
MOJAVE DESERT
AIR QUALITY MANAGEMENT DISTRICT

NSR/FOP Evaluation Document
for
Finish Mill 2 Modification

Preliminary Determination/Decision - Statement of Basis
for
Modification to

FOP Number: 223900003

For:

CalPortland Company

Facility:

CalPortland – Oro Grande

Facility Address:

**19409 National Trails Highway
Oro Grande, CA 92368**

Document Date: July 16, 2018
Submittal date to EPA/CARB for review: July 19, 2018
EPA/CARB 45-day Commenting Period ends: September 1, 2018
Public Notice Posted: July 19, 2018
Public Commenting Period ends: August 20, 2018
Permit Issue date: On or about September 12, 2018

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A. Introduction

1. Application and Setting

CalPortland Company, Oro Grande Cement Plant (CalPortland), Federal Operating Permit (FOP) number 223900003, located at 19409 National Trails Hwy, Oro Grande, CA 92368 is a modern Portland cement manufacturing facility. The basic process of the facility is the calcining of limestone, which is mixed with other raw materials. Calcining takes place in a pre-calciner and the rotary kiln. Ancillary processes are the cooling of the clinker, milling, blending, crushing, and packaging and/or dispatch in bulk truck and railcar.

This facility underwent pre-construction new source review in the 1999 Plant Modernization Project. The modernization project upgraded existing manufacturing processes and equipment including enclosed pre-blending, storage and reclaiming, and a more efficient kiln and finish grinding system.

The Mojave Desert Air Quality Management District (MDAQMD or District) received an application for proposed modification to the already permitted, but yet to be constructed, Finish Mill No. 2, including application for Significant Modification to CalPortland FOP, on October 31, 2017. Finish Mill No 2 is part of the ongoing plant modernization project (1999). The proposed project consists of:

- Revision to existing permits B007466 (Finish Mill No. 2) and T007433 (Finish Mill No. 2 Storage and Feed Bins) to incorporate current design specifications.
- Addition of a new additive conveying system and associated emission controls which will deliver materials to Finish Mill No. 2.
- Replace existing Clinker Conveying System Baghouse, permit C001708, with one new baghouse of similar size.
- Addition of one new truck loadout system and associated emission controls.
- Use of Simultaneous Emission Reductions as offsets

CalPortland provided additional information to MDAQMD on January 25, 2018 regarding the simultaneous emission reduction demonstration. MDAQMD approved the proposal provided in the email correspondence.

A copy of this application material along with supplemental information received by the applicant can be viewed in Appendix A.

Pursuant to District Rule 1301 – *New Source Review Definitions*, CalPortland is an existing Major Facility for CO, NO_x, SO₂, PM_{10/2.5}, and VOC. The MDAQMD is classified as ‘attainment/unclassified’ by USEPA and CARB for CO, NO₂, SO₂, and PM, and is classified as ‘nonattainment’ by CARB for PM_{2.5}; therefore, pursuant to District Rule 1303 – *New Source Review Requirements*, the proposed equipment is subject to both BACT and Offset requirements for the Nonattainment Air Pollutant/Precursors of NO_x, SO_x, PM_{10/2.5}, and VOC. Because only particulate matter emissions are emitted from this project, only PM_{10/2.5} offsets are required. The revised project offset package proposes simultaneous emission reductions and emission

reduction credits to offset any increase in the facility's Potential Emissions, as necessary. Subsequently, a NSR analysis is required for this modification.

In addition, CalPortland is defined as a federal Major Facility pursuant to District Rule 1201 – *Federal Operating Permit Definitions*. The proposed modifications classifies as a Significant Modification to CalPortland's Federal Operating Permit (FOP). Pursuant to District Rule 1205 – *Modifications of Federal Operating Permits*, section (B)(2) and District Rule 1302(D)(1)(d), this document serves as the preliminary decision and Statement of Legal and Factual Basis.

2. Description of Project

CalPortland proposes to modify existing ATC permits for Finish Mill No. 2, as described below, as the layout of Finish Mill No.2 has changed. Additionally, CalPortland is proposing to construct a new truck loadout system to distribute final product (i.e., cement) to its customers. This loadout system was not part of the original plant modernization project.

- 1) Incorporate the following changes related to Finish Mill No 2 operations:
 - a) Update the existing ATCs related to Finish Mill No 2 as follows:
 - i) ATC T007433, Finish Mill No.2 Storage and Feed bins consisting of Process Group 550: Revise the ATC with new equipment specifications, including control devices, as described in detail in the section B.7 of this evaluation.
 - ii) ATC B007466, Finish Mill No.2 consisting of Process Groups 550 and 560: Revise the ATC with new equipment specifications, including control devices, as described in detail in Section B.7 of this evaluation.
 - b) Issue ATCs for a new additive conveying system and associated baghouse related to Finish Mill No.2.
 - c) Modify PTO C001708 for a new baghouse that will replace Baghouse 511BF051.
- 2) Issue ATCs for a new truck loadout system and associated baghouses described in detail in Section 7 of this evaluation.

B. Analysis

1. Presentation of Emissions

As described above, Finish Mill No. 2 and Finish Mill No. 2 Storage and Feed Bins, were issued District Authority to Construct permits as part of the 1999 plant modernization project. The Potential to Emit (PTE) for these existing permit units is shown below in Table 1 as 35.29 ton per year of PM₁₀ and 2.49 ton per year PM_{2.5}. To ensure adequate emission reductions, CalPortland proposes to replace the existing clinker conveying system baghouse with a new baghouse. The PTE for the clinker conveying system baghouse is shown below in Table 1 as 12.77 ton per year of PM₁₀, and 1.92 ton per year of PM_{2.5}, respectively.

The Potential to Emit, calculated Pursuant to District Rule 1304, the Emission Change for a new or modified Facility or Emissions Unit(s) shall be calculated, by subtracting Historic Actual Emission from Proposed Emissions (section (B)(1)(a)):

$$\text{Emissions Change} = (\text{Proposed Emissions}) - (\text{Historic Actual Emissions})$$

Table 1 presents the summary of maximum potential emissions for the Finish Mill No.2 Modification and new Additive Conveying System and Truck Loadout System.

Table 1 - Emissions Analysis

			HAE, tpy		Emission from Proposed Unit, tpy	
Emissions Unit	District Permit	Control Device ID	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
Finish Mill No 2 Storage and Feed Bins	T007433	551BF101	35.29	2.49	0.24	0.04
		551BF102			0.24	0.04
		551BF103			0.24	0.04
		551BF104			0.24	0.04
Finish Mill No 2	B007466	571BF101	35.29	2.49	0.28	0.04
		571BF102			0.28	0.04
		571BF103			0.21	0.03
		571BF104			0.21	0.03
		571BF200			15.72	2.36
		571BF300			4.18	0.63
(New) Truck Loadout System	TBD	661BF726	0	0	1.33	0.20
		661BF751			0.49	0.07
		661BF761			0.49	0.07
		661BF851			0.49	0.07
		661BF861			0.49	0.07
Clinker Conveying System	C001708	New Unit - Replaces 511BF051	0	0	0.24	0.04
	C001708	511BF051	12.77	1.92	0	0
Additive Conveying System	TBD	472BF101	0	0	0.10	0.01
Additive Conveying System Bin (Fugitives)	TBD	N/A	0	0	0.89	0.13
Total Proposed Emissions					26.34	3.95
Total HAE			48.06	4.41		
PM ₁₀ Emissions Change			-21.72			
PM _{2.5} Emissions Change			-0.45			
PM _{10/2.5} Offsets Needed			NO			

Again, there are no emissions of NO_x, VOC, SO_x, or CO associated with the installation of this equipment. Maximum annual criteria emissions are calculated assuming maximum permitted activity. Total proposed PM₁₀ and PM_{2.5} emissions are about 21.72 and 0.45 tons per year less than the existing permitted annual emissions of PM₁₀ and PM_{2.5}. As the resulting project

emissions are less than historical emissions, no emission offsets are required. Detailed emissions calculations are presented in Appendix C.

2. Determination of Nonattainment NSR Requirements

a. BACT Evaluation

[District Rule 1302(C)(2)(a)]

Best Available Control Technology (BACT) is required for each Nonattainment Air Pollutant or its Precursors with potential to emit (PTE);

a) new or modified permit unit; 25 pounds per day or more

b) new or modified facility; 25 tons per year or more.

[District Rule 1303(A)]

Because this facility has a PM_{10/2.5} PTE greater than 25 tons per year or more, BACT is required for each new permit unit. BACT is defined as the most stringent emission limit or control technique which has been achieved in practice, for such Permit Unit class or category of source [District Rule 1301].

The proposed modifications to Finish Mill No. 2 and associated equipment must be equipped with BACT for only PM_{10/2.5} as no other Nonattainment Air Pollutant or its Precursors are emitted.

PM_{10/2.5} BACT

Dry Material (Cement) Handling at a Cement Manufacturing Facility

The applicant proposes that each permitted dry material storage and transfer point or pneumatic conveyance system vent only to atmosphere through a fabric filter baghouse or bin vent with a PM₁₀ emission rate not to exceed 0.005 grains/dscf.

Baghouse Achievable Emission Limits/Reductions

Based on a review of the available BACT determinations for this class and category of source, the District determines BACT as, enclosure of all material storage and transfer points and vent to baghouse(s) with an outlet grain loading not to exceed 0.005 gr/dscf as BACT. Therefore, the proposed modifications and new equipment units meet BACT.

b. Offsets Evaluation

[District Rule 1302(C)(3)]

Offsets are required for any new or modified Facility which has the Potential to Emit a Regulated Air Pollutant in an amount greater than or equal to the thresholds for the Nonattainment Air Pollutants and their Precursors specified in District Rule 1303 (B)(1). As noted above, there is a

net reduction in the amount of PM_{10/2.5} emissions from this project. Therefore, emission Offsets are not required for this project.

c. Determination of Additional Federal Requirements
 [District Rule 1302(C)(4)]

Pursuant to the requirements in District Rule 1302 B(1)(a)(ii), an analysis of Alternative Siting is not required as the proposed equipment is not a Major Modification as defined in District Rule 1301 (DDD).

Pursuant to the requirements in District Rule 1302 B(1)(a)(iii), an analysis of any anticipated impacts on visibility is not required as the proposed equipment does not qualify as an application for a new Major Facility, nor is it a Major Modification for NSR purposes.

3. Determination of Requirements for Toxic Air Contaminants
 [District Rule 1302(C)(5)]

a. District Rule 1320:

Pursuant to District Rule 1320 – *New Source Review for Toxic Air Contaminants*, CalPortland is subject to both State and Federal Toxic New Source Review, as CalPortland is a New or Modified Facility (or Emissions Units) which has the potential to emit a Toxic Air Contaminant, and CalPortland also has the potential to emit 10 tons per year of any single Hazardous Air Pollutant (Federal T-NSR). Pursuant to the requirements of District Rule 1320, an applicability analysis of state and federal air toxic regulations was conducted for the proposed equipment (State T-NSR and Federal T-NSR, respectively). The State T-NSR and Federal T-NSR analyses are described below:

1. State T-NSR:

Section (E)(1)(b) of District Rule 1320 requires that if any Airborne Toxic Control Measure (ATCM) applies to the proposed equipment, the requirements of that ATCM shall be added to the District permit. There are currently no ATCMs promulgated by the California Air Resources Board which apply to the proposed Emission Units (EU).

Pursuant to District Rule 1320, section (E)(2), State T-NSR also requires an EU Prioritization Score (PS) for each New or Modified Emission Unit. A Prioritization Score (PS) considers potency, toxicity and amount of toxics released into the air, as well as the distance to workers, residents and sensitive receptors (such as hospitals, schools, and day care centers). Section (E)(2) requires PS to be calculated utilizing the most recently approved CAPCOA Facility Prioritization Guidelines, the most recently approved OEHHA Unit Risk Factor for cancer potency factors, and the most recently approved OEHHA Reference Exposure Levels for non-cancer acute factors, and non-cancer chronic factors. The District prepared the EU PS using the July 2016 CAPCOA Facility Prioritization Guidelines and CalPortland’s emission inventory data for finish milling operations for year 2016.

Table 2- Prioritization Score

Proposed New/Modified Emission Units	Cancer Priority	Acute Noncancer	Chronic Noncancer
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		Priority	Priority
<i>Finish Mill No. 2¹</i>	50.0	0.009	1.18
<i>New Additive Conveying System and Finish Mill No. 2 Storage and Feed Bins</i>	3.25	0.055	0.30
<i>New Truck Loadout</i>	2.8	0.008	0.07

*Distance to receptors estimated (residence) to be about 377 meters.

¹ Finish Mill No. 1 emissions were used in the calculation of the PS for proposed Finish Mill No. 2. and the Cardinal Scale Cement Truck Loadout was used as representative emissions for the proposed New Truck Loadout.

As shown in the table above, the PS for the Finish Mill No.2 is greater than 10. Therefore, this unit is categorized as “High Priority” and must be evaluated, pursuant to District Rule 1320(E)(3), using results of a District approved Health Risk Assessment. The Prioritization Score for the New Additive Conveying System and Finish Mill No. 2 Storage and Feed Bins, and New Truck Loadout, are greater than 1 and less than 10; and are therefore categorized as “Intermediate Priority.” No further analysis is required for the New Additive Conveying System and Finish Mill No. 2 Storage and Feed Bins, and New Truck Loadout.

