Colorado Department of Public Health and Environment

OPERATING PERMIT

CEMEX Construction Materials South, LLC – Lyons Cement Plant

First Issued: February 1, 2000
Renewed: March 1, 2017
Last Revised: November 17, 2017

AIR POLLUTION CONTROL DIVISION
COLORADO OPERATING PERMIT

FACILITY NAME:	CEMEX Construction Materials South, LLC - Lyons Cement Plant	OPERATING PERMIT NUMBER
FACILITY ID:	0130003	**95OPBO082**
RENEWED:	March 1, 2017	
EXPIRATION DATE:	March 1, 2022	
MODIFICATIONS:	See Appendix F of Permit	

Issued in accordance with the provisions of Colorado Air Pollution Prevention and Control Act, 25-7-101 et seq. and applicable rules and regulations.

ISSUED TO:

CEMEX, Inc.
929 Gessner Suite 1900
Houston, Texas 77024

PLANT SITE LOCATION:

5134 Ute Highway
Longmont, Colorado 80503
Boulder County

INFORMATION RELIED UPON

Operating Permit Renewal Application Received:	March 1, 2012
And Additional Information Received:	Various – See Technical Review Document that supports the Renewal Permit.
Nature of Business:	Cement Production
Primary SIC:	3241

RESPONSIBLE OFFICIAL

Name: Bradley Shane Wilson
Title: Plant Manager

Phone: (303) 823-2101

FACILITY CONTACT PERSON

Name: Michael Whitehead
Title: Environmental Manager

Phone: (303) 823-2115

SUBMITTAL DEADLINES

First Semi-Annual Monitoring Period:	March 1 – June 30
Subsequent Semi-Annual Monitoring Periods:	July 1 – December 31, January 1– June 30
Semi-Annual Monitoring Reports:	Due August 1, 2017 & February 1, 2018 & subsequent years
First Annual Compliance Period:	March 1 - December 31
Subsequent Annual Compliance Periods:	January 1 – December 31
Annual Compliance Certification:	Due February 1, 2018 and subsequent years

Note that the Semi-Annual Monitoring reports and the Annual Compliance report must be received at the Division office by 5:00 p.m. on the due date. Postmarked dates will not be accepted for the purposes of determining the timely receipt of those reports.

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SECTION I - General Activities and Summary

1. Permitted Activities

1.1 This facility manufactures Portland cement. Limestone and other raw materials extracted from the Dowe Flats quarry are processed through a primary crusher at the Dowe Flats quarry. The crushed material is transported to the plant on a 2.0 mile belt conveyor system and discharged to a stockpile. The stockpiled material is placed on a belt by means of a front end loader to be processed through a primary crusher, the dryer, and a secondary crusher. The material from the secondary crusher is stored in raw material storage silos. These storage silos contain silica and iron ore and various quarried raw materials. Material from these storage silos is discharged to weigh belts for the formulation of a desired product. The weigh belts discharge to the raw mill. The raw mill mixes and crushes the blended materials and delivers the homogenized material to storage silos. The homogenized material from the storage silos is delivered to the calciner portion of the kiln. Pulverized coal from the coal mill is fired at the bottom of the flash calciner. The calcined material from the calciner then enters the rotary kiln, which is located at a slight incline along its horizontal axis. The material travels towards the clinker discharge end where additional pulverized coal is fired for the clinkering process. The clinker is discharged from the kiln into the clinker cooler where it is cooled by air forced through the clinker bed by undergrate fans. A good percentage of this air is recovered for use as primary air in the kiln combustion process. The cooled clinker is then moved to internal storage in an A-Frame building, or outside storage stockpiles. The stored clinker is the raw material for the finish mill. In the finish mill the clinker is combined with gypsum, ground to a fine material and stored in product silos. The material in the product silos can be loaded for bulk transport, or sent to a packaging system. From an over-all perspective, the manufacturing process may be viewed as two segments -- clinker production and cement production. The clinker storage allows the two processes to operate at different production rates. During periods of low demand for cement, clinker is accumulated. If cement is in high demand, the clinker production can be supplemented by purchase of clinker from other sources. The overall result is the clinker production can operate at a rather steady rate, while the cement production can operate in response to the current or projected demands.

The facility is located near Lyons, 12 miles north of Boulder. The area in which the facility is located is classified as attainment/maintenance for particulate matter less than 10 microns (PM_{10}). Under that classification, all SIP-approved requirements for PM_{10} will continue to apply in order to prevent backsliding under the provisions of Section 110(l) of the Federal Clean Air Act. This area is classified as nonattainment for ozone and is part of the 8-hr Ozone Control Area as defined in Colorado Regulation No. 7, Section II.A.1.

There are no affected states within 50 miles of the plant. Rocky Mountain National Park, Rawah Wilderness Area and Eagle's Nest Wilderness Area are Federal Class I designated areas within 100 kilometers of the plant.

1.2 Until such time as this permit expires or is modified or revoked, the permittee is allowed to discharge air pollutants from this facility in accordance with the requirements, limitations, and conditions of this permit.

1.3 This Operating Permit incorporates the applicable requirements contained in the underlying construction permits, and does not affect those applicable requirements, except as modified during review of the application or as modified subsequent to permit issuance using the modification procedures found in Regulation No. 3, Part C. These Part C procedures meet the applicable substantive New Source Review requirements of Part B. Any revisions made using the provisions of Regulation No. 3, Part C shall become new applicable requirements for purposes of this operating permit and shall survive reissuance. Any requirements that were designated in the Compliance Order on Consent (COC) signed February 19, 2004 (No. 2002-124) or the Consent Decree entered into the federal District Court for the District of Colorado, No. 09-cv-0019-MSK-MEH as applicable requirements have been incorporated into this operating permit and shall survive reissuance as applicable requirements. This permit incorporates the applicable requirements (except as noted in Section II) from the following Construction Permit(s): P-10,225, P-10,535, 12BO444(1-2), P-10,298, P-10,284, P-10,266, P-10,292, 98BO0259, 10BO718, 93BO1414F, 94BO593, 98BO0292, 98BO0315 and 05BO0703.

1.4 All conditions in this permit are enforceable by the US Environmental Protection Agency, Colorado Air Pollution Control Division (hereinafter Division) and its agents, and citizens unless otherwise specified. **State-only enforceable conditions are:** Section IV - Conditions 3.g (last paragraph), 14 and 18 (as noted).

1.5 All information gathered pursuant to the requirements of this permit is subject to the Recordkeeping and Reporting requirements listed under Condition 22 of the General Conditions in Section IV of this permit. Either electronic or hard copy records are acceptable.

2. Nonattainment Area New Source Review (NANSR) and Prevention of Significant Deterioration (PSD)

2.1 This facility is categorized as a NANSR major stationary source (Potential to Emit of VOC and $NO_X \geq 100$ tons/year). Future modifications at this facility resulting in a significant net emissions increase (see Regulation No. 3, Part D, Sections II.A.27 and 44) for VOC or NO_X or a modification which is major by itself (Potential to Emit $\geq$ 100 tons/year of either VOC or NO_X) may result in the application of the NANSR review requirements.

2.2 This source is categorized as a PSD major stationary source (Potential to Emit $\geq$ 100 tons/year) for PM, PM_{10}, SO_2, NO_X and CO. Future modifications at this facility resulting in a significant net emissions increase (see Regulation No. 3, Part D, Sections II.A.27 and 44) or a modification that is major by itself (Potential to Emit $\geq$ 100 tons/yr) for any pollutant listed in Regulation No. 3, Part D, Section II.A.42 for which the area is in attainment or attainment/maintenance may result in the application of the PSD review requirements.

2.3 There are no other Operating Permits associated with this facility for purposes of determining applicability of NANSR and PSD review regulations.

3. Accidental Release Program (112(r))

3.1 Based on the information provided by the applicant, this facility is not subject to the provisions of the Accidental Release Prevention Program (Section 112 (r) of the Clean Air Act).

4. Summary of Emission Units

4.1 The emissions units regulated by this permit are the following:

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
Dowe Flats and Lyons Quarry – Fugitive Emission Sources (Section II.1)	P017	017	Blasting (combustion byproduct emissions)		Grandfathered
		025	(Particulate Emissions Only) Drilling , Blasting, Truck Loading/Unloading, Haul Roads (Dowe Flats), Scraper Activities, Grading, Bulldozing, Wind erosion of stockpiles and exposed areas	PM Emission Control Plan	93BO1414F
Dowe Flats Quarry – Point Source Emissions (Section II.2)		026	S056 through S064 – Conveyor	Baghouse (8 total)	94BO593
		027	S055 - Primary Crusher (Quarry)	Baghouse	
General Fugitive Emissions Requirements (Section II.14)	P018	028	Process Fugitives (Lyons Cement Plant) Not Subject to Emission Limitations Includes wind erosion of stock piles and various transfers not vented through a stack (e.g. belt and screw conveyor transfers)		Grandfathered
		019	Haul Roads (Lyons Cement Plant/Quarry and Dowe Flats Quarry) Not Subject to Emission Limitations Hauling of purchased limestone, iron, gypsum and silica and operation of water application system		Grandfathered
Raw Material Storage and Handling at Plant Site (Section II.3)	P000	024	Discharge of Primary-Crushed Material onto Open Stockpile S009 - Front End Loader Activity	PM Emission Control Plan	98BO0292
Primary Crusher (Plant) (Section II.4)	P001	001	S002 - Primary Crushing (Plant)	Baghouses	P-10,225*
			S004 - Surge Silo		P-10,535*

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
Raw Materials Drying (Section II.5)	P002	002	S005 - Raw Materials Dryer	Baghouse	12BO444-1
Secondary Crushing (Section II.6)	P003	003	Secondary Crushing and Screening (vents to S001 – Waste Dust Silo)	Baghouse (2 total)	Grandfathered
			S003 - #4&#6 Belt Transfer		P-10,298*
Raw Material Storage Silos (Section II.7)	P004	004	S006 to S008 - Raw Material Storage Silos	Baghouse (3 total)	P-10,284*
Raw Material Grinding (Section II.8)	P005	005	S012 - Raw Mill Feeders	Baghouse (4 total)	Grandfathered
			S013 - Iron/Silica Silo		
			S010 - Raw Material Grinding		
			S011 –Raw Mill Auxiliary Dust Collector		Grandfathered
Homogenizing & Blending (Section II.9)	P006	006	S014 - Homogenizing Silo	Baghouse (2 total)	Grandfathered
			S015 - Kiln Feed Silo		Grandfathered
Kiln Burning (Section II.10)	P007	007	S016 - Precalciner Kiln	Baghouses (3) – Main, Hart and Alkali Bypass Selective Non-Catalytic Reduction (SNCR) System Activated Carbon and Lime Injection Systems	12BO444-2
Clinker Cooling and Transfer to Storage for Finish Mill (Section II.10)	P008	008	S017 – Clinker Drag Chains (1 baghouse)	Baghouse (5 total)	12BO444-2
			S018 - Clinker Cooler (2 baghouses, 1 stack)		
			S023 – 529-25 Drag Conveyor (1 baghouse)		
			S024B – Outside Clinker Drop Hood (1 baghouse, vented to S018 stack through 525-8/9)		
Clinker and Gypsum/Additive Silos and Weigh Feeders (Storage and Transfer to Finish Mill) (Section II.11)	P009	009	S021 – Top of A Frame (Belt 529-30 to 529-63)[1]	Baghouse (14 total)	98BO0259
			S026, S027, S029, S030, S031 – Weigh Feeders 1, 2, 4, 5 and 6[1]		
			S024 - #2 Clinker Silo		
			S032 – Bottom of A Frame Transfer[1]		
			S033 Gypsum/Limestone from 529-31 belt to Silos		
			S035 – Discharge of 629-3 Belt		
			S039 to S041 –Finish Mill Weigh Feeders[2]		
			S038 - Surge Bin[2]		
			[1] stacks vent inside A-Frame		
			[2] stacks vent inside mill building.		

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
Sheltered (A-Frame) Clinker Storage and Reclaim (Section II.11)	P010	010	S034 - #6 Reclaim Feeder and A-Frame Building	Baghouse	98BO0259
			S051 – Top of A Frame – Transfer from 529-29 belt to 529-30 belt		
Outdoor Clinker Piles and Handling (Section II.11)	P015	015	Outdoor Hot Clinker Pile	PM Emission Control Plan	98BO0259
Cement Finish Mill and Auxiliaries (Section II.11)	P011	011	S036 - Finish Mill	Baghouse (2 total)	98BO0259
			S037 – Finish Mill Auxiliary Dust Collector		
			Grinding and Limestone Handling		
	P012	031	S065 – Finish Mill Separator	Baghouses (2 total)	98BO0259
			S069 - Clinker Dust to Finish Mill (SEP project) – vents inside mill room	Baghouse	
Cement Silos/ Packhouse/ Loadout (Section II.11)	P013	013	S043 – Cement Storage Silos A10 and A13 S044 – Cement Storage Silo A7 S045 – Cement Finish Silo A2 S046 – Packhouses West and East (Loading Spouts, Baghouses 825-4 and 825-5 vent to a common stack) S048 – Recirculating System	Baghouse (8 Total)	98BO0259
Material Handling System – Load-In & Load-Out (Section II.12)	P014	014	S020 - Coal Silo/Elevator S019 – Material Unloading Hopper (Railcar)		C-10,316*, 10BO718*
			S025 – Material Unloading Hopper and Spout (Trucks)	Baghouse	
			Outdoor Coal Storage		
Cold Cleaner Solvent Vats (Section II.18)		APEN Exempt[1]	Cold Cleaner Solvent Vats	Work Practice Requirements	Permit Exempt

Process (Permit Section)	Plant ID	AIRS ID	Description		Pollution Control Device	Construction Permit
Handling and Processing of CKD and Raw Material Waste Dust (Section II.13)	P007A	049	Pneumatic Conveyance of Materials	S066 Cement Silo A5 S067 - CKD Loading Spout (vents indoors) S001 - Waste Dust Silo S022 - Kiln Return Dust Silo	Baghouses	98BO0315
			041 - Pug Mill Mixing, Pelletization and Truck Loading of CKD and Benefication Dust	041 - Pug Mill/Truck Loading	Baghouses	
			042 - Haulage and Disposal of Pelletized CKD and Benefication Dust	042 - Truck Hauling and Disposal at Lyons Quarry	PM Emission Control Measures	
Gasoline Storage Tank (Section II.15)		APEN Exempt[1]	Gasoline Storage Tank (3,000 gallons, aboveground)		Submerged Filling and Vapor Recovery	Permit Exempt
Cement Rail Car Unloading System (Section II.25)	P050	050	Cement Rail Car Unloading and Handling System – Hopper, screw conveyor and pneumatic transfer system		Baghouse BH-825-8	05BO0703
Kiln Control Device Support Equipment (Section II.26)	LIS-1	055	BCSA Inc, Silotop R03, Lime Storage Silo, S/N unknown.		Baghouse	
	LIS-2	054	BCSA Inc, Silotop R03, Lime Weigh Hopper, S/N unknown		Baghouse	
Stationary Internal Combustion Engines (Section II.27)	A-Pit Pump	053	John Deere, Model No. 4.5L, diesel fuel-fired engine driving a water pump. This engine is rated at 90 hp and 4.7 gal/hr			
	Dowe Flats 6" Pump	APEN Exempt[1]	John Deere, Model No. T0404045DF150, S/N unknown, diesel fuel-fired engine driving a water pump. This engine is rated at 80 hp and 0.6 MMBtu/hr (4.2 gal/hr).			
	Dowe Flats 8" Pump	APEN Exempt[1]	John Deere, Model No. T0404045DF150, S/N T04045T532755, diesel fuel-fired engine driving a water pump. This engine is rated at 84 hp and 0.6 MMBtu/hr (4.4 gal/hr).			
	Kiln Donkey Engine	APEN Exempt[1]	Natural gas-fired engine used to provide kiln rotation during power failure. No make, model or serial no. available for this engine. This engine is rated at ~ 230 hp.			
	Flood Response Engine	APEN Exempt[1]	Cummins Model No. 4BTAA3.3G7, S/N 75021552, diesel fuel-fired engine providing emergency power to flood response pumps. This engine is rated at 99 hp (73.8 kw) and 4.2 gal/hr.			

*Permit issued, but permit includes no applicable requirements

[1]APEN exempt as long as actual, uncontrolled emissions are below the APEN de minimis level (1 tpy of NOX or VOC, 2 tpy of other criteria pollutants.

5. Alternate Operating Scenarios

5.1 The renewal permit (issued March 1, 2017) specifies that the dryer (addressed in Section II, Condition 5) will comply with the total organic HAP requirements in 40 CFR Part 63 Subpart LLL (Section II, Condition 22). As an alternative operating scenario, the dryer may comply with the THC requirements in 40 CFR Part 63 Subpart LLL (Section II, Condition 22) under the following provisions:

5.1.1 With the submittal of the performance test notification (required by Condition 5.1.2), the permittee shall submit a notification to the Division of the intent to change from the total organic HAP to THC compliance option for the dryer. The notification shall describe changes to operations, such as installation of controls or changes to the raw material source or quarry location that will ensure the dryer can comply with the THC limit.

