semi-annual reports
Performance Testing	As Required	Within 60 days from the end of the test

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

6. When requested by the Control Officer, the Permittee may be required to submit additional reports to verify compliance with permit conditions, permit requirements and requirements of applicable regulations. *[AQR 4.4 and AQR 19.4.1.3]*

IV. OTHER REQUIREMENTS

1. The Permittee shall not use, sell, or offer for sale any fluid as a substitute material for any motor vehicle, residential, commercial, or industrial air conditioning system, refrigerator freezer unit, or other cooling or heating device designated to use a CFC or HCFC compound as a working fluid, unless such fluid has been approved for sale in such use by the Administrator. The Permittee shall keep record of all paperwork relevant to the applicable requirements of 40 CFR 82 on site. *[40 CFR 82]*

ATTACHMENTS

Attachment 1: Applicable Regulations

REQUIREMENTS SPECIFICALLY INDENTIFIED AS APPLICABLE:

1. Clark County Air Quality Regulations (CCARQ) Applicable CCAQR Sections:

Citation	Title
AQR Section 0	Definitions
AQR Section 4	Control Officer
AQR Section 11	Ambient Air Quality Standards
AQR Section 12.1	General application requirements for construction of new and modified sources of air pollution
AQR Section 12.2.5	Requirements for specific air pollutants: PM_{10} emission sources located in the PSD Area.
AQR Section 12.2.10	Requirements for specific air pollutants: CO sources located in the PSD Area.
AQR Section 12.2.13	Requirements for specific air pollutants: VOC sources located in PSD Area.
AQR Section 12.2.15	Requirements for specific air pollutants: NO_X sources located in a PSD Area.
AQR Section 12.2.16	Requirements for specific air pollutants: SO_2 sources located in the PSD area.
AQR Section 12.2.19	Requirements for specific air pollutants: TCS sources in Clark County
AQR Section 12.5	Air Quality Models
AQR Section 14.1.1 Subpart A	New Source Performance Standards (NSPS) General Provisions
AQR Section 14.1.15 Subpart Dc	Standards of Performance for Small Industrial – Commercial - Institutional Steam Generating Units
AQR Section 14.1.94 Subpart OOO	New Source Performance Standards – Standards of Performance for Nonmetallic Mineral Processing Plants
AQR Section 14.1.101 Subpart UUU	Standards of Performance for New Stationary Sources (NSPS) – Calciners and Dryers in Mineral Industries
AQR Section 16	DAQEM Operating Permits
AQR Section 18	Permit and Technical Service Fees
AQR Section 19	40 CFR Part 70 Operating Permits
AQR Section 25	Upset/Breakdown, Malfunctions
AQR Section 26	Emissions of Visible Air Contaminants
AQR Section 27	Particulate Matter from Process Weight Rate
AQR Section 28	Fuel Burning Equipment
AQR Section 29	Sulfur Content of Fuel Oil
AQR Section 34	Performance Standards for Metallic and/or Nonmetallic Mineral Mining and Processing
AQR Section 40	Prohibition of Nuisance Conditions
AQR Section 41	Fugitive Dust
AQR Section 42	Open Burning
AQR Section 43	Odors in the Ambient Air
AQR Section 45	Idling of Diesel Powered Motor Vehicles
AQR Section 49	Compliance Requirements for Boilers and Steam Generators
AQR Section 55	Preconstruction review for New or Modified Stationary Sources in

Citation	Title
	the 8-Hour Ozone Nonattainment Area
AQR Section 70	Emergency Procedures
AQR Section 80	Circumvention

2. Nevada Revised Statutes (NRS), Chapter 445B
3. Clean Air Act, as amended (CAAA), Authority: 42 U.S.C. § 7401, et seq
4. Title 40 of the Code of Federal Regulations (40 CFR) Applicable 40 CFR Subsections:

Citation	Title
40 CFR Part 52.21	Prevention of Significant Deterioration (PSD)
40 CFR Part 52.1470	SIP Rules
40 CFR Part 60, Subpart A	Standards of Performance for New Stationary Sources (NSPS) – General Provisions
40 CFR Part 60, Subpart Dc	Standards of Performance for Small Industrial-Commercial-institutional Steam Generating Units
40 CFR Part 60, Subpart OOO	New Source Performance Standards – Standards of Performance for Nonmetallic Mineral Processing Plants
40 CFR Part 60, Subpart UUU	Standards of Performance for New Stationary Sources (NSPS) – Calciners and Dryers in Mineral Industries
40 CFR Part 60	Appendix A, Method 9 or equivalent, (Opacity)
40 CFR Part 64	Compliance Assurance Monitoring
40 CFR Part 70	Federally Mandated Operating Permits
40 CFR Part 82	Protection of Stratospheric Ozone