CalPortland performed an emission unit Health Risk Assessment for carcinogenic, non-carcinogenic chronic, and non-carcinogenic acute toxic air contaminants. The District approves of the HRA methods and findings for this emission unit-based risk.

The HRA calculated a peak 30-year cancer risk of 10.43 per million at the point of maximum impact. The calculated peak 30-year maximum individual cancer risk is less than the significance level of 10 in a million (4.60 per million). The maximum non-cancer chronic and acute hazard indices are both less than the significance level of 1.0 (0.28 and 0.0044, respectively). Cancer burden is less than the significance threshold of 0.5 (0.0006). As these results make the emission units a “Moderate Risk”, Toxics BACT (TBACT) is required.

As described above the emission unit HRA indicates that Finish Mill No.2 is a Moderate Risk but less than a Significant Health Risk; therefore TBACT is required. The risk driving toxic air pollutants for this emission unit are inorganic particulate metals (inherent to process minerals or occurring or as part of the process), best controlled by fabric filter (baghouse) having control efficiencies 99% or better. For this TBACT determination, TBACT is determined equivalent to the District’s BACT determination (Section B.2) as a baghouse, with emission control efficiencies of 99% or better.

The AERMOD dispersion model (version 16216r) was used to estimate ambient concentrations of toxic air pollutants. The Hot Spots Analysis and Reporting Program (HARP2, Air Dispersion Modeling and Risk Tool) risk assessment module was used to estimate potential health risks due to exposure to emissions.

Table 3- Finish Mill No.2 Health Risk Analysis Results¹

Receptor	Cancer Risk (in a million)	Chronic Hazard Index	Acute Hazard Index
PMI	10.43	0.28	0.0044

MEIR	4.60	0.13	0.0044
MEIW	0.44	0.13	0.0038

2. Federal T-NSR:

Pursuant to section (F)(1) of District Rule 1320, the Modified Facility/EU were analyzed to determine if any current, enforceable Maximum Achievable Control Technology (MACT) standards apply. The proposed equipment is subject to the Portland Cement MACT (40 CFR 63, Subpart LLL), and will comply with all applicable requirements for these units by permit condition. There are no other applicable MACT standards. Federal T-NSR is satisfied.

b. District Rule 1520 – Control of Toxic Air Contaminants from Existing Sources applies to CalPortland, as they are an existing facility that has a facility PTE greater than ten (10) tons per year for VOC, PM, and NO_x, as well as a PTE to emit a TAC (Section (B)(1)(a) and (c)). CalPortland’s 2009 Comprehensive Emission Inventory Report (CEIR) was utilized to fulfill the requirements of section (D)(1)(b)(i) of District Rule 1520. Based on the 2009 report, there is no further requirement’s noted from District Rule 1520.

The numerical results of the 2009 HRA are listed below. The 2009 results indicate that CalPortland facility is not a Significant Health Risk for maximum lifetime cancer risk, however exceed the Significant Health Risk thresholds for chronic and acute total hazard index. Based on this exceedance CalPortland conducts quadrennial public notification in accordance with Section (F) of District Rule 1520 and submits annual CEIR updates. Note that the District is currently reviewing a new Health Risk Assessment submitted by CalPortland in April 2018. Final review is expected to be in late 2018 for this new CalPortland Health Risk Assessment.

Table 4- Facilitywide Health Risk Analysis Results

Cancer Risk, per million (1)	Chronic THI (2)	Acute THI (3)	Cancer Burden
7	1.52	1.43	0.0024

1. This column reports the maximum lifetime excess cancer risk estimate at an occupational or residential receptor (whichever is greater) approved by the District. The maximum estimated risk generally is possible at only one location. All other locations show lower risks. This estimate assumes that a person resides at the location of maximum impact 24 hours per day, 365 days per year, for 70 years of exposure or a person works at the location of maximum impact 8 hours per day, 245 days per year, for 40 years of exposure. Actual cancer risk will likely be less.

2. Chronic total health hazard index (THI) is the sum of the ratios of the average annual exposure level of each compound to the compound's reference exposure level (REL). Actual chronic THI will likely be less.

3. Acute THI is the sum of the ratios of the maximum one-hour exposure level of each compound to the compound's REL. Actual acute THI will likely be less

4. Determination of Requirements for Prevention of Significant Deterioration
[District Rule 1302(C)(6)]

a. PSD Analysis

The federal PSD regulations are provided in 40 CFR 52.21. Per 40 CFR 52.21(a)(2), these regulations apply to any new major stationary source or any existing major stationary source

where a project results in a significant net emissions increase located in an unclassifiable or attainment area. The Facility is an existing major PSD stationary source. The PSD regulations only apply to federal attainment or unclassifiable pollutants which, for this Facility, are PM, PM2.5, NO2, SO2, CO, and Pb. As such, CalPortland must evaluate if the emission increases associated with the Finish Mill No. 2 and new truck loadout system projects are significant. This project is expected to emit PM and PM2.5, but no other PSD pollutants.

For PSD applicability purposes, there are two projects included in this application: (1) the construction of Finish Mill No. 2 and associated sources which is part of the previously permitted modernization project and (2) the construction of the new truck loadout system which is not considered as part of the modernization project. Both projects are expected to emit PM and PM2.5, but no other PSD pollutants.

Because the PTE of (a) the "as built" Finish Mill No.2 system, (b) the replaced clinker conveying system baghouse, and (c) the new additive conveying system baghouse changed when compared to what was represented in the February 18, 1999 Application for the modernization project, the net emission increase associated with the modernization project needs to be reevaluated. Table 5 below shows the original project emission increase provided in the February 18, 1999 Application submitted to MDAQMD as well as the PTE changes to the Finish Mill No.2 system, the clinker conveying system baghouse, and the new additive conveying system baghouse. Because the PM/PM2.5 net emission increase for the modernization project is below the PM/PM2.5 significant emission rates (SERs) of 25 and 10 tpy, respectively, the requirements of 40 CFR 52.21 do not apply to the modernization project.

Table 5. Revised PSD Applicability for the Modernization Project

Emission Units	Emissions (tpy) ¹	
	PM	PM2.5
Old Plant BAE	1,312.00	78.72
Modernized Plant PTE	784.00	47.04
Original Modernization Project Emission Increase (PEI)	-528.00	-31.68
New Finish Mill No 2 (1999 ATC) PTE	41.50	2.49
New Finish Mill No 2 (revised) PTE	54.55	3.27
Difference between Original FM No.2 and Updated FM No.2 PTE	13.05	0.78
Clinker Conveying System Replaced Baghouse (1999 ATC) PTE	31.92	1.92
Clinker Conveying System Replacement Baghouse PTE	0.59	0.04
Difference between Clinker Conveying System Baghouses PTE	-31.33	-1.88
Additive Conveying System New Baghouse + Additive Bin Loading PTE	2.07	0.15
Updated Modernization Project Emission Increase (tpy)	-547.21	-32.63

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| <p>1. Old and Modernized Plant emission values for PM are from the Revised February 18, 1999 Application Table 6. PM2.5 values were not reported in the application and are speciated per note 2.</p> <p>2. PM2.5 is speciated based on Yang, Wenli. PM Size and Chemical Speciation Profile for Concrete Batching- PM3431. California Air Resources Board. October 22, 2013.</p> <p>3. PM emissions from the New Finish Mill No 2 in the Revised February 18, 1999 application come from page 108 of the PDF. PM2.5 values were not reported in the application and are speciated per note 2.</p> |
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The PTE of the new truck loadout system is shown in Table 6 below. Per 40 CFR 52.21(b)(23)(i), the Significant Emission Rate is 25 tpy for PM and 10 tpy for PM2.5. Because the PM/PM2.5 PTE for the new truck loadout system is below the PM/PM2.5 Significant Emission Rate, this project is not considered significant. As such, the requirements of 40 CFR 52.21 do not apply to the new truck loadout system project.

Table 6. PSD Applicability For the New Truck Loadout Project

Emission Units	Emissions (tpy) ¹	
	PM	PM2.5
Truck Loadout System	8.24	0.49
1. PM emissions are speciated based on Yang, Wenli. PM Size and Chemical Speciation Profile for Concrete Batching- PM3431. California Air Resources Board. October 22, 2013.		

b. NAAQS Impact Analysis

District Rule 1302, section (D)(5)(b)(iv) requires that any new or Modified Facility located in an area classified by USEPA as attainment or unclassifiable shall determine if the Facility will cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS). The proposed modification, discussed herein, results in a net decrease in emissions and therefore does not contribute to a violation of the NAAQS.

5. Rules and Regulations Applicable to the Proposed Project

District Rules

Rule 201/203 – *Permits to Construct/Permit to Operate*. Any equipment which may cause the issuance of air contaminants must obtain authorization for such construction from the Air Pollution Control Officer. CalPortland is in compliance with this rule as they appropriately applied for a District permit for all new equipment and maintains District permits for all residing equipment.

Rule 204 – *Permit Conditions*. To assure compliance with all applicable regulations, the Air Pollution Control Officer (Executive Director) may impose written conditions on any permit. The District has imposed permit conditions to ensure CalPortland complies with all applicable regulations.

Rule 206 – *Posting of Permit to Operate*. Equipment shall not operate unless the entire permit is affixed upon the equipment or kept at a location for which it is issued and will be made available to the District upon request.

Rule 207 – *Altering or Falsifying of Permit*. A person shall not willfully deface, alter, forge, or falsify any issued permit.

Rule 209 – *Transfer and Voiding of Permits*. CalPortland shall not transfer, whether by operation of law or otherwise, either from one location to another, from one piece of equipment to another, or from one person to another. When equipment which has been granted a permit is altered, changes location, or no longer will be operated, the permit shall become void.

Rule 210 – *Applications*. CalPortland provided all the required information to correctly address the proposed equipment pursuant to this rule, although there were instances in which additional information were required, in which the thirty (30) day clock was restarted.

Rule 212 – *Standards for Approving Permits*. This rule establishes baseline criteria for approving permits by the District for certain projects. In accordance with these criteria, the proposed modifications and application does not cause issuance of air contaminants in violation of Sections 41700 or 41701 of the State Health and Safety code.

Rule 221 – *Federal Operating Permit Requirement*. CalPortland is in compliance with this rule, as they currently hold and maintain a Federal Operating Permit.

Rule 301 – *Permit Fees*. The proposed equipment will increase CalPortland’s annual permit fees by the applicable amounts described in section (E) of this rule.

Rule 401 – *Visible Emissions*. This rule limits visible emissions opacity to less than 20 percent (or Ringlemann No. 1). In normal operating mode, visible emissions are not expected to exceed 20 percent opacity.

Rule 402 – *Nuisance*. This rule prohibits facility emissions that cause a public nuisance. The proposed modifications and associated equipment is required by permit condition to employ good engineering and operational principles in order to minimize emissions and the possibility of a nuisance.

Rule 404 – *Particulate Matter Concentration*. This rule requires that no person exceed the particulate matter concentration provided in Table 404(a). As the minimum allowable concentration (0.01gr/dscf) is greater than the baghouse outlet grain loading of 0.005 gr/scf (BACT), the proposed baghouses will comply with the requirements of this rule.

Rule 405 – *Solid Particulate Matter – Weight*. This rule requires that no person exceed the particulate matter process weights provided in Table 405(a). Because the proposed baghouses meet BACT (described above), it is not anticipated that they will exceed the limits in Table 405(a) and will therefore meet the requirements of this rule.

Rule 408 – *Circumvention*. This rule prohibits hidden or secondary rule violations. The proposed modifications as described is not expected to violate Rule 408.

Rule 430 – *Breakdown Provisions*. Any Breakdown which results in a violation to any rule or regulation as defined by Rule 430 shall be properly addressed pursuant to this rule.

Rule 900 – *Standards of Performance for New Stationary Sources (NSPS)*. Rule 900 adopts all applicable provisions regarding standards of performance for new stationary sources as set forth in 40 CFR 60. 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants applies to this facility. This rule limits the allowable opacity from kilns and clinker coolers. It does not apply to the proposed equipment.

Regulation X – *National Emission Standards for Hazardous Air Pollutants*. Pursuant to Regulation X, CalPortland is required to comply with all applicable ATCMs and under state law, a federal National Emission Standards for Hazardous Air Pollutants (NESHAP) becomes the State ATCM, unless the Air Resources Board (ARB) has already adopted an ATCM for the source category and associated hazardous air pollutant(s). In the case of the proposed new and modified equipment, the Portland Cement MACT is the applicable MACT and ATCM (as the state has not adopted an equivalent rule).

Regulation XII – *Title V Permits*

This regulation contains requirements for sources which must have a FOP. CalPortland currently has a FOP and is expected to comply with all applicable rules and regulations.

Rule 1201 – *Federal Operating Permit Definitions*. CalPortland is defined as a federal Major Facility pursuant to this rule.

Rule 1203 – *Federal Operating Permits*. The new baghouse units are subject to New Source Review; is being carried out in accordance with District Rule 1302 procedures which allows for Significant Modifications to be processed concurrent with NSR actions. This procedure conforms with all applicable provisions of District Regulation XII. Further, this permit modification will be noticed similarly to District Rule 1207 requirements and in accordance with District Rule 1302.