5.1.2 The performance test notification (required by §§ 63.7(b) and 63.9(e)) and the site-specific test plan shall be submitted to the Division 60 days prior to conducting the initial performance test for THC.

5.1.3 No later than 60 days after completion of the initial THC performance test, the permittee shall submit the results of the performance test along with the notification of compliance status. The performance test results shall include the information specified in § 63.7(g) and the notification of compliance status shall include the information specified in § 60.9(h).

5.1.4 The permittee shall continue to conduct performance tests to assess compliance with the dryer annual VOC emission limit (in tons/yr) in Section II, Condition 5.7 every thirty months as required by Section II, Condition 5.7.1.

5.2 If the permittee exercises the alternative operating scenario in Condition 5.1, they may at any time thereafter revert to the total organic HAP compliance option for the dryer, provided that the requirements in Conditions 5.1.1 through 5.1.4 are met, except that the submittal in Condition 5.1.1 shall note the intent to change from the THC to total organic HAP compliance option.

5.3 The renewal permit (issued March 1, 2017) specifies that the kiln (addressed in Section II, Condition 10) will comply with the THC requirements in 40 CFR Part 63 Subpart LLL (Section II, Condition 22). As an alternative operating scenario, the kiln may comply with the total organic HAP requirements in 40 CFR Part 63 Subpart LLL (Section II, Condition 22) under the following provisions:

5.3.1 With the submittal of the performance test notification (required by Condition 5.3.2), the permittee shall submit a notification to the Division of the intent to change from the THC to total organic HAP compliance option for the kiln.

5.3.2 The performance test notification (required by §§ 63.7(b) and 63.9(e)) and the site-specific test plan shall be submitted to the Division 60 days prior to conducting the initial performance test for total organic HAPs.

5.3.3 No later than 60 days after completion of the initial total organic HAP performance test, the permittee shall submit the results of the performance test along with the notification of compliance status. The performance test results shall include the information specified in § 63.7(g) and the notification of compliance status shall include the information specified in § 60.9(h).

5.3.4 The permittee shall continue to performance tests annually to assess compliance with the kiln annual VOC emission limit (in tons/yr) in Section II, Condition 10.14 annually as required by Section II, Condition 10.14.1.

5.4 If the permittee exercises the alternative operating scenario in Condition 5.3, they may at any time revert to the THC compliance option for the kiln, provided that the requirements in Conditions 5.3.1 through 5.3.4 are met, except that the submittal in Condition 5.3.1 shall note the intent to change from the total organic HAP to THC compliance option.

5.5 The facility must, contemporaneously with making a change from one operating scenario to another, maintain records at the facility of the scenario under which it is operating (Colorado Regulation No. 3, Part A, Section IV.A.1). Either electronic or hard copy records are acceptable.

6. Compliance Assurance Monitoring (CAM)

6.1 The following emission points at this facility use a control device to achieve compliance with an emission limitation or standard to which they are subject and have pre-control emissions that exceed or are equivalent to the major source threshold. They are therefore subject to the provisions of the CAM program as set forth in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV:

S001 – Waste Dust Silo; S005 – Raw Materials Dryer; S010 – Raw Material Grinding, S011 – Raw Mill Auxiliary Dust Collector, S012 – Raw Mill Feeders, S016 – Precalciner Kiln; S022 – Kiln Return Dust Silo; S024 - #2 Clinker Silo; S034- #6 Reclaim Feeder; S036 – Finish Mill; S037 – Finish Mill Auxillary Dust Collector; S043 – Cement Storage Silos A10 and A13; S044 – Cement Storage Silo A7; S045 – Cement Finish Silo A2; S046 – Packhouse West (loading spout); S046 - Packhouse East (loading Spout) - S051 – Top of A Frame Transfer; and S066 – Cement Silo A5

CAM requirements are set forth in Section II, Condition 23 of this permit.

SECTION II - Specific Permit Terms

1. P017- Dowe Flats and Lyons Quarry - Fugitive Dust Sources

AIRS pt 017: Blasting (combustion by-product emissions)

AIRs pt 025: Fugitive PM emissions from quarry activities

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	1.1	3,500,000 tons/year 25,000 tons/day		Recordkeeping	Monthly
ANFO	1.2	1,182 tons/year		Recordkeeping	Monthly
PM	1.3	Dowe Flats Quarry Operations - 134.2 tons/ year	See Condition 1.3	Recordkeeping and Calculation	Monthly
PM_{10}		Dowe Flats Quarry Operations - 58.4 tons/year 916 lbs/day			
PM	1.4	Disturbed Areas @ Lyons Quarry - 19.0 tons/year	63.3 lb/acre-mo	Recordkeeping and Calculation	Monthly
PM_{10}		Disturbed Areas @ Lyons Quarry - 9.4 tons/year	31.7 lb/acre-mo		
NO_X	1.5	10.0 tons/year	17 lb/ton ANFO	Recordkeeping and Calculation	Monthly
CO		39.6 tons/year	67 lb/ton ANFO		
Fugitive Emission Control Plan	1.6			Inspection	Weekly
Restrictions on Lyons Quarry	1.7	Lyons - Mining Prohibited		Certification	Annually
Hauling Restrictions	1.8	Number of haul trips shall be limited to 230 per day		Recordkeeping	Daily
Days of Operation	1.9			Recordkeeping	Monthly
Quarry Parameters for Emission Calculations	1.10			Recordkeeping	Monthly

1.1 Total material (includes: topsoil, overburden, limestone, and waste rock) handled shall not exceed the limitations listed in the above summary table (Construction Permit 93BO1414F, as modified under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section IIA.6 and Part C, Section X, to increase the throughput as indicated on the APEN submitted on July 24, 2015 and redlined on August 10, 2015). The quantity of total material handled shall be monitored and recorded monthly. Any information used to determine the monthly quantities of material handled shall be maintained and made available to the Division

upon request. Monthly quantities of materials handled shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

Compliance with the daily limits shall be monitored by dividing the monthly handling rates by the number of days of operation for that month.

1.2 The quantity of ANFO used in blasting shall not exceed the limits listed in the summary table above (Construction Permit 93BO1414F, as modified under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X to include ANFO limits based on requested emissions included on APEN submitted on August 25, 2016). The quantity of ANFO used shall be monitored and recorded monthly. Any information used to determine the monthly quantities of ANFO used shall be maintained and made available to the Division upon request. Monthly quantities of ANFO used shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

1.3 PM and PM_{10} emissions **from the Dowe Flats Quarry** shall not exceed the limits listed in the summary table above (Construction Permit 93BO1414F). Compliance with the annual limits shall be monitored by calculating emissions from each activity monthly using the emission factors in the table below. Monthly emissions from each activity will be summed together and used in a rolling twelve month total to monitor compliance with the annual emission limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

Compliance with the daily emission limits shall be monitored by dividing the monthly emissions by the number of days of operation for that month.

Note that $PM_{2.5}$ emissions are not subject to permit limitations. Therefore monthly emissions of $PM_{2.5}$ shall be used to determine annual (calendar year) emissions for purposes of APEN reporting.

Activity	Uncontrolled Emission Factors				Control Efficiency
	PM	PM_{10}	$PM_{2.5}$	Units	
Drilling	1.6×10^{-4}	8.0×10^{-5}	3.2×10^{-5}	lb/ton	90%
Blasting – Limestone	3.582	1.862	0.107	lb/blast	
Blasting – Waste Rock/OB	5.005	2.602	0.150	lb/blast	
Truck Loading – Limestone Rock	0.0019	8.98×10^{-4}	1.36×10^{-4}	lb/ton	
Truck Unloading – Limestone Rock	0.0019	8.98×10^{-4}	1.36×10^{-4}	lb/ton	
Rock Hauling – Loaded Trucks	23.632	6.671	0.667	lb/VMT	80%
Rock Hauling – Empty Trucks	15.798	4.459	0.446	lb/VMT	80%
Top Soil Removal	0.058	0.029	0.0116	lb/ton	50%
Scraper – Top Soil Loaded	16.826	4.750	0.475	lb/VMT	80%
Scraper - Empty	13.367	3.773	0.377	lb/VMT	80%
Unloading of Topsoil	0.04	0.02	0.008	lb/ton	50%
Grading of Haul Roads	3.527	1.102	0.109	lb/VMT	80%
Bulldozing	9.782	2.066	1.027	lb/hr	

Water Truck	14.508	4.095	0.410	lb/VMT	80%
Disturbed Areas – Wind Erosion	760	380	152	lb/acre-yr	50%

VMT = vehicle miles traveled.

The source of the emission factors and assumptions used to determine the emission factors are included in Appendix H of the permit. If the underlying assumptions change (e.g. truck weight) and result in a more conservative (i.e. higher) emission factor, the source shall use the higher factor and document the reason for the change in the assumption and subsequently the change in the emission factor.

The control efficiencies noted in the above table may be applied to the emission calculations for the specified activity provided that the following requirements are met:

1.3.1 A control efficiency of 90% can be applied to the drilling emission calculations to take credit for the bag collectors required by Condition 1.6.1.8, provided that the drill bag collectors are operated and maintained in accordance with manufacturer's recommendations and good engineering practices. A copy of operating and maintenance procedures, schedules for maintenance and/or inspection and records related to operation and maintenance of the drills and bag collectors and good engineering practices such as records of routine maintenance and/or inspection shall be made available to the Division upon request.

1.3.2 A control efficiency of 50% can be applied to topsoil removal and unloading emission calculations for watering and adequate moisture provided the requirements in Conditions 1.6.1.1 and 1.6.1.3 are met.

1.3.3 A control efficiency of 80% can be applied to the emission calculations for activities related to the haul roads (hauling, grading, scraping and watering) provided the haul roads are watered and chemical stabilizers are applied as required by Condition 1.6.1.7.

1.3.4 A control efficiency of 50% can be applied to the emission calculations for wind erosion from disturbed areas because the quarry is located in a natural bowl depression which provides a wind break.

1.4 PM and PM_{10} emissions **from disturbed areas at the Lyons Quarry** shall not exceed the limits listed in the summary table above (Construction Permit 93BO1414F). Compliance with the annual limits shall be monitored by calculating emissions monthly using the emission factors included in the above summary table (AP-42, Section 11.9 (dated 10/98), Table 11.9-4, wind erosion of exposed areas, converted to pounds and divided by 12) and the size of the exposed area, in the following equation:

$$\text{Tons/month} = \frac{\text{EF (lb/acre-mo)} \times \text{exposed area acreage (acres)}}{\text{2000 lb/ton}}$$

Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual emission limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

The permittee shall maintain documentation indicating how the size of the exposed area used in the above emission calculations was determined for each month.

1.5 NO_X and CO emissions from blasting shall not exceed the limits listed in the summary table above. (Construction Permit 93BO1414F, as modified under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X to include NO_X and CO emission limits requested on APEN submitted on August 25, 2016) Compliance with the monthly limits shall be monitored by calculating emissions monthly using the emission factors in the summary table (AP-42, Section 13.3, dated 2/80 (reformatted 1/95), Table 13.3-1) and the monthly quantity of ANFO used (as required by Condition 1.2). Monthly emissions from each activity will be summed together and used in a rolling twelve month total to monitor compliance with the annual emission limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

1.6 The Dowe Flats Quarry activities are subject to the following fugitive particulate matter requirements.

1.6.1 Every owner or operator of a new source or activity that is subject to this Section III.D. and which is required to obtain an emission permit under Regulation No. 3 shall submit a fugitive particulate emission control plan meeting the requirements of this Section III.D. at such time as, and as part of, the required permit application. Such plan shall be approved or disapproved by the division in the course of acting to approve or disapprove the permit application and no emission permit shall be issued until a fugitive particulate emission control plan has been approved. (Colorado Regulation No. 1, III.D.1.b)

The following approved measures shall be used to control fugitive particulate matter emissions from the Dowe Flats Quarry (Construction Permit 93BO1414F).

A weekly inspection of the site shall be conducted to ensure the emission control measures are in place and effective. The permittee shall maintain records of the weekly inspections and results. In addition, at any time when a fugitive dust problem is observed, the permittee shall take action to correct the problem. The permittee shall maintain records of the date and time of any fugitive dust problem observed, and the type and time of action taken to correct the problem. These records shall be maintained on site for inspection upon request.

1.6.1.1 Adequate soil moisture must be maintained in topsoil and overburden to control emissions during removal.

1.6.1.2 Topsoil and overburden stockpiles shall be reclaimed and revegetated in

accordance with the Mined Land Reclamation Bureau (MLRB) permit conditions. Open acreage (mine pits and stockpiles) shall be minimized and in no circumstances shall they be in excess of MLRB or APCD permits, whichever is more restrictive. (Construction Permit 93BO1414F, Attachment A, as modified per Section 1, Condition 1.3 of this permit).

1.6.1.3 Emissions from material handling (i.e. removal, loading, and hauling) shall be controlled by watering at all times, except during below-freezing temperatures, unless natural moisture is sufficient to control emissions. A water application system (such as a sprinkler system or water truck) shall be operated to wet muck piles prior to loading, hauling and crushing. (Construction Permit 93BO1414F, Attachment A, as modified per Section 1, Condition 1.3 of this permit)

1.6.1.4 Spillages and accumulations of particulate matter shall be cleaned up and shall be managed to insure they do not contribute to fugitive emissions during operation. (Construction Permit 93BO1414F, Attachment A, as modified per Section 1, Condition 1.3 of this permit)

1.6.1.5 Activities causing fugitive dust emissions shall be suspended when wind speeds reach or exceed 30 miles per hour, averaged over a 60-minute period. Only those activities affected by wind speed, and for which it is possible to "suspend operation" need be shut down (i.e., the permittee cannot "shut down" storage piles, thus this condition would not apply to storage piles). Activities may continue when the average wind speed drops below 30 m.p.h. (Construction Permit 93BO1414F, Attachment A, as modified per Section I, Condition 1.3 of this permit)

The permittee shall install, calibrate, and operate a wind speed instrument which will be used to alert personnel when average wind speeds reach or exceed 30 m.p.h. The permittee shall maintain records of those dates and times when wind speed reaches or exceeds 30 m.p.h, averaged over a sixty minute period.

1.6.1.6 Vehicle speed on unpaved roads and disturbed areas shall not exceed a maximum of 35 m.p.h. Speed limit signs shall be posted.

1.6.1.7 Unpaved haul roads shall be treated with chemical dust suppressants to maintain a surface crust, and watered, as often as needed to control fugitive particulate emissions.

Records of application of dust suppressants shall be maintained on site for inspection upon request.

1.6.1.8 Drills shall be equipped with bag collectors to control emissions.

1.6.1.9 Sequential blasting shall be employed.

1.6.1.10 Reclamation work and sequential extraction of material shall be initiated

to keep the total disturbed areas at any one time to a minimum.

1.6.1.11 The permittee shall maintain a copy of the facility's Mining and Reclamation plan (as submitted and approved by the Colorado Department of Minerals and Geology - Mine, Land, and Reclamation Division) on site for Division inspection upon request. (Construction Permit 93BO1414F, Attachment A, as modified for clarification per Section 1, Condition 1.3 of this permit)

1.6.1.12 The permittee will postpone the loading of explosives if the wind speed is forecasted to be greater than 20 miles per hour at the time of the planned blast. (As provided for in Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate Compliance Order on Consent 2002-124, paragraph 38.b. The COC, at paragraph 46 requires this requirement to be in the permit.)

1.6.1.13 The permittee will record the actual blast with a video camera, which is to be positioned such that the entire blast and emissions can be recorded on the camera. Each recorded blast shall capture the detonation and the tracking of the ensuing dust plume until the plume's opacity dissipates to less than 5% opacity. The video record will be kept on site and made available upon request. (As provided for in Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate Compliance Order on Consent 2002-124, paragraph 38.c. The COC, at paragraph 46 requires this requirement to be in the permit.)