Attachment 1: Emission Units Controlled by Baghouses

List of Emission Units Controlled by Baghouse

EU	Description	Pollutant	Control Technology
A03, B01-B04, D17, F01-F03 & G02-G04	Feeder System, Crushing Conveyor, Primary & Secondary Crusher, 200 Ton Rock Bin, Bucket Elevators, Milling Conveyor, End Trim/Bundler, Re-cut and Riser Machine	PM	Enclosed Process connected to Baghouse: BH-W01
C01, C02, C03, C04, & C05	Imp Mill No.1 through Imp Mill No.5	PM	Enclosed Process connected to Baghouses: BH-W02, BH-W03, BH-W04, BH-05, & BH-W06
D01a, D01b, & D01d	Stucco Area Conveyors	PM	Enclosed Process connected to Baghouses: BH-W07, BH-W08, & BH-W10
D01c & G05	Stucco Area Conveyor and Bucket Elevator	PM	Enclosed Process connected to Baghouse: BH-W09
D01e, D06, D18, & G06-G08,	Stucco Area conveyor, Bucket Elevators, Hammermill, & Stucco Blenders #2	PM	Enclosed Process connected to Baghouse: BH-W13
D03 & D04	North and South Stucco Storage Bin	PM	Enclosed Process connected to Baghouses: BH-W11 & BH-W12
D07-D16, G09, & G10	Pin Mixer, Vermiculite Bin, Landplaster Bins #1 & #2, Ball Mills #1 & #2, Interior Baghouse Conveyors, Interior Baghouse Hopper, Fiberglass Feed Hopper, Concrete Basin, & Bucket Elevators.	PM	Enclosed Process connected to Baghouse: BH-W14
E101, E102, E164, E174, & E175	Roll Crusher, Rock Conveyor, Alpha Rock Screen, North & South Beta Rock Grizzly Feed Screen	PM	Enclosed Process connected to Baghouse: BH-01
E103 & E104	West & East Beta Rock Bin	PM	Enclosed Process connected to Baghouses: BH-02 & BH-03
E105 & E106	West & East Roller Mill	PM	Enclosed Process connected to Baghouses: BH-04 & BH-05
E108 & E109	West & East LP Bin	PM	Enclosed Process connected to Baghouses: BH-06 & BH-07
E110 & E111	West & East Kettle	PM	Enclosed Process connected to

EU	Description	Pollutant	Control Technology
			Baghouses: BH-08 & BH-09
E142-E144, E149-E151, E176-E178, & G24	Alpha Rock Conveyors, South & North Rock Bins, South & North Rock Bin Grizzly Feed Screen, Alpha Rock Elevator Screen, Pan Dryers #1 through #3, & Bucket Elevator	PM	Enclosed Process connected to Baghouse: BH-13
E152, E154, E155, E157, E158, E160-E162, G11, & G25-G28	Alpha Impact Mill #1, Alpha Crushers #1 & #2, Alpha Hammermill, Alpha Hummer Screen, Alpha Air Separator, South & North Alpha Storage Bin, Alpha Surge Bin, & Bucket Elevators	PM	Enclosed Process connected to Baghouse: BH-14
E107, E156, E165, E173, & G12	Alpha Reject Screens, LP Bulk Loadout Bin, LP Bulk Loadout, Ag Gyp Packer, & LP bin Airvy System	PM	Enclosed Process connected to Baghouse: BH-10 & BH-33
E113 & G13	LP Bulk Bagging & Reject Bin	PM	Enclosed Process connected to Baghouse: BH-11
E114, E166, & E167	Stucco Sweeco Screen, Stucco Bulk Loadout Bin, & Stucco Bulk Loadout	PM	Enclosed Process connected to Baghouse: BH-12
E115, E117, E119, E121, G14, & G29	West Hummer Screen, West Stucco Bin, West Air Separator, West Beta Impact Mills #1 & #2, & Bucket Elevator	PM	Enclosed Process connected to Baghouse: BH-15
E116, E118, E120, G16, & G30	East Stucco Bin, East Hummer Screen, East Beta Impact Mill #1 & #2, & Bucket Elevator	PM	Enclosed Process connected to Baghouse: BH-16
E122 through E127	North & South Split Finish Bins #1 through #3	PM	Enclosed Process connected to Baghouses: BH-17, BH-18, BH-19, BH-20, BH-21, & BH-22
E128 & E129	North & South Alpha Bin	PM	Enclosed Process connected to Baghouses: BH23 & BH-25
E130	Cement Bin	PM	Enclosed Process connected to Baghouse: BH-24
E172	HiVAC Vacuum System	PM	Enclosed Process connected to Baghouse: BH-32
E140 & E169	MP Bulk Bagging & MP Bulk Load Out Bin	PM	Enclosed Process connected to Baghouse: BH-28
E139	FP Bulk Load Out Bin	PM	Enclosed Process connected to Baghouse: BH-29
E112, E168, G15, G17, G22, & G23	FP Bulk Bagging, Stucco conveyors, West & East Impact Mills #3, & Bucket Elevators – West & East Hot Pit	PM	Enclosed Process connected to Baghouse: BH-30
E131-E138, E170, &	South & North Bag Packers, South & North	PM	Enclosed Process

EU	Description	Pollutant	Control Technology
E171	Weigh Hoppers, South & North Mixers, South & North MP Bulk Loadouts, South & North Bag Packer Feed Hoppers, & Bucket Elevator		connected to Baghouse: BH-31
G18-G21	Hamilton Surge Bin, Hamilton Bulk Loadout Bin, Hamilton Bulk Loadout, & Hamilton Rotary Screens	PM	Enclosed Process connected to Baghouse: BH-34