Rule 1205 – *Modifications of Federal Operating Permits*. The proposed equipment classifies as a Significant Permit Modification to CalPortland's Federal Operating Permit (FOP), and subsequently, this permit modification is issued in accordance with the provisions of District Rule 1302 pursuant to Rule 1203.

Rule 1207 – *Notice and Comment*. This NSR permitting action is being noticed concurrent with the Significant Modification of CalPortland Federal Operating Permit. Notably, this affords the public the right to petition USEPA to reconsider the decision to not object to the permit action.

Rule 1208 – *Certification*. CalPortland included a Certification of Responsible Official as required with the submitted application for the proposed equipment.

Rule 1211 – *Greenhouse Gas Provisions of Federal Operating Permits*. CalPortland is a Major GHG Facility pursuant to Rule 1211. CalPortland’s FOP includes all the requirements of this rule.

Regulation XIII – *New Source Review*

Rule 1302 – *Procedure*. This rule applies to all new or Modified Facilities and requires certain requirements to be fulfilled when submitting an application. All applicable requirements of this rule are discussed in this NSR document as part of the Analysis procedure. Certification of compliance with the Federal Clean Air Act, applicable implementation plans, and all applicable District rules and regulations have been addressed. The Authority to Construct (ATC) application package for the proposed equipment includes sufficient documentation to comply with Rule 1302(D)(5)(b)(ii). Permit conditions for the proposed project will require compliance with Rule 1302(D)(5)(b)(iii).

Rule 1303 – *Requirements*. This rule requires BACT and offsets for selected facility modifications. Equipment installed shall meet BACT (see Section B(2)(a)). Offsets are not necessary to be obtained as the project PTE is demonstrated to be a net decrease in emissions. CalPortland will comply with the proposed PM10 BACT emission limit of 0.005 grains per dry standard cubic foot by accepting a limit of 0.003 grains per dry standard cubic foot for the proposed finish mill dust collector and by as by accepting a limit of 0.005 grains per dry standard cubic foot for the proposed new truck loadout system.

Rule 1304 – *Emissions Calculations*. The Proposed Emissions from the proposed modifications were calculated pursuant to section (B)(1)(a) of this rule.

Rule 1310 – *Federal Major Facilities and Modifications*. The Proposed Emissions from the proposed new units *are not* determined to be a Federal Major Modification as calculated in accordance with Rule 1310(E)(1)(a) as the Projected Actual Emissions, calculated pursuant to section Rule 1310 (E)(3)(c) do not exceed the Federal Major Modification Thresholds. Said calculation methodologies are similar to those required by District Rule 1304(B)(1)(a) considering all things will be equal with regards to startup, shutdown, and malfunction.

Rule 1320 – *New Source Review for Toxic Air Contaminants*. Pursuant to the requirements of District Rule 1302, an applicability analysis of state and federal air toxic regulations was conducted for the proposed modifications (State T-NSR and Federal T-NSR, respectively) and is discussed in further detail in section (B)(3)(a)(1) of this document.

Rule 1520 – *Control of Toxic Air Contaminants from Existing Sources*. This permit action is subject to Rule 1520, as CalPortland is an existing Major Facility and has a facility PTE greater than ten (10) tons per year for CO, NO_x, SO₂, PM_{10/2.5}, and VOC, as well as has a PTE to emit a TAC (Section (B)(1)(a) and (c)). A Toxic ‘Hot Spots’ Program Analysis was previously conducted by the District pursuant to section (E) of District Rule 1520, concluding with production of a HRA. Results of the HRA are discussed in detail in section (B)(3)(b), above.

Regulation XVII – *Prevention of Significant Deterioration*

The purpose of this regulation is to set forth requirements for all new Major PSD Facilities and Major PSD Modifications which emit or have the potential to emit a PSD Air Pollutant pursuant to the requirements of 40 CFR 52.21. The proposed modification does not constitute a new Major PSD Facility or a Major PSD Modification; therefore, PSD does not apply to the proposed project.

State Regulations

There are no project specific applicable state regulations.

Federal Regulations

40 CFR 63, Subpart LLL - *National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry (Portland Cement MACT)*. The requirements of this regulation applicable to the proposed equipment are visible emissions (opacity) limits with an initial EPA Method 9 Test and monthly visible emissions observations each subject location. The types of modifications proposed to the existing equipment are not expected to adversely affect compliance as this is a closed system and emission control equipment will continue to be used. Compliance with this regulation is expected and implemented by permit condition and can be found in CalPortland FOP, Appendix A.

40 CFR 60, Subpart F – *NSPS for Portland Cement Kilns*. This rule limits the allowable opacity from kilns and clinker coolers. It does not apply to the proposed equipment.

40 CFR 64, *Compliance Assurance Monitoring*. The Compliance Assurance Monitoring (CAM) rule (40 CFR 64) applies to each Pollutant Specific Emissions Unit (PSEU) when it is located at a Major Facility that is required to obtain Title V, Part 70 or 71 permit and it meets all of the following criteria. “PSEU” means an emissions unit considered separately with respect to each regulated air pollutant.

The PSEU must:

- a. Be subject to an emission limitation or standard [40 CFR 64; AND,
- b. Use a control device to achieve compliance [40 CFR 64.2(a)(2)]; AND,
- c. Have the **potential pre-control** emissions that exceed or are equivalent to the major source threshold. [40 CFR 64.2(a)(3)]

For all PSEU (i.e., post control emissions are less than 100 tpy) included in this permit action, CAM review is only required when a Title V Renewal application is submitted, therefore; CalPortland must submit a CAM analysis (and plan if necessary) as part of their next FOP renewal.

6. NSR Preliminary Decision - Conclusion

The District has reviewed the proposed new and modified emission unit applications for CalPortland and conducted a succinct written analysis as required by District Rule 1302, section (D)(1)(b) and District Rule 1203, section (B)(1)(a). The District has determined that the proposed equipment and application are in compliance with all applicable District, state, and

federal rules and regulations as proposed and when operated in terms of the permit conditions stated below.

7. Operating Conditions

The following equipment descriptions and operating conditions will be placed on the Authorities to Construct (ATC) for the project and in Part III of CalPortland’s FOP. The specific section numbers of the FOP are identified here as well. Note that all new and modified equipment descriptions and permit conditions will be in redline/strikethrough form.

64. CLINKER LOADOUT STORAGE – MDAQMD PERMIT # B000197; consisting of:

Equipment No.	Equipment	Capacity	Capac. Units	HP
511BF051	Fan for 511BF051	2,110	DSCFM	15 kW
511BF054	Fan for 511BF054	3,130	ACFM	10

Includes all ancillary equipment associated with this process group, including conveying, storage and material handling.

1. The owner/operator, o/o, shall install, operate and maintain this permit unit in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of air contaminants. [Rule 204]
2. Process equipment shall not be operated unless it is vented to its associated control equipment. [Rule 204; Rule 1303(A)]
3. For dust collectors under this permit the o/o shall conduct a minimum program of inspection and maintenance on this equipment. The o/o shall maintain current and on-site for five (5) years a log of the following information, which shall be provided to District personnel upon request:
 - a. Weekly reading of baghouse pressure drop, date and value;
 - b. Monthly baghouse stack observation date and result (using USEPA Method 22, and USEPA Method 9 if necessary). If no visible emissions are observed for six consecutive months the frequency can change to semi-annually. If no emissions are observed semi-annually the frequency can be changed to annually. If any visible emissions are observed frequency reverts to monthly until no visible emissions are observed for six consecutive months; [40 CFR 63.1350(f)]
 - c. ~~Quarterly~~ Annual bag and bag suspension system inspection date and results;
 - d. Date of bag replacements; and,
 - e. Date and nature of any system repairs. [40 CFR 63.1355(g)]

[40 CFR Part 63 subpart LLL; Rule 1303(A); Rule 1203(D)(1)(d)(ii)]
4. These baghouses shall be operated in compliance with applicable requirements of 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants and 40 CFR 63 Subpart LLL - National Emission Standard for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry. [40 CFR Part 60 subpart F; 40 CFR Part 63 subpart LLL; Rule 1303(A)]

5. These baghouses shall not discharge into the atmosphere an exhaust stream that exhibits greater than ten percent opacity. [40 CFR 63.1345; Rule 401]
6. ~~These baghouses shall discharge no more than a maximum concentration of 0.1 grains/dscf at the operating conditions given in the above description (Rule 404). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 404] (Condition has been relocated to the associated emission control permit)~~
7. ~~These units shall be equipped with a device to measure the pressure differential across the bags (manometer). [Rule 1303(A)]~~
78. The o/o shall maintain on-site a minimum inventory of replacement bags that assures compliance with these conditions. [Rule 1303(A)]

65. BAGHOUSE 511BF054 – MDAQMD PERMIT # C000198; consisting of:

a Nor-Blo Model 156A-10 pulse jet baghouse with polyester felt bags whose total filter area is 447 square feet, equipped with a 10 hp fan generating 3130 acfm of flow at 120 degrees Fahrenheit (for an air to cloth ratio of 7.0:1). This unit serves the clinker and gypsum transfer system portion of the clinker transfer system (B000197).

1. This baghouse shall be operated concurrently with the clinker transfer system under B000197. [Rule 204; Rule 1303(A)]
2. ~~This baghouse shall discharge no more than a maximum concentration of 0.1 gr/dscf at the operating conditions given in the above description. This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [District Rule 404]~~

66. BAGHOUSE 511BF051 – MDAQMD PERMIT # C001708; consisting of:

a ~~Scheuch Nor Blo Model 234A-15 Model skdt08/18-1.6-01~~, pulse jet baghouse with polyester felt bags whose total filter area is ~~7792719~~ square feet, equipped with a ~~1515 hpkW~~ fan generating ~~4,002 4350~~-cfm (~~2,110 dscfm~~) of flow at ~~400+20~~ degrees Fahrenheit) (for an air to cloth ratio of ~~1-65.14~~:1, ~~based on actual flow rates~~). This unit serves the clinker ~~and gypsum~~-transfer portion of the clinker transfer system (B000197).

1. This baghouse shall be operated concurrently with the clinker transfer system under B000197 ~~and the equipment listed as “551” under B012999~~. [Rule 204; Rule 1303(A)]
2. ~~This baghouse shall discharge no more than 0.05 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above~~

description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 404]

81. MATERIAL STORAGE BUILDINGS B007493; consisting of: Request to Cancel Permit. This item is not a part of the Finish Mill 2 project, however, is identified for sole purpose of Title V updates.

81. ADDITIVE CONVEYING SYSTEM BIN – MDAQMD PERMIT # T012998

consisting of:

<u>Equipment No.</u>	<u>Equipment</u>	<u>Capacity</u>	<u>Capac. Units</u>	<u>HP</u>
<u>472FY101</u>	<u>30 Ton Bin, Limestone/Gypsum</u>	<u>4800</u>	<u>Gal</u>	

1. The owner/operator, o/o, shall install, operate and maintain the equipment described above in accord with those recommendations of the manufacturer/supplier. [Rule 204]

82. ADDITIVE CONVEYING SYSTEM – MDAQMD PERMIT # B012999

consisting of:

<u>Equipment No.</u>	<u>Equipment</u>	<u>Capacity</u>	<u>Capac. Units</u>	<u>HP</u>
<u>472BC101</u>	<u>Feeder Belt Conveyor</u>			<u>20</u>
<u>472BC102</u>	<u>Belt Conveyor</u>			<u>30</u>
<u>472FN101</u>	<u>Fan for 472BF101</u>	<u>872</u>	<u>DSCFM</u>	<u>3</u>
<u>472BC103</u>	<u>Multi-Directional Belt Conveyor</u>			<u>7.5</u>
<u>551BE101</u>	<u>Bucket Elevator (Clinker)</u>			<u>155</u>
<u>551BC101</u>	<u>Belt Conveyor (Clinker)</u>			<u>40</u>
<u>561BC101</u>	<u>Finish Mill Feed Conveyor Belt (clinker belt)</u>			<u>25</u>

1. The owner/operator, o/o, shall install, operate and maintain this permit unit in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of air contaminants. [Rule 204]
2. Process equipment shall not be operated unless it is vented to its associated control equipment. [Rule 204; Rule 1303(A)]
3. For the dust collector under this permit the o/o shall conduct a minimum program of inspection and maintenance on this equipment. The o/o shall maintain current and on-site for five (5) years a log of the following information, which shall be provided to District personnel upon request:
 - a. Weekly reading of baghouse pressure drop, date and value;
 - b. Monthly baghouse stack observation date and result (using USEPA Method 22, and USEPA Method 9 if necessary). If no visible emissions are observed for six consecutive months the frequency can change to semi-annually. If no emissions are

- observed semi-annually the frequency can be changed to annually. If any visible emissions are observed frequency reverts to monthly until no visible emissions are observed for six consecutive months; [40 CFR 63.1350(f)]
- c. Annual bag and bag suspension system inspection date and results;
- d. Date of bag replacements; and,
- e. Date and nature of any system repairs. [40 CFR 63.1355(g)]
[40 CFR Part 63 subpart LLL; Rule 1303(A); Rule 1203(D)(1)(d)(ii)]
4. The baghouse shall be operated in compliance with applicable requirements of 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants and 40 CFR 63 Subpart LLL - National Emission Standard for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry. [40 CFR Part 60 subpart F; 40 CFR Part 63 subpart LLL; Rule 1303(A)]
5. This baghouse shall not discharge into the atmosphere an exhaust stream that exhibits greater than ten percent opacity. [40 CFR 63.1345; Rule 401]
6. This unit shall be equipped with a device to measure the pressure differential across the bags (manometer). [Rule 1303(A)]
7. The o/o shall maintain on-site a minimum inventory of replacement bags that assures compliance with these conditions. [Rule 1303(A)]

83. BAGHOUSE 472BF101 – MDAQMD PERMIT # C013000, consisting of:

a DCL Model VMV-375 pulse jet baghouse with bonded polyester filter cartridges whose total filter area is 375 square feet, equipped with a 3 hp fan generating 1,000 cfm (872 dscfm of flow at 60 degrees Fahrenheit) (for an air to cloth ratio of 2.66:1, based on actual flow rates). This unit serves the belt conveyor 472BC102 portions of the additive conveying system (B012999).