1.6.2 If the division determines that a source of activity which is subject to this Section III.D. (whether new or existing) is operating with emissions in excess of 20% opacity and such source is subject to the 20% emission limitation guideline; or if it determines that the source or activity which is subject to this Section III.D. is operating with visible emissions that are being transported off the property on which the source is located and such source is subject is to the no off property transport emission limitation guideline; or if it determines that any source or activity which is subject to this Section III.D. is operating with emissions that create a nuisance; it shall require the owner or operator of that source or activity to submit a written plan to the division for the control of fugitive particulate emissions within the time period specified in Section III.D. Provided, however, that in the case of a source or activity which already has a control plan, the division shall review said control plan and if it determines the plan does not meet the requirements of this Section III.D. it shall require the submission of a revised control plan. (Colorado Regulation No. 1, Section II.D.1.c)

The guidelines that apply to the activities at the Dowe Flats Quarry are as follows:

1.6.2.1 Storage and Handling of Materials – Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to storage and

handling operations. (Colorado Regulation No. III.D.2.c.(iii))

1.6.2.2 Mining Activities, including mined land reclamations - Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to mining activities' except that with respect to sources or activities associated with mining for which there are separate requirements set forth in this regulation, the emission limitation guidelines there specified as applicable to such sources and activities shall apply. (Colorado Regulation No. 1, Section III.D.2.d.(iii))

1.6.2.3 Haul Roads - The no off-property transport emission limitation guideline shall apply to on-site haul roads (i.e., those located on and abutted by the property owned or under control of the owner or operator of the haul road) and the nuisance guideline shall apply to off-site haul roads (i.e., those abutted on both sides by property not owned or under the control of the owner or operator of the haul road). (Colorado Regulation No. 1, Section III.D.2.e.(iii))

1.6.2.4 Haul Trucks - The no off-property transport emission limitation guideline shall apply to haul trucks; except that when operating off the property of the owner or operator, the applicable guideline shall be no off-vehicle transport of visible emissions. (Colorado Regulation No. 1, Section III.D.2.f.(iii))

1.6.2.5 Blasting Activities - Only the no off-property transport emission limitation guideline shall apply to blasting activities. (Colorado Regulation No. 1, Section III.D.2.i.(iii))

1.6.2.6 As used herein, "nuisance" shall mean the emission of fugitive particulates that constitutes a private or public nuisance as defined in common law, the essence of which is that such emissions are unreasonable interfering with another person's use and enjoyment of his property. Such interference must be "substantial" in its nature as measured by a standard that it would be of definite offensiveness, inconvenience, or annoyance to a normal person in the community. (Colorado Regulation No. 1, Section III.D.1.c)

1.6.2.7 The 20% opacity, no off-property transport, and nuisance emission limitation guidelines of this Section III.D. (as included in Conditions 1.6.2.1 through 1.6.2.5) are not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 1973, 25-7-115 as amended. (Colorado Regulation No. 1, Section III.D.1.e.(iii))

1.6.3 In the event that a revised control plan is requested under the provisions of Condition 1.6.2, the following apply:

1.6.3.1 Sources required to submit control plans for revisions to the division shall do so within sixty days of the date such plan or revision is requested; provided, however, that the division, in its discretion, may where

appropriate establish a different time period for submittal, taking into consideration such factors as the duration of the operation of the source or activity, the significance and nature of the emissions, and the relative complexity of the operation and applicable control methods. (Colorado Regulation No. 1, Section III.D.1.d.(ii))

1.6.3.2 Each control plan shall include all available practical methods which are technologically feasible and economically reasonable and which reduce, prevent and control fugitive particulate emissions from the source or activity into the atmosphere. For those materials, equipment, services or other resources (such as water for abatement and control purposes), which are likely to be scarce at any given time, an alternative control method must be included in the control plan. Any source required to submit a control plan may ask for a "control plan conference" with the division, and if so requested the division shall hold such a conference for the purpose of advising what types of control measures and/or operating procedures will meet the requirements of this section. (Colorado Regulation No. 1, Section III.D.1.d.(iii))

1.6.3.3 The division shall approve any plan submitted under this Section III.D. unless the division determines that the plan does not meet the requirements of Section III.D. If a control plan is not approvable in its entirety, the division shall approve those portions, which meet the requirements of this section and disapprove those portions, which fail to meet the requirements of this section. (Colorado Regulation No. 1, Section III.D.1.d.(iv))

1.6.4 It shall be a violation of this regulation (Colorado Regulation No. 1) and the division may take enforcement action pursuant to C.R.S. 1973, 25-7-115, as amended, if the owner or operator:

1.6.4.1 Fails to submit a control plan (or revision of an existing plan) within sixty days (or other time period specified by the division) after being notified by the division that such submittal is required unless operation of such source is discontinued so as to permanently eliminate the cause of fugitive particulate emissions there from (Colorado Regulation No. 1, Section III.D.1.e.(i)); or

1.6.4.2 Owns or operates a source or activity for which the division has disapproved a control plan or a revised control plan unless operation of such source is discontinued so as to permanently eliminate the cause of fugitive particulate emissions there from (Colorado Regulation No. 1, Section III.D.1.e.(ii)); or

1.6.4.3 Fails to comply with the provisions of an approved control plan. (Colorado Regulation No. 1, Section III.D.1.e.(iii)) The provisions of the approved control plan for these sources are found in Condition 1.6.1.

1.7 There shall be no mining of limestone/raw materials or overburden materials at the Lyons Quarry. Reclamation activities and cement kiln dust disposal (as permitted under Section II, Condition 13 of this permit) are allowed in the Lyons Quarry. (Construction Permit 93BO1414F)

1.8 The number of haul truck trips shall be limited to 230 trips per day. The daily number of haul truck trips shall be monitored and recorded daily in order to monitor compliance with the daily limitation. Logs, reports and/or other information used to record and/or determine the hours of daily number of haul trips shall be maintained and made available to the Division upon request.

1.9 Days of operation for the Dowe Flats Quarry activities shall be monitored and recorded monthly. Days of operation shall be used to determine daily throughput and emissions as specified in Conditions 1.1 and 1.3

1.10 The following quarry parameter information shall be monitored and recorded monthly for use in the emission calculations required by Condition 1.3:

1.10.1 The number of blasts. Information recorded for the blasts each month shall indicate whether blasts are conducted on limestone or waste rock/overburden.

1.10.2 The number of hours the bulldozer is operated.

1.10.3 The number of vehicle miles traveled (VMT). VMT shall be determined for all vehicles used for hauling, scraping, grading and watering.

Logs, reports and/or other information used to record and/or determine the information in this Condition 1.10 shall be maintained and made available to the Division upon request.

2. P017- Dowe Flats Quarry – Point Source Emissions

AIRs pt 027: S055, Primary Crusher (Quarry)

AIRS pt 026: S056 – S064 - Belt Conveyor, Radial Stacker to Stockpiles

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	2.1	1,050,000 tons/year		Recordkeeping	Monthly
NSPS OOO Requirements	2.2	PM – 0.05 gram per dry standard cubic meter Opacity – shall not exceed 7% (PM and opacity limits apply to each stack)		Performance Test Baghouse Operation and Maintenance Visible Emission Observation Method 9 Observation	Every Five (5) Years See Condition 2.2.5 Daily Semi-annually
PM	2.3	0.16 tons/year	Crusher: 0.020 lb/ton* Conveyor: 0.00124 lb/ton* (total for all transfer points)	Recordkeeping and Calculation Performance Test	Monthly Every Five (5) Years
PM_{10}	2.3	0.07 tons/year	Crusher: 0.009 lb/ton* Conveyor: 0.00059 lb/ton* (total for all transfer points)	Baghouse Operation and Maintenance	See Condition 2.2.5
Opacity	2.4	Shall not exceed 20%, except as provided for below		Visible Emission Observation Method 9	Daily If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions - Shall not exceed 30%		Baghouse Operation and Maintenance	See Condition 2.2.5
Performance Testing	2.5			EPA Test Methods	Every Five (5) Years
NSPS General Provisions	2.6			See Condition 2.6	

*A control efficiency of 98.6% may be applied as provided for in Condition 2.3.

2.1 Processing and conveying of raw materials at the crusher and conveyor system shall not exceed the limitation listed in the above summary table (Construction Permit 94BO593). The quantity of raw materials processed and conveyed shall be monitored and recorded monthly. Any

information used to determine the monthly quantities of material processed shall be maintained and made available to the Division upon request. Monthly quantities of materials processed and conveyed shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

2.2 The crusher and the conveyor are subject to the provisions of 40 CFR Part 60, Subpart OOO, Standards of Performance for Non-Metallic Mineral Processing Plants, as adopted by reference in Colorado Regulation No. 6, Part A, as follows:

The requirements below reflect the current rule language as of the revisions to 40 CFR Part 60 Subpart OOO published in the Federal Register on April 28, 2009. However, if revisions to this Subpart are published at a later date, the owner or operator is subject to the requirements contained in the revised version of 40 CFR Part 60, Subpart OOO.

Applicability and Designation of Affected Facility (§ 60.670)

2.2.1 When an existing facility is replaced by a piece of equipment of equal or smaller size, as defined in §60.671, having the same function as the existing facility, and there is no increase in the amount of emissions, the new facility is exempt from the provisions of §§60.672, 60.674, and 60.675 except as provided for in 60.670(d)(3) (Condition 2.2.1.2). (60.670(d)(1))

2.2.1.1 An owner or operator complying with 60.670(d)(1) (Condition 2.2.1) shall submit the information required in §60.676(a) (Condition 2.2.4). (60.680(d)(2))

2.2.1.2 An owner or operator replacing all existing facilities in a production line with new facilities does not qualify for the exemption described in 60.670(d)(1) (Condition 2.2.1) and must comply with the provisions of §§60.672, 60.674 and 60.675. (60.670(d)(3))

Standards for Particulate Matter (§ 60.672)

2.2.2 The requirements in Table 2 of this subpart apply for affected facilities with capture systems used to capture and transport particulate matter to a control device. (60.672(a), excluding the first sentence since equipment has been operating for more than 180 days) The provisions in Table 2 that apply to these sources are as follows:

2.2.2.1 Particulate matter (PM) emissions shall not exceed 0.05 grams per dry standard cubic meter (0.022 grains per dry standard cubic feet).

2.2.2.2 Opacity emissions shall not exceed 7%.

This opacity standard applies at all times except during periods of startup, shutdown and malfunction (§ 60.11(c)).

2.2.3 Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this section. (60.672(d))

Reporting and Recordkeeping (§ 60.676)

2.2.4 Each owner or operator seeking to comply with §60.670(d) (Condition 2.2.1) shall submit to the Administrator the information in 60.676(a) about the existing facility being replaced and the replacement piece of equipment. (60.676(a))

Compliance with the emission limitations in Condition 2.2.2 shall be monitored as follows:

2.2.5 The baghouses shall be operated and maintained in accordance with the requirements in Condition 19.

2.2.6 Compliance with the particulate matter limits in Condition 2.2.2.1 shall be monitored by conducting performance tests in accordance with the requirements in Condition 2.5.

2.2.7 Compliance with the opacity requirement in Condition 2.2.2.2 shall be monitored as follows:

2.2.7.1 Daily visible emission observations shall be conducted in accordance with the requirements in Condition 16.

2.2.7.2 A six (6) minute EPA Method 9 opacity observation shall be conducted semi-annually for the primary crusher baghouse and one representative baghouse for the conveyor. Semi-annual opacity observations shall be separated by at least four (4) months.

A different conveyor baghouse shall be tested during each semi-annual Method 9 observation, unless Division approval has been received to test a baghouse that has already been tested. Once Method 9 observations required under this permit condition have been conducted on all conveyor baghouses, the permittee shall repeat the process of testing a different conveyor baghouse during each semi-annual test event.

2.2.7.3 Subject to the provisions of C.R.S. 15-7-123 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

2.2.7.4 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certificate shall be kept on site and made available to the Division upon request.

2.3 PM and PM_{10} emissions shall not exceed the limits listed in the above summary table (Construction Permit 94BO593, as modified under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X to correct PM emission limit in order to reflect emission factors and throughput limit). Compliance with the emission limitations shall be monitored as follows:

2.3.1 Monthly emissions shall be calculated by the end of the subsequent month using the emission factors in the above summary table (from 94BO593 construction permit analysis) in the following equation:

$$\text{Tons/mo} = \frac{\text{EF (lbs/ton) x material conveyed or crushed (tons/mo)}}{\text{2000 lbs/ton}}$$

Note that if the baghouses are operated and maintained in accordance with the requirements in Condition 19 a control efficiency of 98.6 % may be used in the above calculation for the enclosed conveyor baghouses and the crusher baghouse.

Monthly emissions from the crusher and conveyor shall be summed together and used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month rolling total shall be calculated using the previous twelve months' data. Records of emission calculations shall be maintained and made available to the Division upon request.

2.3.2 Performance tests shall be conducted in accordance with the requirements in Condition 2.5.

2.3.3 The baghouses shall be operated and maintained in accordance with the requirements in Condition 19.

2.4 These sources are subject to the Colorado Regulation No. 1 opacity limits set forth in Condition 20 of this permit.

2.5 Performance tests shall be conducted every five (5) years to measure the emission rates of filterable PM and PM_{10} emissions in order to monitor compliance with the emission limitations in Conditions 2.2.2.1 and 2.3. Performance tests shall be conducted in accordance with the appropriate EPA Test Methods and the requirements in § 60.675 (for the PM limits in Condition 2.2.2.1).

Performance tests shall be conducted on the primary crusher baghouse stack and one representative baghouse stack for the conveyor. A different conveyor baghouse shall be tested during each five year test event, unless Division approval has been received to test a baghouse that has already been tested. Once performance tests required under this permit condition have been conducted on all conveyor baghouses, the permittee shall repeat the process of testing a different conveyor baghouse during each five year test event.

Note that performance tests were conducted June 4 – 6 2013 on the primary crusher and a representative conveyor baghouse.

For purposes of assessing compliance with the annual emission limitations in Condition 2.3, the results of the tests shall be converted to a lb/hr basis and used in the following equations:

PM = crusher test result (lb/hr) x 8,064 hrs/yr + 8 x conveyor test result (lb/hr) x 8,064 hrs/yr

PM_{10} = crusher test result (lb/hr) x 8,064 hrs/yr + 8 x conveyor test result (lb/hr) x 8,064 hrs/yr

The throughput rate (tons/hr) of the equipment shall be recorded during the performance test and shall be used in conjunction with the test results to determine the emission factor (lb/ton), which will be compared to the emission factors specified in the permit. If the performance test shows that the PM and/or PM_{10} emission rates/factors are greater than the relevant ones set forth in the permit, and in the absence of subsequent testing results to the contrary (as approved by the Division), the permittee shall apply for a modification to this permit to reflect, at a minimum, the higher emission rate/factor within 60 days of the completion of the test.

Note that the emission factors listed in the permit represent uncontrolled emissions, thus the controlled emission factors for the above analysis are as follows: Crusher: PM = 2.8×10^{-4} lb/ton, PM_{10} – 1.26×10^{-4} lb/ton, Conveyor (total for transfer points): PM – 1.74×10^{-5} lb/ton, PM_{10} = 8.26×10^{-6} lb/ton. Note that the emission factor for the conveyor is for all eight baghouses, thus the emission rates/factors determined for the representative conveyor baghouse must be multiplied by 8 and then compared to the controlled emission rates/factors.

A stack testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior The test protocol, test, and test report must be in accordance with the requirements of the APCD Compliance Test Manual (https://www.colorado.gov/pacific/cdphe/inspections-and-enforcement). A stack testing protocol shall be submitted for Division approval at least forty-five (45) calendar days prior to any performance of the test required under this condition. No stack test required herein shall be performed without prior approval of the protocol by the Division. The Division reserves the right to witness the test. In order to facilitate the Division's ability to make plans to witness the test, notice of the date(s) for the stack test shall be submitted to the Division at least thirty (30) calendar days prior to the test. The Division may for good cause shown, waive this thirty (30) day notice requirement. In instances when a scheduling conflict is presented, the Division shall immediately contact the permittee in order to explore the possibility of making modifications to the stack test schedule. The compliance test results shall be submitted to the Division within forty-five (45) calendar days of the completion of the test unless a longer period is approved by the Division.

2.6 These sources are subject to 40 CFR Part 60, Subpart A - General Provisions, as adopted by reference in Colorado Regulation No. 6, Part A. Specifically, these units are subject to the following requirements:

2.6.1 No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. (§ 60.12)

2.6.2 At all times, including periods of startup, shutdown, and malfunction owners and operators shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source. (§ 60.11(d))

2.6.3 Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (§ 60.7(b))

3. P000 – Raw Material Storage and Handling at Plant Site

AIRS pt 024: Discharge of Primary-Crushed Raw Materials onto Open Stockpile and S009 - Front End Loader Activity

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	3.1	Front End Loaders: 1,050,000 tons/year 4,170 tons/day* Iron Containing Material: 50,000 tons/year		Recordkeeping	Monthly
PM	3.2	15.5 tons/year	Front End Loader: 0.0282 lb PM/ton 0.0127 lb PM_{10}/ton	Recordkeeping and Calculation	Monthly
PM_{10}		7.0 tons/year 53.00 lbs/day			
Days of Operation	3.3			Recordkeeping	Monthly
Opacity	3.4	Shall not exceed 20%, except as provided for below		Visible Emission Observation Method 9	Daily If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions - Shall not exceed 30%		Baghouse Operation and Maintenance	See Condition 19
PM Emission Control Plan	3.5			Inspection	Weekly

*daily limit addresses all materials, including iron containing material.

3.1 Process rates shall not exceed the rates listed in the above summary table (Construction Permit 98BO0292, as modified under the provisions of Section I, Condition 1.3 to reduce the daily throughput limit to a level where compliance with the daily PM_{10} limit is ensured based on the PM_{10} emission factor). The quantity of materials processed shall be monitored and recorded monthly. Any information used to determine the monthly quantities of materials processed shall be maintained and made available to the Division upon request. Monthly quantities of materials processed shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month rolling total shall be calculated using the previous twelve months data.

Compliance with the daily throughput limit shall be monitored by dividing monthly quantity of materials handled by the number of days of operation for that month.