1. This baghouse shall be operated concurrently with the belt conveyor (472BC102) associated with the conveying system under B012999. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.02 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

8384. FINISH MILL #2 STORAGE & FEED BINS – MDAQMD PERMIT # T007433 consisting of:

<u>Equipment No.</u>	<u>Equipment</u>	<u>Capacity</u>	<u>Capac. Units</u>	<u>HP</u>
<u>551BI101</u>	<u>Clinker Storage Bin No 1, 475 ST</u>	<u>76000</u>	<u>Gal</u>	
<u>561WF101</u>	<u>Clinker Bin No. 1 Weigh Feeder</u>			<u>8</u>
<u>551BI104</u>	<u>Limestone, 250 ST</u>	<u>40000</u>	<u>Gal</u>	
<u>561WF104</u>	<u>Limestone Bin Weigh Feeder</u>			<u>1.5</u>

<u>551BI102</u>	<u>Clinker Bin No 2, 475 ST</u>	<u>76160</u>	<u>Gal</u>	
<u>561WF102</u>	<u>Clinker Bin No. 2 Weigh Feeder</u>			<u>8</u>
<u>551BI103</u>	<u>Gypsum Bin, 250 ST</u>	<u>40000</u>	<u>Gal</u>	
<u>561WF103</u>	<u>Gypsum Bin Weigh Feeder</u>			<u>1</u>
<u>571BI101</u>	<u>Fringe Cement Bin, 300 ST</u>	<u>48000</u>	<u>Gal</u>	
<u>551FN101</u>	<u>Fan for 551BF101</u>	<u>2110</u>	<u>DSCFM</u>	<u>15 kW</u>
<u>551FN102</u>	<u>Fan for 551BF102</u>	<u>2110</u>	<u>DSCFM</u>	<u>15 kW</u>
<u>551FN103</u>	<u>Fan for 551BF103</u>	<u>2110</u>	<u>DSCFM</u>	<u>15 kW</u>
<u>551FN104</u>	<u>Fan for 551BF104</u>	<u>2110</u>	<u>DSCFM</u>	<u>15 kW</u>
<u>Equipment</u>	<u>Equipment</u>	<u>Capacity</u>	<u>Capacity</u>	<u>HP</u>
<u>No.</u>			<u>Units</u>	

Clinker
Storage Bin
Limestone/Material Feed
Bin
Gypsum Feed
Bin
Auxiliary
Clinker Feed
Bin

— Includes all ancillary equipment associated with this process group, including conveying, storage and material handling.

— Gallons in thousands

1. The owner/operator, o/o, shall install, operate and maintain this permit unit in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of air contaminants. [Rule 204]
2. Process equipment shall not be operated unless it is vented to its associated control equipment. [Rule 204; Rule 1303(A)]
3. For dust collectors under this permit the o/o shall conduct a minimum program of inspection and maintenance on this equipment. The o/o shall maintain current and on-site for five (5) years a log of the following information, which shall be provided to District personnel upon request:
 - a. Weekly reading of baghouse pressure drop, date and value;
 - b. Monthly baghouse stack observation date and result (using USEPA Method 22, and USEPA Method 9 if necessary). If no visible emissions are observed for six consecutive months the frequency can change to semi-annually. If no emissions are observed semi-annually the frequency can be changed to annually. If any visible emissions are observed frequency reverts to monthly until no visible emissions are observed for six consecutive months; [40 CFR 63.1350(f)]

- c. ~~Annual~~Quarterly bag and bag suspension system inspection date and results;
 - d. Date of bag replacements; and,
 - e. Date and nature of any system repairs. [40 CFR 63.1355(g)]
- [40 CFR Part 63 subpart LLL; Rule 1303(A); Rule 1203(D)(1)(d)(ii)]
4. These baghouses shall be operated in compliance with applicable requirements of 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants and 40 CFR 63 Subpart LLL - National Emission Standard for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry. [40 CFR Part 60 subpart F; 40 CFR Part 63 subpart LLL; Rule 1303(A)]
 5. These baghouses shall not discharge into the atmosphere an exhaust stream that exhibits greater than ten percent opacity. [40 CFR 63.1345; Rule 401]
 - ~~6. These baghouses shall discharge no more than a maximum concentration of 0.01 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404] Condition has been relocated to the associated emission control permit~~
 - ~~67.~~ These units shall be equipped with a device to measure the pressure differential across the bags (manometer). [Rule 1303(A)]
 - ~~78.~~ The o/o shall maintain on-site a minimum inventory of replacement bags that assures compliance with these conditions. [Rule 1303(A)]

85. BAGHOUSE 551BF101 – MDAQMD PERMIT # C013001; consisting of:

a Scheuch Model skdt 08/18-1.6-01, pulse jet baghouse with polyester felt bags whose total filter area is 779 square feet, equipped with a 15 kW hp fan generating 4,002 acfm (2,110 dscfm of flow at 400 degrees Fahrenheit) (for an air to cloth ratio of 5.14:1, based on actual flow rates). This unit serves the following portions of the additive conveying system (B012999); bucket elevator (clinker) 551BE101, belt conveyor (clinker) 551BC10, and finish mill 2 feed conveyor belt 561BC101 as well as clinker bin no. 1 551BI101 and clinker bin no.1 weigh feeder 561WF101 portion of finish mill 2 storage and feed bins (T007433).

1. This baghouse shall be operated concurrently with the equipment listed as “551” or 561BC101 under B012999 and clinker storage and feed bins No.1 (551BI101, 561WF101) under T007433. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.05 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

86. BAGHOUSE 551BF102 – MDAQMD PERMIT # C013002; consisting of:

a Scheuch Model skdt 08/18-1.6-01, pulse jet baghouse with polyester felt bags whose total filter area is 779 square feet, equipped with a 15 kW hp fan generating 4,002 acfm (2,110 dscfm of flow at 400 degrees Fahrenheit) (for an air to cloth ratio of 5.14:1, based on actual flow rates). This unit serves the clinker bin no. 2 551BI102 and clinker bin no.2 weigh feeder 561WF102 portion of finish mill 2 storage and feed bins (T007433).

1. This baghouse shall be operated concurrently with the clinker bin no. 2 storage and feed bins (551BI102, 561WF102) under T007433. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.05 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

87. BAGHOUSE 551BF103 – MDAQMD PERMIT # C013003; consisting of:

a Scheuch Model skdt 08/18-1.6-01, pulse jet baghouse with polyester felt bags whose total filter area is 779 square feet, equipped with a 15 kW hp fan generating 4,002 acfm (2,110 dscfm of flow at 400 degrees Fahrenheit) (for an air to cloth ratio of 5.14:1, based on actual flow rates). This unit serves the clinker conveying 472BC103 portion of additive conveying system under B012999 and the gypsum bin 551BI103 and gypsum bin weigh feeder 561WF103 portions of the finish mill 2 storage and feed bins (T007433).

1. This baghouse shall be operated concurrently with the equipment listed as “472” under B012999 and gypsum storage and feed bins (551BI103, 561WF103) under T007433 [Rule 204; 1303(A)]
2. This baghouse shall discharge no more than 0.05 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

88. BAGHOUSE 551BF1044 – MDAQMD PERMIT # C013004; consisting of:

a Scheuch Model skdt 08/18-1.6-01, pulse jet baghouse with polyester felt bags whose total filter area is 779 square feet, equipped with a 15 kW hp fan generating 4,002 acfm (2,110 dscfm of flow at 400 degrees Fahrenheit) (for an air to cloth ratio of 5.14:1, based on actual flow rates). This unit serves the limestone bin 551BI104 and limestone weigh feeder 561WF104 portion of the storage and feed bins (T007433).

1. This baghouse shall be operated concurrently with the limestone storage and feed bins (551BI104, 561WF104) under T007433. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.05 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

1.89. FINISH MILL #2 – MDAQMD PERMIT # B007466; consisting of:

Equipment No.	Equipment	Capacity	Capac. Units	HP
550BC201	Belt Conveyor		HP	20
550BE201	Bucket Elevator		HP	130
550DG201	Bin Feed Belt Conveyors and Diverter Gates		HP	50
	Weigh Feeder (three)		HP	7
	Belt Conveyor		HP	40
	Air Slide		HP	
5600BM101	Ball Mill		HP	11,400
	Auxiliary Drive and Brake Motor		HP	170
	Ball Mill Oil Pumps		HP	92
	Grinding Aide Pumps		HP	9
	Water Spray Pumps		HP	16
	Air Compressors (2)		HP	300
	Air Slide		HP	
	Pebble Trap Blower		HP	5
	Bucket Elevator		HP	205
	Air Slide		HP	
	Air Slide Fans		HP	53
	Finish Mill Separator		HP	500
	Separator Oil Pumps and Fans		HP	34
	Rotary Feeders (3)		HP	8
	Vent Fans		HP	140
	Air Slide		HP	
	Cement Coolers (2)		HP	255
	Compressors (2)		HP	600
	Transport Pump		HP	250

— Includes all ancillary equipment associated with this process group, including conveying, storage and material handling.

Equipment No.	Equipment	Capacity	Capac. Units	HP	Control ID
From 571GR101	Grinding Aid Spray onto clinker belt (liquid)	-	-	-	
571AS103	Airslide from separator				571BF101
571FN101	Fan for 571BF101	2469	DSCFM		

<u>Equipment No.</u>	<u>Equipment</u>	<u>Capacity</u>	<u>Capac. Units</u>	<u>HP</u>	<u>Control ID</u>
<u>571BM101</u>	<u>Ball Mill</u>			<u>11526</u>	<u>571BF300</u>
<u>571FN300</u>	<u>Fan for 571BF300</u>	<u>37,115</u>	<u>DSCFM</u>		
	<u>Ball Mill Oil Pumps (total hp)</u>			<u>102</u>	
	<u>Grinding Aide and Tall Oil Pumps</u>				
<u>571PU101</u>	<u>(total hp)</u>			<u>2.5</u>	
<u>571WI101</u>	<u>Water Spray Pumps (total hp)</u>			<u>15</u>	
<u>571CP101</u>	<u>Air Compressors (? total hp)</u>			<u>200.25</u>	
<u>571AS101</u>	<u>Air Slide</u>				
<u>571BE101</u>	<u>Bucket Elevator</u>			<u>255</u>	<u>571BF102</u>
<u>571FN102</u>	<u>Fan for 571BF102</u>	<u>2,469</u>	<u>DSCFM</u>		
<u>571BE102</u>	<u>Bucket Elevator</u>			<u>103</u>	
<u>571AS102</u>	<u>Air Slide</u>				
<u>341SG303</u>	<u>IPA Gate - Air Operated</u>				
<u>341BI302</u>	<u>IPA Screw Feeder BIN</u>			<u>60</u>	
<u>341SC302</u>	<u>IPA Screw</u>			<u>1.5</u>	
<u>341RF303</u>	<u>Rotary Feeder</u>			<u>0.5</u>	
<u>341BL302</u>	<u>IPA Blower</u>			<u>75</u>	
<u>571SR101</u>	<u>Separator (SEPOLESV-330)</u>			<u>500</u>	<u>571BF200</u>
<u>571FN200</u>	<u>Fan for 571BF200</u>	<u>139,532</u>	<u>DSCFM</u>		
<u>571RF101</u>	<u>Baghouse 571BF300 Rotary Feeder</u>			<u>3</u>	
<u>571RF102</u>	<u>Separator Baghouse Rotary Feeder</u>			<u>2</u>	
<u>571RF103</u>	<u>Separator Baghouse Rotary Feeder</u>			<u>3</u>	
<u>571RF105</u>	<u>Baghouse 571BF103 Rotary Feeder</u>			<u>3</u>	
	<u>Separator Airslide (to cement</u>				
	<u>cooler)</u>				
<u>571AS104</u>					
<u>621DG307, 308, &</u>					
<u>309, 661DG010</u>	<u>FK Line (pneumatic line) Diverter Gates, 0.75 hp each (x6)</u>			<u>3</u>	
<u>571DG101, 102, &</u>					
<u>103</u>	<u>Airslide Diverter Gates</u>			<u>3.5</u>	
<u>841SM105, 106</u>	<u>Samplers</u>			<u>2</u>	
<u>571CQ10</u>	<u>Cement Cooler</u>			<u>310</u>	<u>571BF103</u>
<u>571FN103</u>	<u>Fan for 571BF103</u>	<u>1852</u>	<u>DSCFM</u>		
<u>571AS105</u>	<u>Cement Cooler Air Slide</u>				
<u>571DG101,102,103</u>	<u>Cement Diverter Gates</u>			<u>4</u>	
<u>661PP010</u>	<u>Conveyor to Cement Storage Dome or Silos 5-17 & Screw Pump</u>			<u>300</u>	
<u>571BL102</u>	<u>Fringe Bin Aeration Blower</u>			<u>10</u>	
	<u>9 Air Slide Fans (571FN110,111,112,113,114,115,116,117,119)</u>			<u>56</u>	
	<u>Separator Oil Pumps and Cooling Fan (total hp)</u>			<u>5.5</u>	
<u>571FN120&121</u>	<u>2 Finish Mill Vent Fans (total hp)</u>			<u>6</u>	
<u>661CP011 & 12</u>	<u>Compressors (total hp)</u>			<u>600</u>	
<u>762CT400</u>	<u>Cooling Tower, Pumps & Fans</u>			<u>280</u>	
<u>571RF104</u>	<u>Fringe Bin Rotary Feeder</u>			<u>3</u>	

<u>Equipment No.</u>	<u>Equipment</u>	<u>Capacity</u>	<u>Capac. Units</u>	<u>HP</u>	<u>Control ID</u>
<u>661AS101</u>	<u>Air Slide</u>				
<u>661DG101,102</u>	<u>Diverter Gates</u>			<u>2</u>	
<u>661FN110</u>	<u>Air Slide Fan</u>			<u>7.5</u>	
<u>571FN104</u>	<u>Fan for 571BF104</u>	<u>1,852</u>	<u>DSCFM</u>		

1. The owner/operator, o/o, shall install, operate and maintain this permit unit in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of air contaminants. [Rule 204]
2. Process equipment shall not be operated unless it is vented to its associated control equipment. [Rule 204; Rule 1303(A)]
3. For dust collectors under this permit the o/o shall conduct a minimum program of inspection and maintenance on this equipment. The o/o shall maintain current and on-site for five (5) years a log of the following information, which shall be provided to District personnel upon request:
 - a. Weekly reading of baghouse pressure drop, date and value;
 - b. Monthly baghouse stack observation date and result (using USEPA Method 22, and USEPA Method 9 if necessary). If no visible emissions are observed for six consecutive months the frequency can change to semi-annually. If no emissions are observed semi-annually the frequency can be changed to annually. If any visible emissions are observed frequency reverts to monthly until no visible emissions are observed for six consecutive months; [40 CFR 63.1350(f)]
 - c. ~~Annual~~Quarterly bag and bag suspension system inspection date and results;
 - d. Date of bag replacements; and,
 - e. Date and nature of any system repairs. [40 CFR 63.1355(g)]
[40 CFR Part 63 subpart LLL; Rule 1303(A); Rule 1203(D)(1)(d)(ii)]
4. These baghouses shall be operated in compliance with applicable requirements of 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants and 40 CFR 63 Subpart LLL - National Emission Standard for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry. [40 CFR Part 60 subpart F; 40 CFR Part 63 subpart LLL; Rule 1303(A)]
5. These baghouses shall not discharge into the atmosphere an exhaust stream that exhibits greater than ten percent opacity. [40 CFR 63.1345; Rule 401]
- ~~6. These baghouses shall discharge no more than a maximum concentration of 0.01 grains/dscf at the operating conditions given in the above description (BACT). With the exception of C013007 (571BF200) and C013010 (571BF300), this equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404] Condition has been relocated to the associated emission control permit~~

67. These units shall be equipped with a device to measure the pressure differential across the bags (manometer). [Rule 1303(A)]
78. The o/o shall maintain on-site a minimum inventory of replacement bags that assures compliance with these conditions. [Rule 1303(A)]
8. The o/o shall provide sampling ports and platforms, at the exhaust of each permit unit C013007 and C0130010, necessary to perform source tests required to verify compliance with District rules, regulations and permit conditions. The location of these ports and platforms shall be subject to District approval.
9. For dust collectors C013007 (571BF200) and C013010 (571BF300), the o/o shall conduct an initial emission compliance test, repeated every 60 months, relative to District Rules 404, 405, and 1303 within 90 days of initial operation of finish mill no.2. Unless otherwise specified herein, the testing shall follow the District's Compliance Testing Procedural Manual. O/o shall use the test method specified below. O/o shall notify the District 10 days prior to conducting the test. Test results must be submitted within 45 days of completion of the test.

Compliance Test Method (PM10): CARB Test Method 5 (or equivalent method with prior District approval).

[Rules 404; 405; 1303]

90. BAGHOUSE 571BF101 – MDAQMD PERMIT # C013005; consisting of:

a Scheuch Model skdt 08/18-1.6-01, pulse jet baghouse with polyester felt bags whose total filter area is 779 square feet, equipped with a 15 kw fan generating 4,002 acfm (2,469 dscfm of flow at 275 degrees Fahrenheit) (for an air to cloth ratio of 5.14:1 based on actual flow rates). This unit serves the finish mill no 2 feed conveyor belt 561BC101 and air slide from separator to ball mill 571AS103.

1. This baghouse shall be operated concurrently with finish mill no. 2 under B007466. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.06 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

91. BAGHOUSE 571BF102 – MDAQMD PERMIT # C013006; consisting of:

a Scheuch Model skdt 08/18-1.6-01, pulse jet baghouse with polyester felt bags whose total filter area is 779 square feet, equipped with a 15 kW fan generating 4,002 acfm (2,469 dscfm of flow at 275 degrees Fahrenheit) (for an air to cloth ratio of

5.14:1 based on actual flow rates). This unit serves the finish mill no. 2 bucket elevator 571BE101 and airslide 571AS101

1. This baghouse shall be operated concurrently with finish mill no. 2 under B007466. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.06 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

92. BAGHOUSE 571BF103 – MDAQMD PERMIT # C013008; consisting of:

a Scheuch Model skdt 09/14-1.6-01, pulse jet baghouse with polyester felt bags whose total filter area is 606 square feet, equipped with a 11 kW fan generating 3,002 acfm (1,852 dscfm of flow at 275 degrees Fahrenheit) (for an air to cloth ratio of 4.96:1 based on actual flow rates). This unit serves the finish mill no. 2 cement cooler 571CQ101, air slide 571AS104, and fk pump 661PP010.

1. This baghouse shall be operated concurrently with finish mill no. 2 under B007466. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.05 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

93. BAGHOUSE 571BF104 – MDAQMD PERMIT # C013009; consisting of:

a Scheuch Model skdt 08/14-1.6-01, pulse jet baghouse with polyester felt bags whose total filter area is 606 square feet, equipped with a 11 kW fan generating 3,002 acfm (1,852 dscfm of flow at 275 degrees Fahrenheit) (for an air to cloth ratio of 4.96:1 based on actual flow rates). This unit serves the finish mill no. 2 fringe cement bin (571BI101) , bucket elevator (571BE102), and air slide (661AS101).

1. This baghouse shall be operated concurrently with bucket elevator (571BE102), air slide (661AS101), or when finish mill no. 2 fringe cement bin is filled (571BI101), under B007466 [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.05 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

94. BAGHOUSE 571BF200 – MDAQMD PERMIT # C013007; consisting of:

a Redecam DPZ pulse jet baghouse with polyester felt bags whose total filter area is 53,260 square feet, equipped with a 1250 hp fan generating 200,000 acfm (139,532 dscfm of flow at 190 degrees Fahrenheit) (for an air to cloth ratio of 3.31 based on actual flow rates). This unit serves the finish mill no. 2 separator.

1. This baghouse shall be operated concurrently with finish mill no. 2 under B007466. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 3.59 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). [Rule 1303(A); Rule 404]

95. BAGHOUSE 571BF300 – MDAQMD PERMIT # C013010; consisting of:

a Redecam SPZ pulse jet baghouse with polyester felt bags whose total filter area is 12,325 square feet, equipped with a 300 hp fan generating 55,000 acfm (37,115 dscfm of flow at 212 degrees Fahrenheit) (for an air to cloth ratio of 3.34:1 based on actual flow). This unit serves the finish mill no. 2 ball mill.

1. This baghouse shall be operated concurrently with finish mill no. 2 under B007466. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.95 lb/hr PM10 at a maximum concentration of 0.003 grains/dscf at the operating conditions given in the above description (BACT). [Rule 1303(A); Rule 404]

138. TRUCK LOADOUT SYSTEM SILOS AND BINS – MDAQMD PERMIT # T013016; consisting of:

<u>Equipment No.</u>	<u>Equipment</u>	<u>Capacity</u>	<u>Capac. Units</u>	<u>HP</u>
<u>661SI725</u>	<u>Cement Silo #25 (South #1), 3000 ST</u>	<u>480000</u>	<u>Gal</u>	
<u>661SI726</u>	<u>Cement Silo #26 (North #1), 3000 ST</u>	<u>480000</u>	<u>Gal</u>	
<u>661FN726</u>	<u>Fan for 661BF726</u>	<u>7.086</u>	<u>DSCFM</u>	<u>22kW</u>

1. The owner/operator, o/o, shall install, operate and maintain this permit unit in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of air contaminants. [Rule 204]
2. Process equipment shall not be operated unless it is vented to its associated control equipment. [Rule 204; Rule 1303(A)]
3. For dust collectors under this permit the o/o shall conduct a minimum program of inspection and maintenance on this equipment. The o/o shall maintain current and on-site for five (5) years a log of the following information, which shall be provided to District personnel upon request:
 - a. Weekly reading of baghouse pressure drop, date and value;

- b. Monthly baghouse stack observation date and result (using USEPA Method 22, and USEPA Method 9 if necessary). If no visible emissions are observed for six consecutive months the frequency can change to semi-annually. If no emissions are observed semi-annually the frequency can be changed to annually. If any visible emissions are observed frequency reverts to monthly until no visible emissions are observed for six consecutive months; [40 CFR 63.1350(f)]
 - c. Annual bag and bag suspension system inspection date and results;
 - d. Date of bag replacements; and,
 - e. Date and nature of any system repairs. [40 CFR 63.1355(g)]
- [40 CFR Part 63 subpart LLL; Rule 1303(A); Rule 1203(D)(1)(d)(ii)]
4. These baghouses shall be operated in compliance with applicable requirements of 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants and 40 CFR 63 Subpart LLL - National Emission Standard for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry. [40 CFR Part 60 subpart F; 40 CFR Part 63 subpart LLL; Rule 1303(A)]
 5. These baghouses shall not discharge into the atmosphere an exhaust stream that exhibits greater than ten percent opacity. [40 CFR 63.1345; Rule 401]
 6. These baghouses shall discharge no more than a maximum concentration of 0.005 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]
 7. These units shall be equipped with a device to measure the pressure differential across the bags (manometer). [Rule 1303(A)]
 8. The o/o shall maintain on-site a minimum inventory of replacement bags that assures compliance with these conditions. [Rule 1303(A)]

139. BAGHOUSE 661BF726 – MDAQMD PERMIT # C013011; consisting of:

a Scheuch Model sfbd 05/09-d-02, pulse jet baghouse with polyester felt bags whose total filter area is 2260 square feet, equipped with a 22kW fan generating 10,000 acfm (7086 dscfm of flow at 180 degrees Fahrenheit) (for an air to cloth ratio of 4.42:1 based on actual flow rates). This unit serves the truck loadout system silos and 661AS101.