3.2 PM and PM_{10} emissions shall not exceed the limits listed in the above summary table (Construction Permit 98BO0292). Compliance with the emission limitations shall be monitored by calculating monthly emissions using the emission factors in the above summary table (from permit notes in Construction Permit 98BO0292, initial approval, modification 2, issued June 19, 2006) in the following equation:

$$\text{Tons/mo} = \frac{\text{EF (lbs/ton) x material processed (tons/mo)}}{\text{2000 lbs/ton}}$$

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data. Records of emission calculations shall be maintained and made available to the Division upon request.

Compliance with the daily emission limit shall be monitored by dividing the monthly emissions by the number of days of operation for that month.

3.3 Days of operation for these activities shall be monitored and recorded monthly. Day of operation shall be used to determine daily throughput and emissions as specified in Conditions 3.1 and 3.2.

3.4 These sources, except for Front End Loader Activity, are subject to the opacity limits set forth in Condition 20 of this permit.

3.5 These sources are subject to the following fugitive particulate matter requirements.

3.5.1 Every owner or operator of a new source or activity that is subject to this Section III.D. and which is required to obtain an emission permit under Regulation No. 3 shall submit a fugitive particulate emission control plan meeting the requirements of this Section III.D. at such time as, and as part of, the required permit application. Such plan shall be approved or disapproved by the division in the course of acting to approve or disapprove the permit application and no emission permit shall be issued until a fugitive particulate emission control plan has been approved. (Colorado Regulation No. 1, III.D.1.b)

The following approved measures shall be used to control fugitive particulate matter emissions from these sources (Construction Permit 98BO0292).

A weekly inspection of the site shall be conducted to ensure the emission control elements are in place and effective. In addition, at any time when a fugitive dust problem is observed, the permittee shall take action to correct the problem. The permittee shall maintain records of the date and time of any fugitive dust problem observed, and the type and time of action taken to correct the problem. These records shall be maintained on site for inspection upon request.

3.5.1.1 Height of discharge from the stacker belt shall be adjusted to minimize the drop height. Water spray bars shall be used if the natural surface moisture is insufficient to limit opacity to less than 10 percent.

3.5.1.2 Transfer points shall be enclosed and maintained under negative pressure.

3.5.1.3 Moisture content of the materials handled by front-end loaders shall be adequate to effectively control the emissions. (Construction Permit 98BO0292, as modified according to Section I, Condition 1.3 of this permit)

3.5.1.4 When feeding the primary crusher at the plant, material drop height from the front-end loaders shall be minimized. (Construction Permit 98BO0292, as modified per Section 1, Condition 1.3 of this permit)

3.5.1.5 The stockpile work area on which the front-end loaders operate shall be treated with chemical dust suppressants and/or water to minimize the generation of fugitive emissions. (Construction Permit 98BO0292, as modified per Section 1, Condition 1.3 of this permit)

3.5.1.6 Paved travel areas used by the front-end loader shall be regularly swept with a high efficiency industrial sweeper to minimize material buildups. In addition, these areas will be watered as necessary and vehicle traffic suspended or rerouted to minimize fugitive emissions if fugitive emissions become a concern. (Construction Permit 98BO0292, as modified per Section 1, Condition 1.3 of this permit)

3.5.1.7 Front end loader and hauling activities shall be suspended when the wind speed reaches or exceeds 30 m.p.h., averaged over a 60-minute period. Activities may continue when the average wind speed drops below 30 m.p.h. (Construction Permit 98BO0292, as modified per Section 1, Condition 1.3 of this permit)

The permittee shall install, calibrate, and operate a wind speed instrument which will be used to alert personnel when wind speeds reach or exceed 30 m.p.h. The permittee shall maintain records of those dates and times when wind speed reaches or exceeds 30 m.p.h, averaged over a sixty minute period.

3.5.2 If the division determines that a source of activity which is subject to this Section III.D. (whether new or existing) is operating with emissions in excess of 20% opacity and such source is subject to the 20% emission limitation guideline; or if it determines that the source or activity which is subject to this Section III.D. is operating with visible emissions that are being transported off the property on which the source is located and such source is subject is to the no off property transport emission limitation guideline; or if it determines that any source or activity which is subject to this Section III.D. is operating with emissions that create a nuisance; it shall require the owner or operator of that source or activity to submit a written plan to the

division for the control of fugitive particulate emissions within the time period specified in Section III.D. Provided, however, that in the case of a source or activity which already has a control plan, the division shall review said control plan and if it determines the plan does not meet the requirements of this Section III.D. it shall require the submission of a revised control plan. (Colorado Regulation No. 1, Section II.D.1.c)

The guidelines that apply to the activities at these sources are as follows:

3.5.2.1 Storage and Handling of Materials – Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to storage and handling operations. (Colorado Regulation No. III.D.2.c.(iii))

3.5.2.2 The 20% opacity, no off-property transport, and nuisance emission limitation guidelines of this Section III.D. (as included in Condition 3.5.2.1) are not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 1973, 25-7-115 as amended. (Colorado Regulation No. 1, Section III.D.1.e.(iii))

3.5.3 In the event that a revised control plan is requested under the provisions of Condition 3.5.2, the requirements in Condition 1.6.3 shall be met.

3.5.4 Violations of these fugitive particulate matter requirements and potential Division enforcement action related to those violations are defined in Condition 1.6.4.

4. P001 – Primary Crusher (Plant Site)

AIRs pt 001: S002 - Primary Crusher (Plant Site) and S004 – Surge Silo

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	4.1			Recordkeeping	Annually
PM & PM_{10}	4.2		PM & PM_{10}: Crusher: 0.001 lb/ton Surge Silo: 2.9 x 10^{-5} lb/ton	Recordkeeping and Calculation	Annually
PM	4.3	See Condition 4.3		Baghouse Maintenance and Operation	See Condition 19
Opacity	4.4	Shall not exceed 20%, except as provided for below		Visible Emission Observation Method 9	Daily If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions – Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Baghouse Maintenance and Operation	See Condition 19

4.1 Raw materials processed through these sources shall be monitored and recorded annually. Any information used to determine the annual quantity of materials processed shall be maintained and made available to the Division upon request.

4.2 Annual emissions for purposes of APEN reporting and the payment of annual fees shall be estimated using the annual raw materials processed, as required by Condition 4.1, and the emission factors listed in the above summary table (AP-42, Section 11.6, dated January 1995, Table 11.6-4) in the following equation:

$$\text{Tons/yr} = \frac{[\text{EF (lb/ton)} \times \text{annual material processed (ton/yr)}]}{2000 \text{ lb/ton}}$$

The emission factors included in the above summary table account for baghouse control.

4.3 No owner or operator of a manufacturing process unit shall cause or permit emission of any particulate matter into the atmosphere during any consecutive sixty minute period which is in excess of the following. (Colorado Regulation No. 1, III.C.1)

4.3.1 For process equipment having design rates of greater than 30 tons per hour, the allowable emission rate shall be determined by use of the equation (Colorado Regulation No. 1, III.C.1.b):

$$E = 17.31 (P)^{0.16}$$

Where:

E is the allowable particulate emissions in lbs/hr.
P is the process weight rate in tons/hr

In absence of evidence to the contrary, compliance with the PM limit is presumed provided the baghouses are operated and maintained in accordance with the requirements specified in Condition 19.

4.4 These sources are subject to the opacity limits set forth in Condition 20 of this permit.

5. P002 - Raw Materials Drying

AIRs pt 002: S005 Raw Materials Dryer

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Operating Hours	5.1	7,000 hours/year		Recordkeeping	Monthly
Dryer Feed	5.2	1,050,000 tons/year 160 tons/hour			
Coal	5.3	1.4 tons/hour			
Dryer Heat Input	5.4	210,000 MMBtu/year		Recordkeeping	Monthly
Btu Content of Fuel	5.5			Fuel Sampling	See Condition 5.5
PM	5.6	22.8 tons/year	See Condition 5.6.3.	Performance Test	From Annually to Every Five (5) Years (See Condition 5.6.2
				Recordkeeping and Calculation	Monthly
PM_{10}		22.8 tons/year and 6.5 lbs/hour		Baghouse Maintenance and Operation	See Condition 5.6.1
				CAM	See Condition 5.6.4.
SO_2	5.7	36.7 tons/year	See Condition 5.7.2	Performance Test	VOC: Every Thirty (30) Months Other Pollutants: Every Five (5) years
NO_x		13.9 tons/year			
CO		57.3 tons/year		Recordkeeping and Calculation	Monthly
Lead		1.6 tons/year			
VOC		144.8 tons/yr			
Opacity	5.8	Shall not exceed 20%, except as provided for below		Visible Emission Observation Method 9	Daily If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions - Shall not exceed 30%		Baghouse Maintenance and Operation	See Condition 19
RACT – VOC	5.9	Process Design		Certification	Annually

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
NSPS Subpart F Opacity	5.10	Less than 10%		Method 22	Monthly to Annually
CAM	5.11	See Condition 23			
MACT Requirements	5.12			See 40 CFR Part 63 Subpart LLL (Condition 22)	
		Total Organic HAP – 12 ppmvd[1]		Performance Test THC CPMS	Every 30 Months 30-Day Rolling Average
		O & M Plan Requirements		See Conditions 22.10 and 22.11.	
Regional Haze Requirements	5.13	NO_X - 13.9 tons/year SO_2 - 36.7 tons/year		Performance Test Recordkeeping and Calculation	Every Five (5) years Monthly

[1]Compliance with the THC limit (24 ppmvd) is provided as an alternative operating scenario in Section I, Condition 5.1.

5.1 Annual operating hours shall not exceed the limits listed in the above summary table. (Construction Permit 12BO444-1, revised in accordance with Section I, Condition 1.3 of this permit). Dryer operating hours shall be monitored and recorded monthly. Monthly hours of operation shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month rolling total shall be calculated using the previous twelve months data.

5.2 Annual and hourly feed rates shall not exceed the limits listed in the above summary table (Construction Permit 12BO444-1, revised in accordance with Section I, Condition 1.3 of this permit).). The quantity of feed material to the dryer shall be monitored and recorded monthly. Any information used to determine the monthly quantities of feed material to the dryer shall be maintained and made available to the division upon request. Monthly quantities of feed material to the dryer shall be used in a twelve month rolling total to monitor compliance with the annual limitation. Each month a new twelve month rolling total shall be calculated using the previous twelve months data.

Compliance with the hourly dryer feed limit shall be monitored by dividing the monthly quantities of dryer feed by the hours the dryer operated for that month.

5.3 The terms and conditions of this permit are based on the dryer using natural gas as the primary fuel. Coal may be used as a backup fuel during emergencies and natural gas curtailments. The Division shall be notified, in writing, within seven (7) calendar days of the start of coal use. Records of the amounts of coal burned and the duration of the combustion must be maintained. (Construction Permit 12BO444-1)

The quantity of coal burned shall be included in monitoring compliance with the heat input limit as specified in Condition 5.4. Compliance with the hourly coal consumption limit shall be

determined by dividing the monthly amount of coal burned by the number of hours coal was burned during the month.

5.4 Dryer heat input shall not exceed the limitation listed in the above summary table. (Construction Permit 12BO444-1) The quantity of fuel burned in the dryer shall be monitored and recorded monthly. Monthly quantities of fuel burned shall be converted to units of MMBtu based on the heat content for each fuel as determined in Condition 5.5. Monthly heat input shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be determined using the previous twelve months' data. Records of the twelve month totals shall be maintained and made available to the Division for inspection upon request.

5.5 The Btu content of the fuel burned in the dryer shall be determined as follows:

5.5.1 The heat content of the natural gas shall be determined semi-annually using ASTM Methods or equivalent if approved in advance by the Division.

5.5.2 If coal is used as a fuel, each shipment of coal shall be sampled to determine the heat content and weight percent sulfur, using the appropriate ASTM methods, or equivalent if approved in advance by the Division. In lieu of sampling, vendor data may used to determine the heat content and weight percent sulfur provided that the sampling and analysis was performed using the appropriate ASTM methods.

5.6 PM and PM_{10} emissions shall not exceed the limits listed in the above summary table (Colorado Regulation No. 3, Part E, Section IV.A.2 (for PM) and Construction Permit 12BO444-1 (for PM_{10})). Compliance with the PM emission limits shall be monitored as follows:

5.6.1 Baghouses shall be operated and maintained in accordance with the requirements in Condition 19.

5.6.2 Within 60 days of the compliance deadline specified in Condition 5.13.2 (April 17, 2014), the owner/operator shall conduct a stack test to measure particulate emissions in accordance with the requirements and procedures set forth in EPA Test Method 5, 5B, 5D or 17, as appropriate, as set forth in 40 CFR Part 60, Appendix A. Stack testing for particulate matter shall be performed annually, except that: (1) if any test results indicate emissions are less than or equal to 50% of the emission limit, another test is required within five years; (2) if any test results indicate emissions are more than 50%, but less than or equal to 75% of the emission limit, another test is required within three years; and (3) if any test results indicate emissions are greater than 75% of the emission limit, an annual test is required until the provisions of (1) or (2) are met. Each test shall consist of three test runs, with each run at least 60 minutes in duration. (Colorado Regulation No. 3, Part E, Section VII.C.3)

The protocol, test notification and submittal of test report shall meet the requirements specified in Condition 21.

Tests shall be performed using natural gas (the primary fuel). However, if coal is used for 45 days or more during any calendar year, stack testing shall be performed according to Condition 21 of this permit. This shall be a one-time test.

For purposes of assessing compliance with the annual emission limitations, the results of the test shall be converted to a lb/hr basis and multiplied by the allowable operating hours in the year (7,000 hrs/yr). Compliance with the daily PM_{10} emission limit shall be assessed by comparing the lb/hr PM_{10} emission rate from the test to the limit.

5.6.3 In addition, to the stack tests described above (Condition 5.6.2), compliance with the annual limitations (ton/yr limits) applicable to the CEMEX dryer shall be monitored by calculating emissions monthly using the emission factors (in lb/hr) determined from the most recent Division-approved stack test and hours of operation for the month (see Condition 5.1). Monthly emissions shall be calculated by the end of the subsequent month and used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous 12 months' data. (Colorado Regulation No. 3, Part E, Section VII.C.3)

Pollutant	Fuel	Emission Factor	Source
PM[1]	Natural Gas	0.84 lb/hr	May 2013 stack test (natural gas used as fuel)
PM_{10}[1]	Natural Gas	0.11 lb/hr	
PM[2]	Coal	2.64 lb/hr	1988 stack test (coal used as fuel)
PM_{10}[2]	Coal	2.64 lb/hr	

[1]The emission factors in this table represent the emission factors from the most recent stack test. The permittee shall use emission factors from the most recent stack test to calculate emissions proceeding the test.
[2]These emission factors shall be used in the event that a stack test is not required for burning coal. If a stack test is conducted for coal burning, emission factors from that test shall be used in lieu of these factors.

Compliance with the hourly PM_{10} emission limitation shall be monitored by dividing the monthly emissions by the number of hours the dryer operated for that month.

5.6.4 In addition to the stack tests described above (Condition 5.6.2), the owner/operator shall monitor compliance with the particulate matter limits in accordance with the applicable compliance assurance monitoring plan developed and approved in accordance with 40 CFR Part 64. (Colorado Regulation No.3, Part E, Section VII.C.3) The compliance assurance monitoring requirements are specified in Condition 5.11 and the compliance assurance monitoring plan is included in Appendix G of this permit.

5.7 SO_2, NO_X, CO, VOC and lead emissions shall not exceed the limits listed in the above summary table (Construction Permit 12BO444-1). Compliance with the emission limits shall be monitored as follows:

5.7.1 Performance testing for lead, sulfur dioxide, nitrogen oxides, carbon monoxide, and volatile organic compounds shall be performed in accordance with the requirements and procedures set forth in the appropriate EPA Test Methods.

Frequency of testing shall be every thirty (30) months for VOC and every five (5) years for lead, sulfur dioxide, nitrogen oxides and carbon monoxide.

Note that performance tests for SO_2, NO_X, CO, VOC and lead emissions were last conducted in June 2016.

Tests shall be performed under natural gas combustion conditions, however, tests shall be performed under coal combustion conditions if a test as described under Condition 5.6.2 is required (a one-time coal test is required, if applicable).

For purposes of assessing compliance with the annual emission limitations, the results of the tests shall be converted to a lb/hr basis and multiplied by the allowable operating hours in the year (7,000 hrs/yr).

A stack testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior The test protocol, test, and test report must be in accordance with the requirements of the APCD Compliance Test Manual (https://www.colorado.gov/pacific/cdphe/inspections-and-enforcement). A stack testing protocol shall be submitted for Division approval at least forty-five (45) calendar days prior to any performance of the test required under this condition. No stack test required herein shall be performed without prior approval of the protocol by the Division. The Division reserves the right to witness the test. In order to facilitate the Division's ability to make plans to witness the test, notice of the date(s) for the stack test shall be submitted to the Division at least thirty (30) calendar days prior to the test. The Division may for good cause shown, waive this thirty (30) day notice requirement. In instances when a scheduling conflict is presented, the Division shall immediately contact the permittee in order to explore the possibility of making modifications to the stack test schedule. The compliance test results shall be submitted to the Division within forty-five (45) calendar days of the completion of the test unless a longer period is approved by the Division

5.7.2 Compliance with the annual emission limitations shall be monitored by calculating monthly emissions using the appropriate emission factors specified in the table below and hours of operation.

Pollutant	Fuel	Emission Factor	Source
SO_2[1]	Natural Gas	1.66 x 10^{-2} lb/hr	June 2016 stack test (natural gas used as fuel)
NO_X[1]	Natural Gas	2.02 lb/hr	
CO[1]	Natural Gas	0.658 lb/hr	
VOC[1]	Natural Gas	9.19 lb/hr	
Pb[1]	Natural Gas	9.46 x 10^{-5} lb/hr	
SO_2[2]	Coal	1.04 lb/hr	1988 stack test (coal used as fuel)
NO_X[2]	Coal	13.68 lb/hr	
CO[2]	Coal	19.6 lb/hr	
VOC[2]	Coal	1.3 lb/hr	July 2011 stack test (natural gas used as fuel)
Pb[2]	Coal	1.8 x 10^{-4} lb/hr	

[1]The emission factors in this table represent the emission factors from the most recent stack test. The permittee shall use emission factors from the most recent stack test to calculate emissions proceeding the test.

[2]These emission factors shall be used in the event that a stack test is not required for burning coal. If a stack test is conducted for coal burning, emission factors from that test shall be used in lieu of these factors.

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month rolling total shall be calculated using the previous twelve months' data.

5.7.3 Upon the compliance deadline for the NO_X and SO_2 emission limitations in Conditions 5.13.1.1 and 5.13.1.2 (Regional Haze NO_X and SO_2 limits), compliance with the NO_X and SO_2 emission limitation in Condition 5.7 shall, in the absence of credible evidence to the contrary, be presumed as long as the monitoring conducted in accordance with the requirements in Condition 5.13.3 (Regional Haze NO_X and SO_2 monitoring) indicates compliance with the PM emission limitations in Conditions 5.13.1.1 and 5.13.1.2 (Regional Haze NO_X and SO_2 limits).

5.8 These sources are subject to the opacity limits set forth in Condition 20 of this permit.

5.9 This source shall utilize Reasonably Available Control Technology (RACT) for VOC emissions (Colorado Regulation No. 7, II.C). Operation of this dryer as designed represents RACT. Any modification of the design shall require a new RACT determination and modification or reopening of this permit.

5.10 On and after the date on which the performance test required to be conducted by §60.8 is completed, you may not discharge into the atmosphere from any affected facility other than the kiln and clinker cooler any gases which exhibit 10 percent opacity, or greater. (40 CFR Part 60 Subpart F § 60.42(c))

Any sources other than kilns (including associated alkali bypass and clinker cooler) that are subject to the 10 percent opacity limit must follow the appropriate monitoring procedures in

§63.1350(f) (Condition 22.33), (m)(1) through (4), (10) and (11), (o), and (p) of this chapter. (CFR Part 60 Subpart F § 60.64(b)(3))

5.11 This source is subject to the CAM requirements set forth in Condition 23 of this permit.

5.12 This source is subject to the requirements in 40 CFR Part 63 Subpart LLL as set forth in Condition 22 of this permit.

Specifically the dryer is subject to the organic HAP and work practice requirements in §63.1243(b) (Condition 22.4) and the operation and maintenance plan requirements, as well as any testing, monitoring, recordkeeping and reporting that apply to those requirements.

Note that the opacity requirement in 40 CFR Part 60 Subpart F (Condition 5.10) that applies to the dryer is more stringent than the opacity limit in 40 CFR Part 63 Subpart LLL (§ 63.1345, Condition 22.6), so as provided for in § 63.1356 (Condition 22.62), the dryer does not have to comply with the opacity requirement in § 63.1345. The opacity requirement in § 63.1345 is included in the permit shield for streamlined conditions (Section III.3) of this permit with respect to the dryer.

5.13 The dryer is subject to the following Regional Haze Requirements:

5.13.1 Emission Limitations (Colorado Regulation No. 3, Part G, Section VI.A.2)

5.13.1.1 NO_X emissions shall not exceed 13.9 tons/year.

5.13.1.2 SO_2 emissions shall not exceed 36.7 tons/year.

5.13.2 Compliance Date

5.13.2.1 The permittee must comply with the above limits and averaging times as expeditiously as practicable, but in no event later than five years after EPA approval of Colorado's state implementation plan for regional haze, or relevant component thereof. The permittee must maintain control equipment or operational practices required to comply with the above limits and averaging times, and establish procedures to ensure that such equipment or operational practices are properly operated and maintained. (Colorado Regulation No. 3, Part F, Section IV.A.3)

5.13.2.2 The permittee shall submit to the Division a proposed compliance schedule within sixty days after EPA approves the BART portion of the Regional Haze SIP. The Division shall publish these proposed schedules and provide for a thirty-day public comment period following publication. The Division shall publish its final determinations regarding the proposed schedules for compliance within sixty days after the close of the public comment period and will respond to all public comments received. (Colorado Regulation No. 3, Part F, Section IV.A.4)

The Division issued a determination on October 1, 2013 which specified the following compliance dates:

a. NO_X – July 1, 2017

b. SO_2 – July 1, 2017

c. PM - April 17, 2014 (note that the PM emission limit is included in Condition 5.6)

5.13.3 SO_2 and NO_X Monitoring Requirements.

5.13.3.1 Unless performance tests were completed within the previous 6 months, within 60 days of the compliance deadline specified in Regulation Number3, Part F Section VI.A.3 (See Condition 5.13.2.2), the owner/operator shall conduct a stack test to measure NO_X and SO_2 emissions in accordance with the appropriate EPA test methods. Frequency of testing thereafter shall be every five years. Each test shall consist of three test runs, with each run at least 60 minutes in duration. (Colorado Regulation No. 3, Part F, Section VI.B.2.b)

For purposes of assessing compliance with the annual emission limitations, the results of the tests shall be converted to a lb/hr basis and multiplied by the allowable operating hours in the year (7,000 hrs/yr).

The requirements for the test protocol, notification and report specified in Condition 5.7.1 shall be met.

5.13.3.2 In addition to the stack tests described above, compliance with the annual NO_X and SO_2 limits shall be monitored by calculating emissions monthly using the emission factors (in lb/hr) determined from the most recent Division-approved stack test and hours of operation for the month. Monthly emissions shall be calculated by the end of the subsequent month and used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous 12 months' data. (Colorado Regulation No. 3, Part F, Section VI.B.2 and VI.B.2.b)

6. P003 - Secondary Crushing

AIRS pt 003: Secondary Crushing and Screening (vents to S001) and S003 - #4&#6 Belt Transfer

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	6.1			Recordkeeping	Annually
PM &PM_{10}	6.2		PM & PM_{10}: Screening and Crushing: 0.00031 lb/ton Silo and Belt Transfer: 2.9 x 10^{-5} lb/ton (each baghouse)	Recordkeeping and Calculation	Annually
PM	6.3	See Condition 6.3		Baghouse Maintenance and Operation	See Condition 19
Opacity	6.4	Shall not exceed 20%, except as provided for below		Visible Emission Observation Method 9	Daily If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions - Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Baghouse Maintenance and Operation	See Condition 19

6.1 Raw materials processed through these sources shall be monitored and recorded annually. Any information used to determine the annual quantity of materials processed shall be maintained and made available to the Division upon request.

6.2 Annual emissions for purposes of APEN reporting and the payment of annual fees shall be estimated using the annual raw materials processed, as required by Condition 6.1, and the emission factor listed in the above summary table (AP-42, Section 11.6, dated January 1995, Table 11.6-4) in the following equation:

$$\text{Tons/yr} = \frac{[\text{EF (lb/ton)} \times \text{annual material processed (ton/yr)}]}{2000 \text{ lb/ton}}$$

The emission factors included in the above summary table account for baghouse control.

6.3 No owner or operator of a manufacturing process unit shall cause or permit emission of any particulate matter into the atmosphere during any consecutive sixty minute period which is in excess of the following (Colorado Regulation No. 1, III.C.1):

6.3.1 For process equipment having design rates of greater than 30 tons per hour, the allowable emission rate shall be determined by the use of the equation (Colorado Regulation No. 1, III.C.1.b):

$$E = 17.31 (P)^{0.16}$$

Where:

E is the allowable particulate emissions in lbs/hr.
P is the process weight rate in tons/hr

In absence of evidence to the contrary, compliance with the PM limit is presumed provided the baghouses are operated and maintained in accordance with the requirements specified in Condition 19.

6.4 These sources are subject to the opacity limits set forth in Condition 20 of this permit.

7. P004 - Raw Material Storage Silos

AIRs pt 004: S006 through S008 - Raw Materials Storage Silos

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	7.1			Recordkeeping	Annually
PM &PM_{10}	7.2		PM & PM_{10}: 2.9×10^{-5} lb/ton (for each baghouse stack)	Recordkeeping and Calculation	Annually
PM	7.3	See Condition 7.3		Baghouse Maintenance and Operation	See Condition 19
Opacity	7.4	Shall not exceed 20%, except as provided for below		Visible Emission Observation Method 9	Daily If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions -Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Baghouse Maintenance and Operation	See Condition 19
MACT Requirements	7.5			See 40 CFR Part 63 Subpart LLL (Condition 22)	
		Opacity Shall Not Exceed 10%		Method 22	Monthly to Annually
		O & M Plan Requirements		See Conditions 22.10 and 22.11	

7.1 Raw materials processed through these sources shall be monitored and recorded annually. Any information used to determine the annual quantity of materials process shall be maintained and made available to the Division upon request.

7.2 Annual emissions for purposes of APEN reporting and the payment of annual fees shall be estimated using the annual raw materials processed, as required by Condition 7.1, and the emission factors listed in the above summary table (AP-42, Section 11.6, dated January 1995, Table 11.6-4) in the following equation:

$$\text{Tons/yr} = \frac{[\text{EF (lb/ton)} \times \text{annual material processed (tons/yr)}]}{2000 \text{ tons/yr}}$$

The emission factors included in the above summary table account for baghouse control.

7.3 No owner or operator of a manufacturing process unit shall cause or permit emission of any particulate matter into the atmosphere during any consecutive sixty minute period which is in excess of the following (Colorado Regulation No. 1, III.C.1):

7.3.1 For process equipment having design rates of greater than 30 tons per hour, the allowable emission rate shall be determined by the use of the equation (Colorado Regulation No. 1, III.C.1.b):

$$E = 17.31 (P)^{0.16}$$

Where:

E is the allowable particulate emissions in lbs/hr.
P is the process weight rate in tons/hr

In absence of evidence to the contrary, compliance with the PM limit is presumed provided the baghouses are operated and maintained in accordance with the requirements specified in Condition 19.

7.4 These sources are subject to the opacity limits set forth in Condition 20 of this permit.

7.5 These sources are subject to the requirements in 40 CFR Part 63 Subpart LLL as set forth in Condition 22 of this permit.

8. P005 - Raw Material Grinding

AIRs pt 005: S010 - Raw Material Grinding, S011 – Raw Material Separator, S012 – Raw Mill Feeders and S013 - Iron/Silica Silo

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	8.1			Recordkeeping	Annually
PM &PM_{10}	8.2		PM & PM_{10}: S010 - 0.012 lb/ton S011 - 0.032 lb/ton S012 - 0.019 lb/ton S013 - 0.0031 lb/ton	Recordkeeping and Calculation	Annually
PM	8.3	See Condition 8.3		Baghouse Maintenance and Operation	See Condition 19
Opacity	8.4	Shall not exceed 20%, except as provided for below		Visible Emission Observation Method 9	Daily If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions – Shall not exceed 30%		Baghouse Maintenance and Operation	See Condition 19
MACT Requirements	8.5			See 40 CFR Part 63 Subpart LLL (Condition 22)	
		Opacity Shall Not Exceed 10%		Method 22	S010 & S011 Daily S012 & S013 Monthly to Annually
		O & M Plan Requirements		See Conditions 22.10 and 22.11	
CAM	8.6	See Condition 23 (S010, S011 & S012 only)			

8.1 Raw material processed through these sources shall be monitored and recorded annually. Any information used to determine the annual quantity of materials processed shall be maintained and made available to the Division upon request.

8.2 Annual emissions for purposes of APEN reporting and the payment of annual fees shall be estimated using the annual raw materials processed, as required by Condition 8.1, and the emission factors listed the above summary table (AP-42, Section 11.6, January 1995, Table 11.6-4), in the following equation:

$$\text{Tons/yr} = \frac{[\text{EF (lb/ton)} \times \text{annual material processed (ton/yr)}]}{2000 \text{ lb/ton}}$$

The emissions factors included in the above summary table account for baghouse control.

8.3 no owner or operator of a manufacturing process unit shall cause or permit emission of any particulate matter into the atmosphere during any consecutive sixty minute period which is in excess of the following (Colorado Regulation No. 1, III.C.1):

8.3.1 For process equipment having design rates of greater than 30 tons per hour, the allowable emission rate shall be determined by use of the equation (Colorado Regulation No. 1, III.C.1.b):

$$E = 17.31 (P)^{0.16}$$

Where:

E is the allowable particulate emissions in lbs/hr.
P is the process weight rate in tons/hr

In absence of evidence to the contrary, compliance with the PM limit is presumed provided the baghouses are operated and maintained in accordance with the requirements specified in Condition 19.

8.4 These sources are subject to the opacity limits set forth in Condition 20 of this permit.

8.5 These sources are subject to the requirements in 40 CFR Part 63 Subpart LLL as set forth in Condition 22 of this permit.

8.6 The following sources are subject to the CAM requirements set forth in Condition 23 of this permit: S010, S011 and S012.

9. P006 - Homogenizing and Blending

AIR pt 006: S014 - Homogenizing Silo and S015 Kiln Feed Silo

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	9.1			Recordkeeping	Annually
PM &PM_{10}	9.2		PM & PM_{10}: 2.9×10^{-5} lb/ton (for each baghouse stack)	Recordkeeping and Calculation	Annually
PM	9.3	See Condition 9.3		Baghouse Maintenance and Operation	See Condition 19
Opacity	9.4	Shall not exceed 20%, except as provided for below		Visible Emission Observation Method 9	Daily If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions - Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Baghouse Maintenance and Operation	See Condition 19
MACT Requirements	9.5			See 40 CFR Part 63 Subpart LLL (Condition 22)	
		Opacity Shall Not Exceed 10%		Method 22	Monthly to Annually
		O & M Plan Requirements		See Conditions 22.10 and 22.11	

9.1 Material processed through these sources shall be monitored and recorded annually. Any information used to determine the annual quantity of materials processed shall be maintained and made available to the Division upon request.

9.2 Annual emissions for purposes of APEN reporting and the payment of annual fees, a shall be estimated using the annual materials processed, as required by Condition 9.1, and the emission factors listed in the above summary table (AP-42, Section 11.6, dated January 1995, Table 11.6-4), in the following equation:

$$\text{Tons/mo} = \frac{[\text{EF (lb/ton)} \times \text{annual material processed (tons/yr)}]}{2000 \text{ lb/ton}}$$

The emission factors included in the above summary table account for baghouse control.

9.3 No owner or operator of a manufacturing process unit shall cause or permit emission of any particulate matter into the atmosphere during any consecutive sixty minute period which is in excess of the following (Colorado Regulation No. 1, III.C.1):

9.3.1 For process equipment having design rates of greater than 30 tons per hour, the allowable emission rate shall be determined by use of the equation (Colorado Regulation No. 1, III.C.1.b):

$$E = 17.31 (P)^{0.16}$$

Where:

E is the allowable particulate emissions in lbs/hr.
P is the process weight rate in tons/hr

In absence of evidence to the contrary, compliance with the PM limit is presumed provided the baghouses are operated and maintained in accordance with the requirements specified in Condition 19.

9.4 These sources are subject to the opacity limits set forth in Condition 20 of this permit.

9.5 These sources are subject to the requirements in 40 CFR Part 63 Subpart LLL as set forth in Condition 22 of this permit.