1. This baghouse shall be operated concurrently when the truck loadout system silos are being filled under T013016. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.30 lb/hr PM10 at a maximum concentration of 0.005 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission

compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

140. TRUCK LOADOUT SYSTEM – MDAQMD PERMIT # B013017; consisting of:

<u>Equipment No.</u>	<u>Equipment</u>	<u>Capacity</u>	<u>Capac. Units</u>	<u>HP</u>
	<u>SOUTH Truck Loadout System #7</u>			
<u>661LS751</u>	<u>South Loadout Spout #7</u>			<u>1</u>
<u>661AS751/661AS</u>	<u>Common Air Slides</u>			
<u>661BK751</u>	<u>Spout Positioner</u>			<u>2</u>
<u>661FN752,753,76</u> <u>2,763,852,853,862</u> <u>,863</u>	<u>All Airslide Fans</u>			<u>50</u>
<u>661BK750,760</u>	<u>Silo Aeration Blowers</u>			<u>80</u>
<u>661FN751</u>	<u>Fan for Baghouse 661BF751</u>	<u>2617</u>	<u>DSCFM</u>	
	<u>NORTH Truck Loadout System #7</u>			
<u>661LS761</u>	<u>North Loadout Spout #7</u>			<u>1</u>
<u>661AS752</u>	<u>Common Air Slides</u>			
<u>661BK761</u>	<u>Spout Positioner</u>			<u>2</u>
<u>661FN761</u>	<u>Fan for Baghouse 661BF761</u>	<u>2617</u>	<u>DSCFM</u>	
	<u>SOUTH Truck Loadout System #8</u>			
<u>661LS851</u>	<u>South Loadout Spout #8</u>			<u>1</u>
	<u>Common Air Slides</u>			
<u>661BK851</u>	<u>Spout Positioner</u>			<u>2</u>
<u>661FN851</u>	<u>Fan for Baghouse 661BF851</u>	<u>2617</u>	<u>DSCFM</u>	
	<u>North Truck Loadout System #8</u>			
<u>661LS861</u>	<u>North Loadout Spout #8</u>			<u>1</u>
	<u>Common Air Slides</u>			
<u>661BK861</u>	<u>Spout Positioner</u>			<u>2</u>
<u>661FN861</u>	<u>Fan for Baghouse 661BF861</u>	<u>2617</u>	<u>DSCFM</u>	

1. The owner/operator, o/o, shall install, operate and maintain this permit unit in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of air contaminants. [Rule 204]
2. Process equipment shall not be operated unless it is vented to its associated control equipment. [Rule 204; Rule 1303(A)]
3. For dust collectors under this permit the o/o shall conduct a minimum program of inspection and maintenance on this equipment. The o/o shall maintain current and

on-site for five (5) years a log of the following information, which shall be provided to District personnel upon request:

- a. Weekly reading of baghouse pressure drop, date and value;
 - b. Monthly baghouse stack observation date and result (using USEPA Method 22, and USEPA Method 9 if necessary). If no visible emissions are observed for six consecutive months the frequency can change to semi-annually. If no emissions are observed semi-annually the frequency can be changed to annually. If any visible emissions are observed frequency reverts to monthly until no visible emissions are observed for six consecutive months; [40 CFR 63.1350(f)]
 - c. Annual bag and bag suspension system inspection date and results;
 - d. Date of bag replacements; and,
 - e. Date and nature of any system repairs. [40 CFR 63.1355(g)]
[40 CFR Part 63 subpart LLL; Rule 1303(A); Rule 1203(D)(1)(d)(ii)]
4. These baghouses shall be operated in compliance with applicable requirements of 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants and 40 CFR 63 Subpart LLL - National Emission Standard for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry. [40 CFR Part 60 subpart F; 40 CFR Part 63 subpart LLL; Rule 1303(A)]
 5. These baghouses shall not discharge into the atmosphere an exhaust stream that exhibits greater than ten percent opacity. [40 CFR 63.1345; Rule 401]
 6. These units shall be equipped with a device to measure the pressure differential across the bags (manometer). [Rule 1303(A)]
 7. The o/o shall maintain on-site a minimum inventory of replacement bags that assures compliance with these conditions. [Rule 1303(A)]

141. BAGHOUSE 661BF751 – MDAQMD PERMIT # C013012; consisting of:

a DCL CFM660-104 model pulse jet baghouse with polyester bags whose total filter area is 658 square feet, equipped with a 7.5 hp fan generating 3,000 acfm (2617 dscfm of flow at 60 degrees Fahrenheit) (for an air to cloth ratio of 4.55:1 based on actual flow rates). This unit serves the south truck loadout system #7 of the truck loadout system.

1. This baghouse shall be operated concurrently with the south truck loadout spout no. 7 under B013017. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.11 lb/hr PM10 at a maximum concentration of 0.005 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

142. BAGHOUSE 661BF761 – MDAQMD PERMIT # C013013; consisting of:

a DCL CFM660-104 model pulse jet baghouse with polyester bags whose total filter area is 658 square feet, equipped with a 7.5 hp fan generating 3,000 acfm (2617 dscfm of flow at 60 degrees Fahrenheit) (for an air to cloth ratio of 4.55:1 based on actual flow rates). This unit serves the north truck loadout system #7 of the truck loadout system.

1. This baghouse shall be operated concurrently with the north truck loadout spout no.7 (661LS761) under B013017. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.11 lb/hr PM10 at a maximum concentration of 0.005 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

143. BAGHOUSE 661BF851 – MDAQMD PERMIT # C013014; consisting of:

a DCL CFM660-104 model pulse jet baghouse with polyester bags whose total filter area is 658 square feet, equipped with a 7.5 hp fan generating 3,000 acfm (2617 dscfm of flow at 60 degrees Fahrenheit) (for an air to cloth ratio of 4.55:1 based on actual flow rates). This unit serves the south truck loadout system #8 of the truck loadout system.

1. This baghouse shall be operated concurrently with the truck loadout spout no.8 (661LS851) under B013017. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.11 lb/hr PM10 at a maximum concentration of 0.005 grains/dscf at the operating conditions given in the above description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

144. BAGHOUSE 661BF861 – MDAQMD PERMIT # C013015; consisting of:

a DCL CFM660-104 model pulse jet baghouse with polyester bags whose total filter area is 658 square feet, equipped with a 7.5 hp fan generating 3,000 acfm (2617 dscfm of flow at 60 degrees Fahrenheit) (for an air to cloth ratio of 4.55:1 based on actual flow rates). This unit serves the north truck loadout system #8 of the truck loadout system.

1. This baghouse shall be operated concurrently with the truck loadout spout no.8 (661LS861) under B013017. [Rule 204; Rule 1303(A)]
2. This baghouse shall discharge no more than 0.11 lb/hr PM10 at a maximum concentration of 0.005 grains/dscf at the operating conditions given in the above

description (BACT). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]

The following updates to CalPortland- Oro Grande Title V permit are minor changes to Section III of the permit and are not related to the Finish Mill No. 2 project. The basis for each change is described after each proposed change in italics.

44. PREHEATER AND KILN – MDAQMD PERMIT # B007435; consisting of:

Equipment No.	Equipment	Capacity	Capac. Units	HP
331FN400	Fan for Baghouse 331BF101	627,000	ACFM	2500 3000

45. BAGHOUSE 331BF101 – MDAQMD PERMIT # C007411; consisting of:

a pulse jet baghouse with polyester felt bags whose total filter area is 125,400 square feet, equipped with a ~~2500~~3000 hp fan generating 627,000 cfm of flow at 307 degrees Fahrenheit (for an air to cloth ratio of 5.0:1). This unit serves the kiln exhaust (B007435) and the raw mill (B007439).

Facility requests a change in horsepower rating from 2500 to 3000 for the above noted baghouse motor. There will be no change emissions due to this change. The basis for the change is consistency in that the motor is due for replacement and the 3000 hp motor is a common motor size used throughout the plant.

1. 111. 123. ~~PACKHOUSE BULK TRUCK LOADOUT STATIONS 2 AND 3 – MDAQMD PERMIT # B000159; consisting of:~~

Bulk truck loadout stations served by silos 5 through 17, with ancillary equipment:

Equipment No.	Equipment	Capacity	Capac. Units	HP
613-CPV-070	FK Pump			200
613-CPV-071	FK Pump			250
613-CPV-072	FK Pump			200
613-CPV-074	FK Pump			200
613-CPU-080	Compressor			350
613-CPU-081	Compressor			200
613-CPU-082	Compressor			350
613-CPU-084	Compressor			200
	Truck Loadout			
	Diverter Gate			
621-BFFN-010	Fan for 621-BF-010	11,200	ACFM	25
621-BFFN-007	Fan for 621-BF-007	6,790	ACFM	15
621-BFFN-009	Fan for 621-BF-009	2,830	ACFM	15
521-BFFN-008	Fan for 621_BF-008	2,830	ACFM	15

Includes all ancillary equipment associated with this process group, including conveying, storage and material handling.

1. The owner/operator, o/o, shall install, operate and maintain this permit unit in strict accord with those recommendations of the manufacturer/supplier and/or sound

engineering principles which produce the minimum emissions of air contaminants.
[Rule 204]

2. This equipment must not be operated unless it is vented to operating air pollution control equipment covered by all four valid District permits: C000160 (621BF010), C001771 (621BF007), C001772 (621BF009), and C001775 (621BF008). [Rule 204; Rule 1303(A)]
3. For dust collectors under this permit the o/o shall conduct a minimum program of inspection and maintenance on this equipment. The o/o shall maintain current and on-site for five (5) years a log of the following information, which shall be provided to District personnel upon request:
 - a. Weekly reading of baghouse pressure drop, date and value;
 - b. Monthly baghouse stack observation date and result (using USEPA Method 22, and USEPA Method 9 if necessary). If no visible emissions are observed for six consecutive months the frequency can change to semi-annually. If no emissions are observed semi-annually the frequency can be changed to annually. If any visible emissions are observed frequency reverts to monthly until no visible emissions are observed for six consecutive months; [40 CFR 63.1350(f)]
 - c. Quarterly bag and bag suspension system inspection date and results;
 - d. Date of bag replacements; and,
 - e. Date and nature of any system repairs. [40 CFR 63.1355(g)][40 CFR Part 63 subpart LLL; Rule 1303(A); Rule 1203(D)(1)(d)(ii)]
4. These baghouses shall be operated in compliance with applicable requirements of 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants and 40 CFR 63 Subpart LLL - National Emission Standard for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry. [40 CFR Part 60 subpart F; 40 CFR Part 63 subpart LLL; Rule 1303(A)]
5. These baghouses shall not discharge into the atmosphere an exhaust stream that exhibits greater than ten percent opacity. [40 CFR 63.1345; Rule 401]
6. These baghouses shall discharge no more than a maximum concentration of 0.1 grains/dscf (except C000160, which shall discharge no more than a maximum concentration of 0.08 gr/dscf) at the operating conditions given in the above description. This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 404]
7. These units shall be equipped with a device to measure the pressure differential across the bags (manometer). [Rule 1303(A)]
8. The o/o shall maintain on-site a minimum inventory of replacement bags that assures compliance with these conditions. [Rule 1303(A)]

1. 118.133.CEMENT RAIL LOADOUT (236) – MDAQMD PERMIT # B001901;
consisting of:

Equipment No.	Equipment	Capacity	Capac. Units	HP
611BFFN002	Fan for 611BF002	5,000	ACFM	7.5
621BFFN001	Fan for 621BF001	9,600	ACFM	25
621BE018	Bucket Elevator			30
621BFFN003	Fan for 621BF003	2,880	ACFM	7.5
621BFFN208	Fan for 621BF208	4,200	ACFM	7.5

Includes all ancillary equipment associated with this process group, including conveying, storage and material handling.

1. The owner/operator, o/o, shall install, operate and maintain this permit unit in strict accord with those recommendations of the manufacturer/supplier and/or sound engineering principles which produce the minimum emissions of air contaminants. [Rule 204]
2. This equipment must not be operated unless it is vented to operating air pollution control equipment covered by valid District permits C000162, C001776, C001770, C000164. [Rule 204; Rule 1303(A)]
3. For dust collectors under this permit the o/o shall conduct a minimum program of inspection and maintenance on this equipment. The o/o shall maintain current and on-site for five (5) years a log of the following information, which shall be provided to District personnel upon request:
 - a. Weekly reading of baghouse pressure drop, date and value;
 - b. Monthly baghouse stack observation date and result (using USEPA Method 22, and USEPA Method 9 if necessary). If no visible emissions are observed for six consecutive months the frequency can change to semi-annually. If no emissions are observed semi-annually the frequency can be changed to annually. If any visible emissions are observed frequency reverts to monthly until no visible emissions are observed for six consecutive months; [40 CFR 63.1350(f)]
 - c. Quarterly bag and bag suspension system inspection date and results;
 - d. Date of bag replacements; and,
 - e. Date and nature of any system repairs. [40 CFR 63.1355(g)]

[40 CFR Part 63 subpart LLL; Rule 1303(A); Rule 1203(D)(1)(d)(ii)]
4. These baghouses shall be operated in compliance with applicable requirements of 40 CFR 60 Subpart F – Standards of Performance for Portland Cement Plants and 40 CFR 63 Subpart LLL - National Emission Standard for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry. [40 CFR Part 60 subpart F; 40 CFR Part 63 subpart LLL; Rule 1303(A)]
5. These baghouses shall not discharge into the atmosphere an exhaust stream that exhibits greater than ten percent opacity. [40 CFR 63.1345; Rule 401]

6. Permitted baghouse C000164 shall discharge no more than a maximum concentration of 0.01 grains/dscf at the operating conditions given in the above description (BACT). Permitted baghouse C001776 shall discharge no more than a maximum concentration of 0.09 grains/dscf at the operating conditions given in the above description. Permitted baghouses ~~C001776~~, C001770, C000162 shall discharge no more than a maximum concentration of 0.1 grains/dscf at the operating conditions given in the above description (Rule 404). This equipment does not require a regularly scheduled emission compliance test. However, emission compliance testing may be required at the discretion of the District. [Rule 1303(A); Rule 404]
7. These units shall be equipped with a device to measure the pressure differential across the bags (manometer). [Rule 1303(A)]
8. The o/o shall maintain on-site a minimum inventory of replacement bags that assures compliance with these conditions. [Rule 1303(A)]

These updates are necessary as it was discovered that the existing permit limits were not as stringent as Rule 404 standards. The new emission standards are based on Rule 404 and ensure each unit meets this applicable requirement. These FOP changes are unrelated to the Finish Mill 2 permitting action.

C. Title V Permit/FOP – Significant Permit Modification

1. Proposed Changes to FOP

CalPortland submitted an application for Significant Permit Modification in parallel with the application for District Permit modification. The District is processing the proposed FOP changes in accordance with procedures specified in District Rule 1302(D)(1)(d). This preliminary decision also serves as the statement of basis and draft FOP.

Additionally, the District received a request from CalPortland to change the baghouse bag and bag suspension system inspection frequency from quarterly to annual on all baghouse permits where the kiln or finish mill must be shutdown to perform this inspection. According to CalPortland, fulfilling this requirement on a quarterly basis can be a burden to CalPortland production. In consideration of this change, the District consulted the June 24, 1999 CAPCOA/CARB/EPA Region IX Periodic Monitoring Workgroup Guidelines (CAPCOA Guidelines) and examined all current monitoring requirements placed on baghouse permits proposed for change.