10. P007- Kiln Burning and P008 – Clinker Cooling and Transfer to Storage for Finish Mill

AIRs pt 007 (P007): S016 – Precalciner Kiln

AIRS pt 008 (P008): S017 – Clinker Drag Chains, S018 - Clinker Cooler, S023 Drag Conveyor, S024B – Outside Clinker Drop Hood

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Kiln Feed Rate & Clinker Production Rate	10.1			Recordkeeping	Daily
Operating Hours	10.2	8,064 hours/year		Recordkeeping	Daily and Monthly
Kiln Feed Rate	10.3	120 tons/hour 967,680 tons/year (dry basis)		Recordkeeping	Daily and Monthly
Kiln Fuel	10.4	Natural Gas: 2,438 MMscf/yr Coal: 113,945 tons/yr Tire-Derived Fuel (Whole or Shredded Tires): 18,400 tons/yr Petroleum Coke/Coal Blend: 10,000 tons/yr Blend not to exceed 10% petroleum coke and petroleum coke not to exceed 2% sulfur by weight The use of any other fuel requires Division approval		Recordkeeping	Daily and Monthly
PM & PM_{10} – Kiln	10.5	133 ton/year	See Condition 10.5	Performance Test Recordkeeping and Calculation Baghouse Operation and Maintenance	Annually Monthly See Condition 19

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
PM & PM_{10} – P008	10.6		S018: performance test S024B, S017 & S023: 0.0024 lb/ton (for each baghouse stack)	Recordkeeping and Calculation	Annually
PM – S017, S023 & S024B	10.7	See Condition 10.7		Baghouse Operation and Maintenance	See Condition 19
Provisions for Using Tire-Derived Fuel in Kiln	10.8			See Condition 10.8	
Opacity	10.9	Shall not exceed 20%, except as provided for below		Continuous Opacity Monitoring System	Continuously
		Certain Operating Conditions - Shall not exceed 30%		Method 9	During Each Spray Tower Blasting Event
NO_X – Kiln	10.10	2649.0 tons/year		Continuous Emission Monitoring System	Continuously
		1.85 lb/ton clinker, on a 30-day rolling average			
CO – Kiln	10.11	396.0 tons/year			
SO_2 - Kiln	10.12	1340 tons/year			
SO_2	10.13	**Facility Wide Limit:** 7 lbs/ton of material		See Condition 10.13	Daily
VOC - Kiln	10.14	138 tons/year	Stack Test	Performance Test Recordkeeping and Calculation	Annually Monthly
Continuous Emission Monitoring Requirements	10.15			See Condition 10.15	
Lead - Kiln	10.16	4.4 tons/year	See Condition 10.16	Performance Test Recordkeeping and Calculation	Every Five (5) Years Monthly
RACT – VOC	10.17	Process Design		Certification	Annually

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
MACT Standards	10.18			See 40 CFR Part 63 Subpart LLL (Condition 22)	
		O & M Plan Requirements		See Conditions 22.10 and 22.11	
		Kiln: PM – 0.07 lb/ton clinker		Performance Test PM CPMS	Annually 30-Day Rolling Average
		D/F – 0.2 ng/dscm (TEQ), corrected to 7% O_2		Performance Test Temperature at Baghouse Inlet	Every 30 Months 3-Hour Rolling Average
		Mercury (Hg) – 55 lb/MM tons clinker		Sorbent Trap System[2]	30-Day Rolling Average
		THC – 24 ppmvd, corrected to 7% O_2[1]		THC CEMS	30-Day Rolling Average
		HCl – 3 ppmvd, corrected to 7% O_2		Performance Test SO_2 CEMS[2]	Every 30 Monthlys 30-Day Rolling Average
		Clinker Cooler: PM – 0.07 lb/ton clinker		Performance Test PM CPMS	Annually 30-Day Rolling Average
CAM	10.19	See Condition 23 (kiln (P007/S016) only)			
SNCR Operating Requirements	10.20			See Condition 10.20	
Prohibition on Netting Credits or Offsets from Required Controls	10.21			See Condition 10.21	
Regional Haze Requirements	10.22	**Kiln:** Opacity shall not exceed 20%. NO_X – 255.3 lbs/hr, on a 30-day rolling average and 901.0 tons/year SO_2 – 25.3 lbs/hr, on a 12-month rolling average and 95 tons/yr		COMS, CEMS	Continuous

[1]Compliance with the total organic HAP limit (12 ppmvd) is provided as an alternative operating scenario in Section I, Condition 5.3.

[2]40 CFR Part 63 Subpart LLL provides alternative monitoring options in lieu of those included in the permit, specifically: for Hg, Hg CEMS, for HCl, HCl CEMS or a sorbent monitoring system. Use of these alternatives requires the installation and certification of the appropriate monitoring system and a permit modification to include the appropriate requirements in the permit. The modification application may be processed as a minor modification using the procedures in Colorado Regulation No. 3, Part C, Section X.

10.1 The permittee shall record the daily production rates and kiln feed rates (Construction Permit 12BO444-2).

10.2 Annual (calendar year) operating hours shall not exceed 8,064 (Construction Permit 12BO444-2). The permittee shall monitor and record hours of operation daily (Construction Permit 12BO444-2). Daily hours of operation shall be summed to determine monthly hours of operation. Monthly hours of operation shall be used to monitor compliance with the annual limitation.

10.3 Kiln feed rate shall not exceed 120 tons/hour and 967,680 tons/year (dry basis). (Construction Permit 12BO444-2, as modified under the provisions of Section I, Condition 1.3 to increase the annual limitation.) Daily quantities of the kiln feed shall be summed to determine monthly quantities of kiln feed. Monthly quantities of kiln feed shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month rolling total shall be calculated using the previous twelve months' data.

Compliance with the hourly kiln feed rate shall be determined by dividing the daily kiln feed rate, as recorded under Condition 10.1, by the daily hours of operation, as recorded under Condition 10.2.

10.4 The Construction Permit was issued based on permitted fuels consisting of natural gas, coal, and/or tire derived fuel (TDF). The use of petroleum coke is incorporated directly into this operating permit according to Section I, Condition 1.3 of this permit. No other fuels shall be used without prior approval from the Division.

Kiln fuel consumption shall not exceed the limitations listed in the above summary table (Construction Permit 12BO444-2). Records of the amount of each type of fuel shall be monitored and recorded daily. (Construction Permit 12BO444-2) Daily quantities of each type of fuel shall be summed to determine monthly quantities of fuel. Monthly quantities of each type of fuel shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month new twelve month totals shall be calculated using the previous twelve months' data.

The permittee shall provide the Division written notice at least sixty (60) calendar days prior to the commencement of burning TDF in the kiln.

A petroleum coke/coal blend containing no more than 10% petroleum coke may be used. The sulfur content of the petroleum coke used shall not exceed 2% by weight. The sulfur content of the petroleum coke used in the blend shall be determined by sampling and analyzing each shipment of petroleum coke, using the appropriate ASTM methods or equivalent, if approved in advance by the Division. In lieu of sampling, vendor data may be used to determine the weight percent sulfur provided that sampling and analysis was performed using the appropriate ASTM methods.

10.5 Emissions of PM and PM_{10} **from the kiln (P007)** shall not exceed the limits listed in the above summary table. (Construction Permit 12BO444-2). Compliance with the PM and PM_{10} limits shall be monitored as follows:

10.5.1 Compliance with the annual emission limits shall be assessed during the annual performance tests required by 40 CFR Part 63 Subpart LLL (Condition 22). The emission factor (in lb/ton clinker) determined from the performance test shall be used to calculate emissions as required by Condition 10.5.2.

10.5.2 Monthly emissions shall be calculated by the end of the subsequent month using the emission factors from the most recent performance test (assumes PM = PM_{10}) and the monthly quantity of clinker produced. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual emission imitations. Each month a new twelve month total will be calculated using the previous twelve months data.

10.5.3 Baghouses shall be operated and maintained in accordance with the requirements in Condition 19

10.6 Annual emissions of PM and PM_{10} **from emission group P008 (Clinker Cooling and Transfer to Storage for Finish Mill)** shall be calculated for the purposes of APEN reporting and the payment of fees, as follows:

10.6.1 Annual emissions from the clinker cooler (S018) shall be calculated using the PM and PM_{10} emission factors (in lbs/ton clinker) from the most recent performance test (assumes PM = PM_{10}) conducted on the clinker cooler as required by 40 CFR Part 63 Subpart LLL (Condition 22) and the annual quantity of clinker produced.

10.6.2 Annual PM and PM_{10} emissions from the remaining emission units (S024B, S017 and S023) within P008 shall be calculated using the emission factors specified in the above summary table (AP-42, Section 11.6 (dated 1/95), Table 11.6-4) and the annual quantity of clinker produced.

10.7 **For S024B, S017 and S023:** no owner or operator of a manufacturing process unit shall cause or permit emission of any particulate matter into the atmosphere during any consecutive sixty minute period which is in excess of the following (Colorado Regulation No. 1, III.C.1):

10.7.1 For process equipment having design rates of greater than 30 tons per hour, the allowable emission rate shall be determined by use of the equation (Colorado Regulation No. 1, III.C.1.b):

$$E = 17.31\ (P)^{0.16}$$

Where:

E is the allowable particulate emissions in lbs/hr.
P is the process weight rate in tons/hr

In absence of evidence to the contrary, compliance with the PM limit is presumed provided the baghouses are operated and maintained in accordance with the requirements specified in Condition 19.

10.8 The following requirements apply when TDF if used as fuel in the kiln:

10.8.1 Performance tests shall be conducted as follows:

10.8.1.1 Performance tests shall be conducted within forty five (45) days of commencing burning of TDF in the kiln, provided the requirements in Condition 10.8.1.2 are met.

10.8.1.2 If the burning of TDF fuel does not occur for 45 days or more during a rolling twelve month period, no stack testing is required. The 45 days is the total number of days that TDF is burned in the kiln. If TDF is burned in the kiln only part of a day, that day counts towards the 45 day total.

10.8.1.3 Performance tests shall be conducted for VOC in accordance with the requirements in Condition 10.14.1 and for lead in accordance with the requirements in Condition 10.16.1.

10.8.1.4 A performance test shall be conducted to verify compliance with the dioxin-furan limit in 40 CFR Part 63 Subpart LLL (Condition 22) using the appropriate EPA Test Methods and the procedures in 40 CFR Part 63 Subpart LLL (Condition 22). The protocol, test notification and submittal of test report shall meet the requirements specified in Condition 10.14.1.

10.8.1.5 If TDF burned for more than 20% of the total plant operating hours during the five year term of this permit, an additional stack test shall be required during the term of the renewal permit. Such test shall be conducted within 45 calendar days of achieving the 20% of total plant operating threshold.

10.8.2 Scrap tires that are not discarded and are managed under the oversight of established tire collection programs, including tires removed from vehicles and off-specification tires are not solid wastes when used as a fuel (40 CFR Part 241 § 241.4(a)(1)). The TDF used as fuel in the kiln shall meet the requirements in this Condition 10.8.2 or the kiln will be subject to the requirements in 40 CFR Part 60 Subpart DDDD, "Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units".

10.9 These sources are subject to the following opacity requirements:

10.9.1 Except as provided in Condition 10.9.2, below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in

excess of 20% opacity. This standard is based on 24 consecutive opacity readings taken at 15-second intervals for six minutes. The approved reference test method for visible emissions measurement is EPA Method 9 (40 CFR Part 60, Appendix A (July, 1992)) in all subsections of Section II.A of Regulation No. 1. (Colorado Regulation No. 1, II.A.1).

10.9.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, any process modification, or adjustment or occasional cleaning of control equipment, which is in excess of 30% opacity for a period or periods aggregating more than six minutes in any sixty consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

Compliance with this opacity limits shall be monitored as follows:

10.9.3 For **the kiln (P007)** compliance with the opacity limits in Conditions 10.9.1 and 10.9.2 shall be monitored using the continuous opacity monitor system (COMS) required by Conditions 10.15.1 and 10.22.4.1.

10.9.4 For **clinker cooler (S018)** compliance with the opacity limits in Conditions 10.9.1 and 10.9.2 shall be monitored using the continuous opacity monitor system (COMS) required by Condition 10.15.2.

10.9.5 For the **other sources included in emission group P008**, compliance with the opacity limits in Conditions 10.9.1 and 10.9.2 shall be monitored as required by Condition 20.

10.9.6 For **the kiln (P007)** compliance with the opacity limit in Condition 10.9.1 **during each dynamite spray tower blasting event** shall be monitored as follows:

10.9.6.1 A visual emission observation shall be conducted in accordance with EPA Method 9.

10.9.6.2 Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

10.9.6.3 All Method 9 opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certificate shall be kept on site and made available to the Division upon request.

10.9.6.4 Records of the date, time and length of each blasting event, as well as the COM data for each blasting event, shall be maintained and made available

to the Division upon request.

10.10 Emissions of NO_X from the kiln (P007) shall not exceed the following limitations:

10.10.1 Annual emissions of NO_X (in tons/year) shall not exceed the limits listed in the above summary table. (Construction Permit 12BO444-2, revised according to Section I, Condition 1.3, to revise the NO_X emission limits (removed lb/hr limit))

10.10.2 Emissions of NO_X shall not exceed 1.85 lb/ton clinker, on a 30-day rolling average. (As provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate NO_X limits required by the Consent Decree entered into the federal District Court for the District of Colorado, No. 09-cv-0019-MEK-MEH, paragraph 30. The CD, at paragraph 30, requires the permit to include the NO_X limit)

Compliance with the NO_X limits shall be monitored using the NO_X CEMS required by Condition 10.15, as follows:

10.10.3 For purposes of monitoring compliance with the emission limit in Condition 10.10.1, for any hour in which the kiln is operating, the permittee shall program the DAHS to calculate lb/hr NO_X emissions in accordance with the requirements in Condition 18.1.1.3.b and 40 CFR Part 60.

Specifically hourly mass NO_X emissions (in lb/hr) shall be calculated using the following equation:

$$E_h = K \times C_h \times Q_h \times 60 \text{ minutes/hr} \times [1 - (B_{wo}/100)]$$

Where: E_h = mass emissions (lb/hr)
C_h = NO_X concentration, dry basis, ppm
Q_h = volumetric flow rate, wet basis, scfm
$K = 1.194 \times 10^{-7}$ (lb/scf)/ppm
B_{wo} = gas moisture, %

The resulting NO_X lb/hr value is then multiplied by the unit operating time for that hour to produce a NO_X lbs value. Hourly NO_X mass emissions (lbs) shall be summed and divided by 2000 lbs/ton to determine monthly NO_X emissions (in tons).

Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months data.

10.10.4 Upon the compliance deadline for the annual NO_X emission limitation in Condition 10.22.1 (Regional Haze NO_X limits), compliance with the NO_X emission limitations in Condition 10.10.1 shall, in the absence of credible evidence to the contrary, be presumed as long as the monitoring conducted in accordance with the requirements in

Condition 10.22.3 (Regional Haze NO_X monitoring) indicates compliance with the NO_X emission limitations in Condition 10.22.1 (Regional Haze NO_X limits).

10.10.5 For purposes of monitoring compliance with the emission limit in Condition 10.10.2, the 30 day rolling average NO_X emission rate, in lbs NO_X/ton clinker, at the Lyons Kiln for an operating day and the previous 29 operating days shall be calculated in accordance with the following procedure. (paragraph 7.a of CD No. 09-cv-0019-MEK-MEH). Note that NO_X mass emissions (in lbs) shall be determined as specified in Condition 10.10.3 and clinker produced shall be determined as required by Condition 10.1.

10.10.5.1 Sum the total pounds of NO_X emitted from the Lyons Kiln Main Stack during an operating day and the previous 29 operating days, as measured by the NO_X CEMS (required by Condition 10.15).

10.10.5.2 Sum the total tons of clinker produced by the Lyons Kiln during the same operating day and the previous 29 operating days shall be summed.

10.10.5.3 Divide the total number of pounds of the specified pollutant (NOX) emitted from the Lyons Kiln during the 30 operating days referred to above by the total tons of clinker produced during the same 30 operating days.

10.10.5.4 A new 30-day rolling average NO_X emission rate shall be calculated for each new operating day. Each 30-day rolling average NO_X emission rate shall include all NO_X emissions from the Lyons Kiln Main Stack during all periods of kiln operation on any kiln operating day, including emissions from each startup, shutdown, or malfunction.

10.10.6 For purposes of the emission limit in Condition 10.10.2 and the monitoring method specified in Condition 10.10.5, as operating day shall mean any day that on which kiln operations occurs. (paragraph 7.bb of CD No. 09-cv-0019-MEK-MEH) Kiln operation shall have the meaning provided for in Condition 10.20.3.

10.11 Emissions of CO **from the kiln (P007)** shall not exceed the limit listed in the above summary table. (Construction Permit 12BO444-2, revised according to Section I, Condition 1.3, to revise the CO emission limits (removed lb/hr limit)). Compliance with the CO annual emission limit shall be monitored using the CO CEMS required by Condition 10.15, as follows:

For any hour in which the kiln is operating, the permittee shall program the DAHS to calculate lb/hr CO emissions in accordance with the requirements in Condition 18.1.1.3.b and 40 CFR Part 60.

Specifically hourly mass CO emissions (in lb/hr) shall be calculated using the following equation:

$E_h = K \times C_h \times Q_h \times 60 \text{ minutes/hr} \times [1 - (B_{wo}/100)]$

Where: E_h = mass emissions (lb/hr)
C_h = CO concentration, dry basis, ppm
Q_h = volumetric flow rate, wet basis, scfm
K = 7.267 x 10^{-8} (lb/scf)/ppm
B_{wo} = gas moisture, %

The resulting CO lb/hr value is then multiplied by the unit operating time for that hour to produce a CO lbs value. Hourly CO mass emissions (lbs) shall be summed and divided by 2000 lbs/ton to determine monthly CO emissions (in tons).

Monthly emissions shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month, a new twelve month total shall be calculated using the previous twelve months data.

10.12 Emissions of SO_2 **from the kiln (P007)** shall not exceed the limits listed in the above summary table. (Construction Permit 12BO444-2, revised according to Section I, Condition 1.3, to revise the NO_X, CO, and VOC emission limits). Compliance with the SO_2 annual emission limit shall monitored using the SO_2 CEMS required by Condition 10.15 as follows:

10.12.1 For any hour in which fuel is combusted in the unit, the permittee shall program the DAHS to calculate lb/hr SO_2 emissions in accordance with the requirements in Condition 18.1.1.3.b of this permit and the requirements in 40 CFR Part 60.

Specifically hourly mass SO_2 emissions (in lb/hr) shall be calculated using the following equation:

$E_h = K \times C_h \times Q_h \times 60$ minutes/hr x $[1 - (B_{wo}/100)]$

Where: E_h = mass emissions (lb/hr)
C_h = SO_2 concentration, dry basis, ppm
Q_h = volumetric flow rate, wet basis, scfm
K = 1.660 x 10^{-7} (lb/scf)/ppm
B_{wo} = gas moisture, %

The resulting SO_2 lb/hr value is then multiplied by the unit operating time for that hour to produce a SO_2 lbs value. The hourly SO_2 lbs values shall be used as follows:

10.12.1.1 For use in assessing compliance with the facility wide SO_2 limit in Condition 10.13, hourly SO_2 mass emissions (lbs) shall be summed to determine daily SO_2 emissions.

10.12.1.2 For use in assessing compliance with the annual SO_2 emission limit in Condition 10.12, Hourly SO_2 mass emissions (lbs) shall be summed and divided by 2000 lbs/ton to determine monthly SO_2 emissions (in tons). Monthly emissions shall be used in a rolling twelve month total to monitor

compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months data.

10.12.2 Upon the compliance deadline for the annual SO_2 emission limitation in Condition 10.22.1.2 (Regional Haze SO_2 limits), compliance with the SO_2 emission limitations in Condition 10.12 shall, in the absence of credible evidence to the contrary, be presumed as long as the monitoring conducted in accordance with the requirements in Condition 10.22.3 (Regional Haze SO_2 monitoring) indicates compliance with the SO_2 emission limitations in Condition 10.22.1.2 (Regional Haze SO_2 limits).

10.13 **Facility Wide Limit** Sulfur dioxide emissions shall not exceed 7 pounds per ton of material (including fuel) processed. This emission limit shall be calculated over each 24-hour period that commences at midnight. If the source does not operate for the entire 24-hour period, the actual hours of operation shall be used as the averaging time. At no time shall the averaging time be greater than 24 hours. (Construction Permit 12BO444-2 and Colorado Regulation No. 1, Section VI.A.3.f.).

Compliance with the facility wide limit shall be monitored using the daily SO_2 emission data from the CEMS (as required by Condition 10.12.1.1) and actual material throughputs recorded under Conditions 10.3 and 10.4, the relevant information recorded for the dryer (see Condition 5.2), and any other information necessary from any other sources emitting sulfur dioxide at this facility.

The owner or operator of the affected source shall maintain all data used to show compliance with this emission standard for a period of two years for sources not subject to the operating permit program and five years for sources subject to the operating permit program. This data shall be available for inspection by the division upon request. (Colorado Regulation No. 1, Section VI.A.3.f)

10.14 Emissions of VOC **from the kiln (P007)** shall not exceed the limits listed in the above summary table. (Construction Permit 12BO444-2, revised according to Section I, Condition 1.3, to revise the VOC emission limits (removed lb/hr limit)). Compliance with the VOC emission limit shall be monitored as follows:

10.14.1 Performance testing for VOC shall be performed once during each calendar year, in accordance with the requirements and procedures set forth in the appropriate EPA Test Method. The length of time between each test shall be at least six months. Test results shall be used to monitor compliance with the annual limit (tons per year limitation) and converted to units of lbs/ton feed, for use in subsequent emission calculations. The emission factor (in lb/ton feed) determined from the performance test shall be used to calculate emissions are required by Condition 10.14.2.

Testing shall be performed for each proposed fuel type, except natural gas. No testing is required if natural gas is the only fuel used during the calendar year. Alternatively, the permittee may test using the worst case VOC emitting fuel, and

shall then use this emission rate to estimate VOC emissions from all fuels for that year.

If TDF is used as fuel, performance testing will be required as specified in Condition 10.8.1.

For purposes of assessing compliance with the annual emission limitations in Condition 10.14, the results of the test shall be converted to a lb/hr basis and multiplied by the allowable operating hours (8,064 hrs/yr).

A stack testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior The test protocol, test, and test report must be in accordance with the requirements of the APCD Compliance Test Manual (https://www.colorado.gov/pacific/cdphe/inspections-and-enforcement). A stack testing protocol shall be submitted for Division approval at least forty-five (45) calendar days prior to any performance of the test required under this condition. No stack test required herein shall be performed without prior approval of the protocol by the Division. The Division reserves the right to witness the test. In order to facilitate the Division's ability to make plans to witness the test, notice of the date(s) for the stack test shall be submitted to the Division at least thirty (30) calendar days prior to the test. The Division may for good cause shown, waive this thirty (30) day notice requirement. In instances when a scheduling conflict is presented, the Division shall immediately contact the permittee in order to explore the possibility of making modifications to the stack test schedule. The compliance test results shall be submitted to the Division within forty-five (45) calendar days of the completion of the test unless a longer period is approved by the Division.

10.14.2 Monthly emissions shall be calculated by the end of the subsequent month using the emission factors from the most recent performance test and the monthly quantity of feed to the kiln. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual emission imitations. Each month a new twelve month total will be calculated using the previous twelve months data.

10.15 These sources are subject to the following requirements for continuous monitoring systems:

10.15.1 **For the kiln (P007)**, the source shall install, certify and operate continuous emission monitoring (CEMS) equipment for measuring opacity, SO_2, NO_X (including diluent gas either CO_2 or O_2), CO, and volumetric flow (Construction Permit 12BP0444-2, Colorado Regulation No. 3, Part F, Sections VII.B.1.b and VII.C.2.a (for SO_2, NO_X and opacity) and paragraph 11 of Consent Decree (09-cv-0019-MEK-MEH) filed on April 19, 2013 (for NO_X)).

10.15.2 **For the clinker cooler (S017)**, the source shall install, certify and operate a continuous opacity monitoring system (COMS).

The CEMS and COMS shall meet the requirements in Condition 18.

10.16 Emissions of lead **from the kiln (P007)** shall not exceed the limits shown in the above summary table. (Construction Permit 12BO441-2, as modified under the provisions of Section I, Condition 1.3) Compliance with the annual limitations shall be monitored as follows:

10.16.1 Performance testing for lead shall be performed every five years in accordance with the requirements and procedures set forth in appropriate EPA Test Methods. Test results shall be used to monitor compliance with the annual (tons per year limitation) and converted to units of lbs/ton feed, for use in subsequent emission calculations. The emission factor (in lb/ton feed) determined from the performance test shall be used to calculate emissions are required by Condition 10.16.2.

Note that the previous performance test for lead was conducted on April 6, 2011.

Testing shall be performed for each proposed fuel type, except natural gas. No testing is required if natural gas is the only fuel used during the calendar year. Alternatively, the permittee may test using the worst case VOC emitting fuel, and shall then use this emission rate to estimate VOC emissions from all fuels for that year.

If TDF is used as fuel, performance testing will be required as specified in Condition 10.8.1.

For purposes of assessing compliance with the annual emission limitations in Condition 10.16, the results of the test shall be converted to a lb/hr basis and multiplied by the allowable operating hours (8,064 hrs/yr).

A stack testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior The test protocol, test, and test report must be in accordance with the requirements of the APCD Compliance Test Manual (https://www.colorado.gov/pacific/cdphe/inspections-and-enforcement). A stack testing protocol shall be submitted for Division approval at least forty-five (45) calendar days prior to any performance of the test required under this condition. No stack test required herein shall be performed without prior approval of the protocol by the Division. The Division reserves the right to witness the test. In order to facilitate the Division's ability to make plans to witness the test, notice of the date(s) for the stack test shall be submitted to the Division at least thirty (30) calendar days prior to the test. The Division may for good cause shown, waive this thirty (30) day notice requirement. In instances when a scheduling conflict is presented, the Division shall immediately contact the permittee in order to explore the possibility of making modifications to the stack test schedule. The compliance test results shall be submitted to the Division within forty-five (45) calendar days of the completion of the test unless a longer period is approved by the Division.

10.16.2 Monthly emissions shall be calculated by the end of the subsequent month using the emission factor in the table below and the monthly quantity of feed to the kiln. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual emission imitations. Each month a new twelve month total will be calculated using the previous twelve months data.

Pollutant	Emission Factor	Source
Kiln		
Lead[1]	9.17 x 10^{-6} lbs/ton feed	April 2011

[1]The emission factors in this table represent the emission factors from the most recent stack test. The permittee shall use emission factors from the most recent stack test to calculate emissions.

Emission calculations are not required for any twelve month period for which only natural gas was used as fuel for the kiln. In these cases, compliance with the annual limitations is presumed, in the absence of credible evidence to the contrary.

10.16.3 Baghouses shall be operated and maintained in accordance with the requirements in Condition 19.

10.17 This source shall utilize Reasonably Available Control Technology (RACT) for VOC emissions (Colorado Regulation No. 7, II.C). Operation of this kiln and clinker cooler as designed represents RACT. Any modification of the design shall require a new RACT determination and modification or reopening of this permit.

10.18 These sources are subject to the requirements in 40 CFR Part 63 Subpart LLL as set forth in Condition 22 of this permit.

10.19 The precalciner-kiln (S016) is subject to the CAM requirements set forth in Condition 23 of this permit.

10.20 The following requirements apply to operation of the non-selective catalytic reduction unit. (As provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate the SNCR operating requirements of the Consent Decree entered into the federal District Court for the District of Colorado, No. 09-cv-0019-MEK-MEH. The CD, at paragraph 30, requires the permit to include the SNCR operating requirements.)

10.20.1 An ammonia injection meter must be installed, calibrated, and operated in accordance with good engineering practices and manufacturer's recommendations. Except during breakdowns, repairs, calibration checks, and zero and span adjustments, the permittee shall capture and record data from the ammonia injection meter. (paragraph 15 of CD No. 09-cv-0019-MEK-MEH)

10.20.2 The SNCR system and ammonia injection meter shall be operated at all times of Lyons Kiln Operation, except as provided for in Conditions 10.20.2.1 and 10.20.2.2,

consistent with the technological limitations (including but not limited to the gas temperature at the point of ammonia injection), manufacturer's specifications, and good engineering and maintenance practices for such pollution control technology and the Lyons Kiln, and good air pollution control practices for minimizing emissions. (paragraph 7.m of CD No. 09-cv-0019-MEK-MEH)

10.20.2.1 Malfunctions of the pollution control, emissions monitoring or ammonia metering technology, or

10.20.2.2 Metering or monitoring equipment repairs, calibration checks, and zero and span adjustments, or

10.20.2.3 When baseline ammonia if being established or reestablished per Paragraph 12.

10.20.3 "Kiln Operation", shall mean with respect to the Lyons Kiln (P007, AIRS pt 007) any period when any raw materials are fed into the Lyons Kiln or any period when any combustion is occurring or fuel is being fired in the Lyons Kiln. (paragraph 7.v of CD No. 09-cv-0019-MEK-MEH)

10.21 Prohibitions on Netting Credits or Offsets from Required Controls

10.21.1 Emission reductions resulting from compliance with the requirements of this Consent Decree shall not be considered as a creditable contemporaneous emission decrease for the purpose of obtaining a netting credit or offset under the Clean Air Act's Non-attainment NSR and PSD programs. (As provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate paragraph 26 of the Consent Decree entered into the federal District Court for the District of Colorado, No. 09-cv-0019-MEK-MEH. The CD, at paragraph 30, requires the permit to include the prohibition of netting credits or offsets)

10.21.2 The limitations on the generation and use of netting credits or offsets set forth in Paragraph 26 (Condition 10.21.1) do not apply to emission reductions achieved by CEMEX at the Lyons Kiln Main Stack that are greater than those required under this Consent Decree. For purposes of this Paragraph, emission reductions are greater than those required under this Consent Decree if they result from CEMEX's compliance with enforceable emission limitations that are more stringent than the limits imposed under this Consent Decree, applicable provisions of the Clean Air Act, and the Colorado SIP, and the emission reductions resulting from the more stringent emission limits are made "creditable" within the meaning of, and as required by, the Colorado SIP. (As provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate paragraph 27 of the Consent Decree entered into the federal District Court for the District of Colorado, No. 09-cv-0019-MEK-MEH. The CD, at paragraph 30, requires the permit to include the prohibition of netting credits or offsets)

10.21.3 Nothing in this Consent Decree is intended to preclude the emission reductions generated under this Decree from being considered by EPA as creditable contemporaneous emission decreases for the purpose of attainment demonstrations submitted pursuant to Section 110 of the Act, 42 U.S.C. § 7410, or in determining impacts on National Ambient Air Quality Standards, PSD increments, or air quality-related values, including visibility in a Class I area. (As provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate paragraph 28 of the Consent Decree entered into the federal District Court for the District of Colorado, No. 09-cv-0019-MEK-MEH. The CD, at paragraph 30, requires the permit to include the prohibition of netting credits or offsets)

10.22 The kiln is subject to the following Regional Haze Requirements:

10.22.1 Emission Limitations (Colorado Regulation No. 3, Part F, Section VI.A.2)

10.22.1.1 NO_X emissions shall not exceed 255.3 lb/hr, on a 30-day rolling average and 901.0 tons/year, on a 12-month rolling average.

10.22.1.2 SO_2 emissions shall not exceed 25.3 lbs/hr, on a 12-month rolling average and 95.0 tons/year, on a 12-month rolling average.

10.22.1.3 Opacity shall not exceed 20%.

10.22.2 Compliance Date

10.22.2.1 The permittee must comply with the above limits and averaging times as expeditiously as practicable, but in no event later than five years after EPA approval of Colorado's state implementation plan for regional haze, or relevant component thereof. The permittee must maintain control equipment or operational practices required to comply with the above limits and averaging times, and establish procedures to ensure that such equipment or operational practices are properly operated and maintained. (Colorado Regulation No. 3, Part F, Section IV.A.3)

10.22.2.2 The permittee shall submit to the Division a proposed compliance schedule within sixty days after EPA approves the BART portion of the Regional Haze SIP. The Division shall publish these proposed schedules and provide for a thirty-day public comment period following publication. The Division shall publish its final determinations regarding the proposed schedules for compliance within sixty days after the close of the public comment period and will respond to all public comments received. (Colorado Regulation No. 3, Part F, Section IV.A.4)

The Division issued a determination on October 1, 2013 which specified the following compliance dates:

a. NO_X – December 31, 2017

b. SO_2 – December 31, 2017

c. PM – May 15, 2014

10.22.3 SO_2 and NO_X Monitoring Requirements.

10.22.3.1 At all times after the compliance deadline specified in Regulation Number 3, Part F, Section VI.A.3., or VI.B.3. (Condition 10.22.2), the owner/operator of each BART or RP unit shall maintain, calibrate and operate a CEMS in full compliance with the requirements in 40 CFR Part 60 Section 60.13 and Part 60 Appendices A, B and F to accurately measure SO_2, NO_X and diluents, if diluent is required. The CEMS shall be used to determine compliance with the SO_2 and NO_X Regional Haze emission limits for each such unit. For particular units, such limits are expressed in units of pounds per hour, tons per year, pounds per ton clinker or pounds per million Btu. The owner/operator shall calculate emissions in the applicable units. In determining compliance with the SO_2 and NO_X Regional Haze limits, all periods of emissions shall be included, including startups, shutdowns, emergencies and malfunctions. (Colorado Regulation No. 3, Part F, Section VII.B.1.b)

10.22.3.2 For any hour in which fuel is combusted in the BART or RP unit, the owner/operator shall calculate hourly NOx and SO_2 emissions in the appropriate units (lbs/hr) or (lbs/MMbtu) in accordance with the provisions in 40 CFR Part 60. These hourly values shall be used to determine compliance in accordance with the particular limits averaging time (Colorado Regulation No. 3, Part F, Section VII.B.1.b.(i)), as follows:

a. Pounds per Hour or Pounds per Million Btu Regional Haze Limits on a 30-day rolling average. Before the end of each operating day, the owner/operator shall calculate and record the 30-day rolling average emission rate in lb/MMBtu or lb/hr from all valid hourly emission values from the CEMS for the previous 30 operating days. (Colorado Regulation No. 3, Part F, Section VII.B.1.b.(i)(1))

b. Pounds per Hour on a 12-month rolling average. Before the end of each month, the owner/operator shall calculate and record the 12-month rolling average emission rate in lb/hr from all valid hourly emission values from the CEMS for the previous 12 months. (Colorado Regulation No. 3, Part F, Section VII.B.1.b.(i)(2))

c. Tons per year Regional Haze Limits on a 12-month rolling average. Before the end of each month, the owner/operator shall calculate and record the total emissions in tons/yr from all valid hourly emission values from the CEMS for the previous 12

months. (Colorado Regulation No. 3, Part F, Section VII.B.1.b.(i)(3))

10.22.4 Opacity Monitoring

10.22.4.1 In order to monitor compliance with the opacity limit, the owner or operator shall install, calibrate, maintain, and continuously operate a COM located at the outlet of the PM control device to continuously monitor opacity. The COM shall be installed, maintained, calibrated, and operated as required by 40 CFR Part 63, Subpart A, and according to PS-1 of 40 CFR Part 60, Appendix B. (Colorado Regulation No. 3, Part F. Section VII.C.2.a) Note that the Division considers that the requirements in 40 CFR Part 60 Subpart A are equivalent and thus is requiring that the COM meet those requirements.