CAPCOA Guidelines state that an annual inspection of the entire baghouse is a sufficient form of monitoring to ensure proper operation. District permits require weekly reading of baghouse pressure drop and monthly baghouse stack observation requirements.

The District determines that an annual baghouse bag and bag suspension system inspection augmented with existing permit requirements will continue to provide a sufficient level of confidence that each baghouse is being properly operated and maintained.

2. Title V/FOP – Conclusion

The District has reviewed the applications and proposed modifications to CalPortland's Federal Operating Permit. The District has determined that the proposed modification is in compliance with all applicable District, state, and federal rules and regulations as proposed when operated in the terms of the operating conditions given herein.

D. Comment Period and Notifications

1. Public Comment

This preliminary determination/decision will be publicly noticed on July 20, 2018, allowing for public comment until August 20, 2018. Please see Appendix B for noticing details.

2. Notifications

The preliminary decision will be submitted to USEPA and CARB pursuant to District Rule 1302 for a forty-five (45) day review period on July 19, 2018. The final modified FOP shall be issued on or about September 12, 2018.

All correspondence as required by District Rules 1302 will be forwarded electronically to the following recipients:

Director, Office of Air Division
United States EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105
R9airpermits_AV_MD@epa.gov

Chief, Stationary Source Division
California Air Resources Board
P.O. Box 2815
Sacramento, CA 95812
ttele@arb.ca.gov

Desirea Haggard
Environmental Manager
CalPortland Company
P.O. Box 146
Oro Grande, CA 92368
dhaggard@calportland.com

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Appendix A Application

Appendix B Public Notice

Noticing Methods include the following, per District Rule 1302(D)(2) and (3):

- Published in newspapers of general circulation - *Riverside Press Enterprise* (Riverside County) and the *Daily Press* (San Bernardino County) on July 20, 2018.
- Mailed and/or emailed to MDAQMD contact list of persons requesting notice of actions (see the contact list following the Public Notice in this Appendix) on July 20, 2018.
- Posted on the MDAQMD Website at the following link: <http://www.mdaqmd.ca.gov/permitting/public-notices-advisories/public-notices-permitting-regulated-industry>

NOTICE of TITLE V PERMIT MODIFICATION

NOTICE IS HEREBY GIVEN THAT *CalPortland Company*, located within the Mojave Desert Air Quality Management District (MDAQMD) at 19409 National Trails Hwy, Oro Grande, has applied for a Preconstructions Review including Significant Modification of a Federal Operating Permit (FOP) pursuant to the provisions of MDAQMD Regulations XII and XIII, respectively. The applicant is a company engaged in Portland Cement Manufacturing. CalPortland - Oro Grande operates under FOP Number 223900003 and is proposing modification to the already permitted, but yet to be constructed, Finish Mill No. 2. In addition, CalPortland – Oro Grande proposes the addition of a new additive conveying system for Finish Mill No. 2 and a new bulk truck cement silo and loadout system.

REQUEST FOR COMMENTS: Interested persons are invited to submit written comments and/or other documents regarding the terms and conditions of the proposed Federal Operating Permit. If you submit written comments, you may also request a public hearing on the proposed Significant Modification of the FOP. To be considered, comments, documents and requests for public hearing must be submitted no later than 5:00 P.M. on August 20, 2018 to the MDAQMD, Attention: Chris Anderson at the address listed below.

RIGHT TO PETITION USEPA FOR RECONSIDERATION: The proposed Title V Permit is also subject to review and approval by USEPA. If USEPA has not objected to a proposed permit action and the District has not addressed a public comment in a satisfactory manner, the public may also petition the Administrator of USEPA at 1200 Pennsylvania Ave, N.W., Washington, D.C. 20460, within 60 days after the end of the 45-day USEPA review period, to reconsider the decision to not object to the permit action.

AVAILABILITY OF DOCUMENTS: The Proposed Federal Operating Permit as well as the application and other supporting documentation are available for review at the MDAQMD offices, 14306 Park Avenue, Victorville, CA 92392. Please contact Chris Anderson, Air Quality Engineer, at the above address or (760) 245-1661, x 1846 or at canderson@mdaqmd.ca.gov for additional questions pertaining to this action and/or corresponding documents.

Traducción en español esta disponible por solicitud. Por favor llame: (760) 245-1661 x1846

Mr. Larry Trowsdale mchsi 951 E Skylark Ave Ridgecrest, CA 93555	Ms. Janet Laurain Adams Broadwell Joseph & Cardozo 601 Gateway Blvd., St. 1000 South San Francisco, CA 94080-7037	Mr. Ramon Campos Environmental Compliance Manager, Blythe P.O. Box 1210 Blythe, CA 92226
Chief, Planning Division California Air Resources Board P.O. Box 2815 Sacramento, CA 95812	Ms. Desirea Haggard Environmental Manager, CalPortland-Oro 2025 E Financial Way Glendale, CA 91741	City Manager City of Barstow 220 East Mountain View, Suite A Barstow, CA 92311
Mr. Mike Sword Planning Div Mgr, Clark Co Dept of Air Q and 4701 Russell Road, Suite 200 Las Vegas, NV 89118	Ms. Brenda Abernathy Air Program Manager, N45NCW, Naval Air 429 E Bowen Rd, Stop 4014 China Lake, CA 93555-6108	Mr. Kent T. Christensen HS&E Manager, Ducommun Aerostructures 4001 El Mirage Road Adelanto, CA 92301
Environmental Manager Duffield Marine, Inc. 17260 Muskrat Avenue Adelanto, CA 92301	Mr. Randy Lack Chief Marketing Officer, Element Markets, 3555 Timmons Lane, Suite 900 Houston, TX 77027	Ms. Christine Grandstaff Evolution Markets 27801 Golden Ridge Lane San Juan Capistrano, CA 92675
Mr. Jon Boyer High Desert Power Project LLC 19000 Perimeter Rd Victorville, CA 92394	Mr. Glen King Environmental Manager, Luz Solar Partners 43880 Harper Lake Road Harper Lake, CA 92347	Mr. Mike Plessie HQB N B CO, NREA MCAGCC Box 78110 Twentynine Palms, CA 92278-8110
Ms. Carol Kaufman Metropolitan Water District 700 N Alameda Street, 8th Floor, Rm 106 Los Angeles, CA 90012	Mr. David Rib Environmental Manager, Mitsubishi Cement 5808 State Highway 18 Lucerne Valley, CA 92356-9691	Environmental Manager Mobile Pipe Lining & Coating, Inc 12766 Violet Road Adelanto, CA 92301
Mr. John F. Espinoza HES Manager, Molycorp Minerals, LLC HC-1 Box 224 Mountain Pass, CA 92366	Mr. Mark Solheid Senior EHS Analyst, NASA/Goldstone DSCC 93 Goldstone Road Fort Irwin, CA 92310	Mr. Don Shepherd National Park Service, Air Resources Div 12795 W Alameda Pkwy Lakewood, CO 80228
Chief, Bureau of Air Quality NDCNR, Env Prot Div (Air) 901 South Stewart St, Suite 4001 Carson City, NV 89701-5249	Mr. Mike Peay EH&S Manager, Northwest Pipe Co. 12351 Rancho Road Adelanto, CA 92301	Ms. Diana Furman Senior Gas Engineer, PG&E (Attn: Air) P.O. Box 7640 San Francisco, CA 94120
Mr. Steve Smith SB County Transportation Authority 1170 W. Third Street, Second Floor San Bernardino, CA 92410	Mr. Anoop Sukumaran Environmental Engineer, Searles Valley P.O. Box 367 Trona, CA 93592-0367	Ms. Karin Fickerson Air Quality Team Lead, SoCalGas 1650 Mountain View Avenue Oxnard, CA 93030
Mr. Michael Eichenlaub Specialty Minerals Inc. P.O. Box 558 Lucerne Valley, CA 92356-0558	Director, Air Division (Attn: AIR-3) United States EPA, Region IX 75 Hawthorne Street San Francisco, CA 94105	Ms. Anne McQueen Senior Engineer, Yorke Engineering, LLC 31726 Rancho Viejo Road, Suite 218 San Juan Capistrano, CA 92675

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El Monte, CA 91731

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Ms. Jessica Gammett
Environmental Manager, CalPortland
19409 National Trails Hwy
Oro Grande, CA 92368

Appendix C Emission Calculations

Table 1. Emission Unit Parameters						
Process	Permit Number	Baghouse Equipment ID	Baghouse Parameters			
			Annual Hours of Operation	Flow Rate (acfm)	Flow Rate² (dscfm)	Maximum Outlet Grain Loading (gr/dscf)
Finish Mill No 2 Storage and Feed Bins	T007433	551BF101	8,760	4,002	2,110	0.003
		551BF102	8,760	4,002	2,110	0.003
		551BF103	8,760	4,002	2,110	0.003
		551BF104	8,760	4,002	2,110	0.003
Finish Mill No 2	B007466	571BF101	8,760	4,002	2,469	0.003
		571BF102	8,760	4,002	2,469	0.003
		571BF103	8,760	3,002	1,852	0.003
		571BF104	8,760	3,002	1,852	0.003
		571BF200	8,760	200,000	139,532	0.003
		571BF300	8,760	55,000	37,115	0.003
		661BF726	8,760	10,000	7,086	0.005
Truck Loadout System	N/A	661BF751	8,760	3,000	2,617	0.005
		661BF761	8,760	3,000	2,617	0.005
		661BF851	8,760	3,000	2,617	0.005
		661BF861	8,760	3,000	2,617	0.005
		661BF861	8,760	3,000	2,617	0.005
Clinker Conveying System	C001708	New Unit - Replaces 511BF051	8,760	4,002	2,110	0.003
	C001708	511BF051	8,760	4,000	3,401	0.1
Additive Conveying System	N/A	472BF101	8,760	1,000	872	0.003
1. Baghouse parameters come from manufacturer specification sheet except 511BF051 whose specifications come from the current Federal Operating Permit issued January						
2. Refer to Table 4a for actual flow rate conversion to dry standard flow rate.						
Table 2. Conversion Factors						
Conversions						
1 pound =	7,000	grains				
1 hour =	60	minutes				
1 ton =	2,000	pounds				
Table 3. PM Speciation Factors						
PM Speciation with respect to Total PM						
Weight Fraction of PM2.5	0.06					
Weight Fraction of PM10	0.40					
1. Yang, Wenli. <i>PM Size and Chemical Speciation Profile for Concrete Batching - PM3431</i> . Air Resources Board. October 22, 2013.						

Table 4. Potential to Emit Emissions									
Process	Permit Number	"Process" Permit Application ID	Permit Detail or Baghouse Permit	Baghouse Equipment ID	Baghouse Permit Application ID #	PM₁₀ PTE		PM_{2.5} PTE	
						lb/hr	tpy	lb/hr	tpy
Finish Mill No 2 Storage and Feed Bins	T007433		550BF101	551BF101	2177	0.05	0.24	0.01	0.04
		Mod-Paid PCR	550BF102	551BF102	2178	0.05	0.24	0.01	0.04
			NA	551BF103	2179	0.05	0.24	0.01	0.04
			NA	551BF104	2180	0.05	0.24	0.01	0.04
Finish Mill No 2	B007466		NA	571BF101	2181	0.06	0.28	0.01	0.04
			NA	571BF102	2182	0.06	0.28	0.01	0.04
			NA	571BF103	2183	0.05	0.21	0.01	0.03
			NA	571BF104	2184	0.05	0.21	0.01	0.03
			NA	571BF200	2185	3.59	15.72	0.54	2.36
		Mod-Paid PCR	NA	571BF300	2186	0.95	4.18	0.14	0.63
(New) Truck Loadout System	N/A	2194	NA	661BF726	2187	0.30	1.33	0.05	0.20
		2195	NA	661BF751	2188	0.11	0.49	0.02	0.07
			NA	661BF761	2189	0.11	0.49	0.02	0.07
			NA	661BF851	2190	0.11	0.49	0.02	0.07
			NA	661BF861	2191	0.11	0.49	0.02	0.07
Clinker Conveying System	B000197		C001708	New Unit - Replaces 511BF051		0.05	0.24	0.01	0.04
	B000197		C001708	511BF051	Mod-Paid PCR	2.92	12.77	0.44	1.92
Additive Conveying System	N/A	2193	NA	472BF101	2289	0.02	0.10	0.00	0.01
Additive Conveying System Bin	N/A	2192	NA	NA	NA	0.32	2.10	0.05	0.32

1. Hourly potential to emit for new units is calculated as PTE (lb/hr) = Grain Loading (gr/scf) x Flow Rate (scfm) x 60 (min/hr) / 7,000 (gr/lb)

2. Annual PTE for new units is calculated as PTE (tpy) = Hourly PTE (lb/hr) x 8,760 (hrs/yr) / 2,000 (lb/ton)

3. PTE for 511BF051 comes from the current Federal Operating Permit issued January 8, 2016.

4. PTE for Additive Conveying System Bin includes fugitive emissions from loader and storage piles. Note that storage pile not included for offset purposes.

Permit # ¹	Process	Baghouse Parameters				
		Flow Rate (acfm) ³	Temperature (Fahrenheit) ³	Temperature (Rankine) ⁴	Pressure (inHg) ⁵	Flow Rate (dscfm) ⁶
C001708	Baghouse 511BF051	4,350	120	579.67	26.82	3,401
ATC ²	Baghouse 551BF101	4,002	400	860	26.82	2,110
ATC ²	Baghouse 551BF102	4,002	400	860	26.82	2,110
ATC ²	Baghouse 551BF103	4,002	400	860	26.82	2,110
ATC ²	Baghouse 551BF104	4,002	400	860	26.82	2,110
ATC ²	Baghouse 571BF101	4,002	275	735	26.82	2,469
ATC ²	Baghouse 571BF102	4,002	275	735	26.82	2,469
ATC ²	Baghouse 571BF103	3,002	275	735	26.82	1,852
ATC ²	Baghouse 571BF104	3,002	275	735	26.82	1,852
ATC ²	Baghouse 571BF200	200,000	190	650	26.82	139,532
ATC ²	Baghouse 571BF300	55,000	212	672	26.82	37,115
ATC ²	Baghouse 661BF726	10,000	180	640	26.82	7,086
ATC ²	Baghouse 661BF751	3,000	60	520	26.82	2,617
ATC ²	Baghouse 661BF761	3,000	60	520	26.82	2,617
ATC ²	Baghouse 661BF851	3,000	60	520	26.82	2,617
ATC ²	Baghouse 661BF861	3,000	60	520	26.82	2,617
ATC ²	New Unit - Replaces 511BF051	4,002	400	860	26.82	2,110
ATC ²	Baghouse 472BF101	1,000	60	520	26.82	872
1. Permit numbers from Federal Operating Permit Number 223900003, revised on November 21, 2017.						
2. New emission units proposed in the November 1, 2017 ATC Application submitted to MDAQMD.						
3. Baghouse parameters provided in Federal Operating Permit Number 223900003, revised on November 21, 2017 or specification sheets/process flow diagrams provided in the November 1, 2017 ATC Application submitted to MDAQMD.						
4. Temperature (R) = Temperature (F) + 459.67						
5. Pressure (inHg) from 2016 Comprehensive Emission Inventory (CEIR) and based on actual site atmospheric conditions						
6. Flow Rate (dscfm) = Flow Rate (acfm) x (Standard Temperature (Rankine) / Actual Exhaust Temperature (Rankine)) x (Actual Pressure (inHg) / Standard Pressure (inHg)) x (1 - Moisture of Ambient Air (%) / 100)						
	Standard Pressure (inHg)	29.92				
	Standard Temperature (Rankine)	519.67				
	Moisture Content Ambient Air (%)	2.7				

Table 3. Additive Conveying System Fugitive Emissions														
	Equipment ID	Throughput, Tons/Day	Throughput, Tons/Year	Control Device	Control Efficiency %	Emission Factor, Lb/Ton			Daily Emissions, Lbs			Annual Emissions, TPY		
						PM	PM10	PM2.5	PM	PM10	PM2.5	PM	PM10	PM2.5
Storage Pile Area	NA	0.3		None	0	2.43	1.21	0.18	0.007	0.003	0.000	2.43	1.21	0.18
Loading (from Storage Pile)	NA	1400	328000	None	0	0.006	0.003	0.000	7.94	3.86	0.58	0.93	0.45	0.07
Unloading to 30 ST Hopper	472STR101	1400	328000	Partial Enclos	0.040	0.006	0.003	0.000	7.62	3.71	0.56	0.89	0.43	0.07
"Permit Unit" PTE Totals									15.57	7.57	1.14	1.82	0.89	0.13
PTE Totals									15.57	7.58	1.14	4.25	2.10	0.32
Emission factors from MDAQMD Mineral Handling and Processing, Section VI.E, and using site specific data provided in 2017 CEIR.														
PM10/PM2.5 ratio from Background Document for Revisions to Fine Fraction Ratios Used for AP-42 Fugitive Dust Emission Factors, Table 1.														
https://www3.epa.gov/ttn/chief/ap42/ch13/bgdocs/b13s02.pdf														
Throughput estimated provided by applicant.														
Storage Pile emission factor ton/acre. Storage pile acreage estimated from finish mill 1 current storage pile area using aerial image.														
For purposes of assessing OFFSETS, storage pile emissions are EXCLUDED because they are not considered part of the PERMIT UNIT [District Rule 1304(D)(3)].														

Table 5. CalPortland Oro Grande Modernization Project			
Equipment	Emissions (tpy)		
	PM	PM10	PM2.5
New Finish Mill No 2 (1999 ATC) PTE ¹	41.50	35.29	2.49
New Finish Mill No 2 (revised) PTE ²	54.55	21.82	3.27
Clinker Conveying System Replaced Baghouse PTE ^{2a}	31.92	12.77	1.92
Clinker Conveying System Replacement Baghouse PTE ²	0.59	0.24	0.04
Additive Conveying System New Baghouse PTE ²	0.25	0.10	0.01
Additive Conveying System Bin (Fugitives) PTE	1.82	0.89	0.13
New Truck Loadout System PTE ²	8.24	3.29	0.49
Proposed Emissions ³	65.45	26.34	3.95
Historic Actual Emissions (HAE) ⁴	73.42	48.06	4.41
Net Change in Emissions⁵	-7.97	-21.72	-0.45
1. PM and PM10 emissions from the New Finish Mill No 2 (1999 ATC) in the Revised February 18, 1999 application come from page 108 of the PDF. PM2.5 values were not reported in the application and are speciated per note 2.			
2. PM10 and PM2.5 are fractionated based on Yang, Wenli. PM Size and Chemical Speciation Profile for Concrete Batching - PM3431. Air Resources Board. October 22, 2013.			
3. Proposed Emission (tpy) = Additive Conveying System New Baghouse (tpy) + Additive Conveying System Fugitives (tpy) + Clinker Conveying System Replacement Baghouse (tpy) + New Finish Mill No 2 revised (tpy) + New Truck Loadout System (tpy).			
4. HAE (tpy) = New Finish Mill No 2 1999 ATC (tpy) - Clinker Conveying System Replaced Baghouse (tpy)- Cement Truck Loading Drive-Through Silos - Shutdown (tpy)			
5. Net Change in Emissions (tpy) = Proposed Emissions - HAE.			
1. Unless otherwise notes, refer to Table 4, Potential to Emit Emissions.			
2a. Per Federal Operating Permit Number 223900003, revised on November 21, 2017.			
Outlet Grain Loading Rate:	0.1	gr/dscf	
Flow rate	4,040	dscfm (Refer to Table 4a for conversion from actual flow rate to standard flow rate)	

Table 9. Finish Mill 2 Toxic Emissions

	Process	Permit Number	ID Number	Material Controlled by Baghouse	Emissions (tpy) ¹													
					PM ₁₀	PM	Aluminum	Arsenic	Barium	Chromium	Cr(VI)	Silica, Crystln	Manganese	Mercury	Lead	Vanadium	Zinc	
Project Increases	Finish Mill No 2 Storage and Feed Bins	T007433	551BF101	Clinker	0.24	0.59	3.00E-03	2.44E-05	4.69E-05	2.65E-05	1.86E-06	0.00E+00	9.03E-04	0.00E+00	4.26E-05	2.61E-05	5.82E-05	
			551BF102	Clinker	0.24	0.59	3.00E-03	2.44E-05	4.69E-05	2.65E-05	1.86E-06	0.00E+00	9.03E-04	0.00E+00	4.26E-05	2.61E-05	5.82E-05	
			551BF103	Gypsum	0.24	0.59	0.00E+00	7.92E-06	1.56E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E-06	0.00E+00	
			551BF104	Limestone	0.24	0.59	7.72E-04	4.15E-06	5.53E-06	1.69E-06	0.00E+00	7.39E-02	2.20E-04	6.73E-08	1.70E-05	4.65E-06	1.05E-05	
	Finish Mill No 2	B007466	571BF101	Gypsum, Limestone & Clinker Blend	0.28	0.70	7.52E-04	1.11E-05	2.08E-05	5.15E-06	3.27E-07	2.16E-02	2.23E-04	1.97E-08	1.25E-05	7.42E-06	1.33E-05	
			571BF102	Cement	0.28	0.70	3.33E-03	2.27E-05	4.73E-05	2.76E-05	8.27E-06	0.00E+00	1.11E-03	0.00E+00	4.26E-05	2.46E-05	4.96E-05	
			571BF103	Cement	0.21	0.52	2.50E-03	1.70E-05	3.55E-05	2.07E-05	6.21E-06	0.00E+00	8.34E-04	0.00E+00	3.20E-05	1.84E-05	3.72E-05	
			571BF104	Cement	0.21	0.52	2.50E-03	1.70E-05	3.55E-05	2.07E-05	6.21E-06	0.00E+00	8.34E-04	0.00E+00	3.20E-05	1.84E-05	3.72E-05	
			571BF200	Cement	15.72	39.29	1.88E-01	1.28E-03	2.67E-03	1.56E-03	4.68E-04	0.00E+00	6.29E-02	0.00E+00	2.41E-03	1.39E-03	2.80E-03	
			571BF300	Cement	4.18	10.45	5.01E-02	3.41E-04	7.11E-04	4.15E-04	1.24E-04	0.00E+00	1.67E-02	0.00E+00	6.41E-04	3.69E-04	7.45E-04	
			661BF726	Cement	1.33	3.33	1.59E-02	1.09E-04	2.26E-04	1.32E-04	3.96E-05	0.00E+00	5.32E-03	0.00E+00	2.04E-04	1.17E-04	2.37E-04	
	Truck Loadout System	N/A	661BF751	Cement	0.49	1.23	5.89E-03	4.01E-05	8.35E-05	4.87E-05	1.46E-05	0.00E+00	1.96E-03	0.00E+00	7.53E-05	4.34E-05	8.76E-05	
			661BF761	Cement	0.49	1.23	5.89E-03	4.01E-05	8.35E-05	4.87E-05	1.46E-05	0.00E+00	1.96E-03	0.00E+00	7.53E-05	4.34E-05	8.76E-05	
			661BF851	Cement	0.49	1.23	5.89E-03	4.01E-05	8.35E-05	4.87E-05	1.46E-05	0.00E+00	1.96E-03	0.00E+00	7.53E-05	4.34E-05	8.76E-05	
			661BF861	Cement	0.49	1.23	5.89E-03	4.01E-05	8.35E-05	4.87E-05	1.46E-05	0.00E+00	1.96E-03	0.00E+00	7.53E-05	4.34E-05	8.76E-05	
	Project Decreases	Clinker Conveying System	C001708	New Unit - Replaces 511BF051	Clinker	0.24	0.59	3.00E-03	2.44E-05	4.69E-05	2.65E-05	1.86E-06	0.00E+00	9.03E-04	0.00E+00	4.26E-05	2.61E-05	5.82E-05
		Additive Conveying System	N/A	511BF051	Gypsum and Limestone	0.10	0.25	3.11E-04	1.75E-06	2.39E-06	6.82E-07	0.00E+00	2.98E-02	8.86E-05	2.71E-08	6.86E-06	1.90E-06	4.23E-06
	Project Total Increase					25.45	63.63	2.97E-01	2.05E-03	4.25E-03	2.46E-03	7.17E-04	1.25E-01	9.88E-02	1.14E-07	3.83E-03	2.20E-03	4.46E-03
	Project Total Decrease²					13.44	33.60	1.70E-01	1.38E-03	2.65E-03	1.50E-03	1.05E-04	0.00E+00	5.11E-02	0.00E+00	2.41E-03	1.48E-03	3.29E-03
	Project Total Net Change³					12.01	30.03	1.28E-01	6.71E-04	1.59E-03	9.55E-04	6.11E-04	1.25E-01	4.77E-02	1.14E-07	1.42E-03	7.26E-04	1.17E-03

1. Toxic emissions are speciated from PM based on material profiles from the 2016 CEIR
 2. Project Total Decrease is the reduction in emissions from the removal of Baghouse 511BF051
 3. Project Total Net Change (tpy) = Project Total Increase (tpy) - Project Total Decrease (tpy)

Table 6. New Truck Loadout System Emissions			
Units	Emissions (tpy)		
	PM ¹	PM10	PM2.5
New Truck Loadout System	8.24	3.29	0.49
1. PM are speciated based on Yang, Wenli. PM Size and Chemical Speciation Profile for Concrete Batching - PM3431. Air Resources Board. October 22, 2013.			

Table 7. PSD FM2 Update		
Units	Emissions (tpy) ¹	
	PM	PM2.5
Old Plant BAE	1,312.00	78.72
Modernized Plant PTE	784	47.04
Original Modernization Project Emission Increase (PEI)	-528.00	-31.68
New Finish Mill No 2 (1999 ATC) PTE	41.5	2.49
New Finish Mill No 2 (revised) PTE	54.55	3.27
Difference between Original FM No.2 and Updated FM No.2 PTE	13.05	0.78
Clinker Conveying System Replaced Baghouse (1999 ATC) PTE	31.92	1.92
Clinker Conveying System Replacement Baghouse PTE	0.59	0.04
Difference between Clinker Conveying System Baghouses PTE	-31.33	-1.88
Additive Conveying System New Baghouse + Additive Bin Loading PTE	2.07	0.15
Updated Modernization Project Emission Increase (tpy)	-544.21	-32.63

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