The opacity monitoring system shall meet the requirements in Condition 18.

11. P009 – Clinker and Gypsum/Additive Silos and Weigh Feeders (Storage and Transfer to Finish Mill), P010 - Sheltered (A-Frame) Clinker Storage and Reclaim, P015 - Outdoor Clinker Piles and Handling, P012 and P011 – Cement Finish Mill and Auxiliaries and P013 – Cement Silos/Packhouse/Loadout

AIRs pt 009 (P009): S021 – Top of A Frame (belt 529-30 to 529-63), S026, S027, S029, S030, S031 – Weigh Feeders 1, 2, 4, 5 and 6, S032 – Bottom of A-Frame Transfer, S024 - #2 Clinker Silo, S038 – Surge Bin, S035 – Discharge of 629-3 Belt, S039 - S041 – Finish Mill Weigh Feeders, S038 – Surge Bin , and S033 - Gypsum/Limestone from 529-31 belt to Silos

AIRs pt 010 (P010): S034 - #6 Reclaim Feeder and S051 - Top of A Frame from 529-9 belt to 529-30 belt

AIRs pt 015 (P015): Outdoor Hot Clinker Pile

AIRs pt 011 (P011): S036 – Finish Mill, S037 – Finish Mill Auxiliary Dust Collector and Grinding and Limestone Handling

AIRs pt 031 (P012): S065 – Finish Mill Separator and S069Clinker Baghouse Dust to Finish Mill (SEP project)

AIRs pt 013 (P013) – S043 – Cement Storage Silos A10 and A13, S044 – Cement Storage Silo A7, S045 – Cement Finish Silo A2, S046 - Packhouses East and West (loading spouts) and S048 - Recirculating System

Parameter	Permit Condition Number	Limitations		Emission Factors	Monitoring	
					Method	Interval
Process Rate	11.1	P009	Clinker and Additives Handled: 600,000 tons/year 4,000 tons/day		Recordkeeping	Monthly
		P010	Clinker Handled: 600,000 tons/year 5,500 tons/day			
		P015	Maximum Clinker Stored: 120,000 tons Clinker Handled: 180,000 tons/year 5,500 tons/day			
		P011	Overall Fresh Feed to Mill: 631,600 tons/year 4,500 tons/day 15,000 tons/year limestone			

Parameter	Permit Condition Number	Limitations		Emission Factors	Monitoring	
					Method	Interval
Process Limits	11.1	P012	Cement Produced: 631,600 tons/year 4,500 tons/day SEP baghouse clinker dust handled: 161,280 tons/yr		Recordkeeping	Monthly
		P013	Cement Handled: 681,600 tons/year (includes 50,000 tons/yr imported cement) 4,500 tons/day			
Operating Hours	11.2	8,064 hours/year			Recordkeeping	Monthly
Days of Operation	11.3				Recordkeeping	Monthly
PM and PM_{10}	11.4	P009	PM: 9.3 tons/year	See Condition 11.4.2	Baghouse Operation and Maintenance	See Condition 11.4.1
			PM_{10}: 4.65 tons/year, 52 lbs/day			
		P010	PM: 21.96 tons/year			
			PM_{10}: 10.98 tons/year, 201 lbs/day			
		P011	PM: 17.05 tons/year		Recordkeeping and Calculation	Monthly
			PM_{10}: 8.65 tons/year 48 lbs/day			
		P012	PM: 21.9 tons/year			
			PM_{10}: 10.95 tons/year 107 lbs/day			
		P013	PM: 12.3 tons/year		Performance Tests	Every Five (5) Years
			PM_{10}: 6.2 tons/year 43 lbs/day			
		P015	PM: 2.05 tons/year	PM: 3.8 lb/VMT PM_{10}: 1.7 lb/VMT & 80% control	Recordkeeping and Calculation	Monthly
			PM_{10}: 0.92 ton/year 78 lbs/day			
				0.3 mile one way haul distanc		

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Opacity	11.5	Shall not exceed 20%, except as provided for below		Visible Emission Observation Method 9	Daily If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions - Shall not exceed 30%		Baghouse Maintenance and Operation	See Condition 19
Fugitive Particulate Emissions	11.6			Inspection	Weekly
NSPS Subpart F Opacity	11.7	Less than 10%		Method 22	S036 & S065 - Daily All Others - Monthly to Annually
CAM	11.8	See Condition 23 (S024, S034, S036, S037, S044, S045 & S046 only)			
MACT Requirements	11.9			See 40 CFR Part 63 Subpart LLL (Condition 22)	
		Outdoor Clinker Storage		See Condition 22.5	
		O & M Plan Requirements		See Conditions 22.10 and 22.11	

11.1 The amount of clinker, cement and other materials handled shall not exceed the limits listed in the table above (Construction Permit 98BO0259, as modified under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B Section II.A.6 and Part C, Section X, to add throughput limit to P012 for SEP baghouse as specified in August 19, 2008 submittal). The quantity of materials handled through each emission group shall be monitored and recorded monthly. Any information used to determine the monthly quantities of material handled shall be maintained and made available upon request Monthly quantities of material handled shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data.

Compliance with the daily throughput limits shall be monitored by dividing the monthly quantity of material handled through the emission group by the monthly number of days of operation for that emission group.

11.2 Annual hours of operation shall not exceed 8,064 (Construction Permit 98BO0259). Hours of operation shall be monitored and recorded monthly. Monthly hours of operation shall be used in a twelve month rolling total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated based on the previous twelve months' data. Records

of monthly and twelve month totals of operating hours shall be kept on-site and made available for inspection upon request.

11.3 Days of operation for these emission groups shall be monitored and recorded monthly. If any unit within an emission group operates during a day, that day counts as a day of operation. Days of operation shall be used to determine daily throughput and emissions as specified in Conditions 11.1 and 11.4.2.

11.4 PM and PM_{10} emission rates shall not exceed the limits listed in the above summary table (Construction Permit 98BO0259, as modified under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B Section II.A.6 and Part C, Section X, to increase emission limit for P012 for SEP baghouse per August 19, 2008 submittal and P009 to address S021 and S033 (APEN submitted 2/20/13)). Compliance with the PM and PM_{10} emission limits shall be monitored as follows:

11.4.1 **For all sources except P015**, the baghouses shall be operated and maintained in accordance with the requirements in Condition 19.

11.4.2 **For all sources except P015**, monthly emissions shall be calculated by the end of the subsequent month using the PM and PM_{10} emission factors described in the paragraphs below (in gr/dscf), hours of operation (as required by Condition 11.2) and the maximum design flow rate of the baghouses (see table below).

Note that the maximum design flow rate shall be converted to dry standard cubic feet for use in the emission calculations. The permittee shall maintain records of actual stack temperature and pressure for this conversion and shall make this information available to the Division upon request.

<u>For all but BH 725-28 (S069/SEP baghouse):</u> The PM and PM_{10} emission factor for any baghouse, within an emission group that has been performance tested shall be the results of the most recent performance test. The PM and PM_{10} emission factor for any baghouse within an emission group that has <u>not</u> been performance tested, shall be the results of the most recent performance test for any baghouse within that emission group that has been performance tested.

<u>For BH 725-28 (S069/SEP baghouse):</u> The PM and PM_{10} emission factor shall be the baghouse grain loading specified in the table below. Since BH 725-28 is located and vents inside a building performance testing is not required for this baghouse.

Monthly emissions of PM and PM_{10} shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data.

Emission Group	Stack ID/ Baghouse ID	Baghouse Grain Loading (gr/dscf)		Design Flow Rate (ACFM)	Stack ID/ Baghouse ID	Baghouse Grain Loading (gr/dscf)		Design Flow Rate (ACFM)
		PM	PM_{10}			PM	PM_{10}	
P009	S024/ BH 625-12	0.0233	0.0117	2,000	S031/BH 625-9	0.0233	0.0117	1,000
	S038/BH 725-5	0.0233	0.0117	1,000	S035/BH 625-14	0.0233	0.0117	1,000
	S026/BH 625-4	0.0233	0.0117	1,000	S039/BH 725-6	0.0233	0.0117	1,000
	S027/BH 625-5	0.0233	0.0117	1,000	S040/BH 725-7	0.0233	0.0117	1,000
	S029/BH 625-7	0.0233	0.0117	1,000	S041/BH 725-8	0.0233	0.0117	1,000
	S030/BH 625-8	0.0233	0.0117	1,000	S032/BH 625-10	0.0233	0.0117	2,000
	S021/BH 525-15	0.0233	0.0117	1,000	S033BH 625-11	0.0233	0.0117	1,000
P010	BH 625-15	0.0146	0.0073	45,000	S051/BH 525-17	0.0146	0.0073	10,000
P011	BH 725-2	0.0215	0.0102	18,200	S037BH 725-3	0.0215	0.0102	14,300
P012/031*	S065/ BH-725-10/ 11	0.0058	0.0029	147,060	S069/BH 725-28 (SEP BH)	0.01	0.005	1,300
P013	S043/BH 825-1	0.0239	0.0120	4,400	S046/BH 824-5	0.0239	0.0120	2,540
	S044/BH 825-2	0.0239	0.0120	4,400	S048/BH 825-6	0.0239	0.0120	1,280
	S045/BH 825-3	0.0239	0.0120	4,400	S046/BH 825-4	0.0239	0.0120	1,640

*identified in Construction Permit 95BO0259 as AIRS pt 031.

Compliance with the daily PM_{10} emission limitations shall be monitored by dividing the monthly PM_{10} emissions by the number of days the emission group operated during that month.

11.4.3 **For all sources except P015**, performance tests shall be conducted every five (5) years to measure the emission rates of filterable PM and PM_{10}. Performance tests shall be conducted in accordance with the appropriate EPA Test Methods.

A test shall be performed for a representative baghouse for each activity group (P009, P010, P011, P012, and P013) to monitor compliance with the grain loading (gr/scf) requirements included in the table in Condition 11.4.2. A different baghouse from each activity group shall be tested during each five year test event, unless all baghouses within the activity group have been tested or Division approval has been received for testing a baghouse that had been tested previously. Once performance tests have been conducted on all baghouses in an activity group (e.g. P009), the permittee shall repeat the process of testing a different baghouse from each activity group during each five year test event.

Note that performance tests were conducted in April and May 2011 for these sources.

Since S026 thru S032 and S038 thru S041 (baghouses within emission group P009) are located and vent inside a building, performance testing is not required for these baghouses.

For purposes of assessing compliance with the annual PM and PM_{10} emission limitations, the results of the tests shall be converted to a gr/dscf basis and compared to the grain loading requirements included in the table in Condition 11.4.2. Any test

result that indicates non-compliance with the grain loading requirements in Condition 11.4.2 shall be considered a violation of the annual emission limitation.

The protocol, test notification and submittal of test report shall meet the requirements specified in Condition 21.

11.4.4 **For P015**, compliance with the emission limits shall be monitored as follows:

11.4.4.1 Monthly emissions shall be calculated by the end of the subsequent month using the emission factors in the above summary table (from Construction Permit 98BO0259, final approval, modification No. 3, dated April 11, 2006) and the number of vehicle miles traveled during the month. Monthly emissions of PM and PM_{10} shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data.

A control efficiency of 80% can be applied to the monthly emission calculations provided the control measures in Condition 11.6.1 have been met.

11.4.4.2 Vehicle miles traveled (VMT) shall be monitored and recorded monthly for use in the emission calculations required by Condition 11.4.4.1. Logs, reports and/or other information used to record and/or determine the monthly VMT shall be maintained and made available to the Division upon request.

11.4.4.3 The one-way haul distance shall not exceed 0.3 miles. (Construction Permit 98BO0259). Records that demonstrate that the one-way haul distance to outdoor clinker storage meets this requirement shall be maintained and made available to the Division upon request.

11.5 **Except for P015**, these sources are subject to the opacity limits set forth in Condition 20 of this permit.

11.6 The activities addressed in **P015** are subject to the following fugitive particulate matter requirements:

11.6.1 Every owner or operator of a new source or activity that is subject to this Section III.D. and which is required to obtain an emission permit under Regulation No. 3 shall submit a fugitive particulate emission control plan meeting the requirements of this Section III.D. at such time as, and as part of, the required permit application. Such plan shall be approved or disapproved by the division in the course of acting to approve or disapprove the permit application and no emission permit shall be issued until a fugitive particulate emission control plan has been approved. (Colorado Regulation No. 1, Section III.D.1.b)

The following approved measures shall be used to control fugitive particulate matter emissions from the activities in P015. (Construction Permit 98BO0259)

A weekly inspection of the site shall be conducted to ensure the emission control elements are in place and effective. In addition, at any time when a fugitive dust problem is observed, the permittee shall take action to correct the problem. The permittee shall maintain records of the date and time of any fugitive dust problem observed, and the type and time of action taken to correct the problem. These records shall be maintained on site for inspection upon request.

11.6.1.1 If, at any time, visible emissions are observed to originate from pile(s), then the pile(s) shall be watered at least once per day until a crust forms on the surface.

11.6.1.2 The permittee shall operate a water application system (such as a sprinkler system or water truck) to minimize fugitive particulate matter emissions from roads and other traffic areas, loading areas and other sources of fugitive particulate matter emissions. The water truck and/or sprinkler system shall meet the following requirements:

a. During the day shift, the permittee shall operate the plant based water truck on full-time basis, 12 hours a day, 7 days a week. Watering shall occur according to this schedule excluding periods of freezing conditions, snow/ice covered roads, rain or a shutdown of the kiln and crushing/drying system for greater than 24 hours. As used here, the term "freezing conditions" means weather conditions severe enough to clog the water truck due to freezing. The permittee shall take reasonable precautions to prevent such freezing conditions. (Construction Permit 98BO0259 and Compliance Order on Consent 2002-124, paragraph 41.a, revised to remove statement regarding operation of the water truck is the sole assignment of individual and to remove specific measure to prevent freezing conditions.)

b. The water truck shall be operated during nights as necessary to water such areas adequately to control particulate emissions. (As provided for in Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate Compliance Order on Consent 2002-124, paragraph 41.b. The COC, at paragraph 46 requires this requirement to be in the permit.)

c. An automated sprinkler system shall be operated in accordance with the following requirements:

(i) Sprinklers will be set for 10 minutes or longer on each station. Cycle times will be set for at least one cycle every

two hours, except that the permittee may reduce watering if the area becomes too wet for operations.

(ii) The sprinkler system shall be positioned to cover 100% of the affected area.

(iii) The sprinkler system shall be in service from mid-April through mid-October each year, except during rain, snow or freezing conditions.

11.6.1.3 Haul roads shall be treated with chemical dust suppressants, as often as required, to maintain a surface crust. Such controls shall achieve a minimum control efficiency of 80%. Records of such application of dust suppressants and watering shall be maintained on site.

11.6.1.4 Traffic on and around storage pile(s) shall be minimized.

11.6.1.5 Height of fall material shall be minimized. Dust extractor used shall be in close proximity to the emission source.

11.6.1.6 Vehicle traffic on unpaved surfaces shall be restricted to established roadways.

11.6.1.7 Clinker shall be reclaimed from the storage pile(s) as soon as practicable.

11.6.1.8 Paved areas shall be kept clean using a high efficiency industrial sweeper.

11.6.1.9 Activities causing fugitive particulate matter emissions shall be suspended when wind speeds reach or exceed 30 miles per hour, averaged over a 60-minute period. Only those activities affected by wind speed, and for which it is possible to "suspend operation" need be shut down (i.e., the permittee cannot "shut down" storage piles, thus this condition would not apply to storage piles). Activities may continue when the average wind speed drops below 30 m.p.h. (Construction Permit 98BO0259, as modified per Section 1, Condition 1.3 of this permit)

The permittee shall install, calibrate, and operate a wind speed instrument which will be used to alert personnel when average wind speeds reach or exceed 30 m.p.h. The permittee shall maintain records of those dates and times when wind speed reaches or exceeds 30 m.p.h, averaged over a sixty minute period.

11.6.1.10 Spillages and other particulate matter accumulations shall be cleaned up with the least delay. The permittee shall operate a powered sweeper during day shift for 12 hours a day, 7 days a week to control accumulations on paved areas. Sweeping shall occur according to this schedule except under the following circumstances: wet pavement, snow/ice covered pavement, or shutdown of the kiln and crushing/drying system for greater than 24 hours. (Construction Permit 98BO0259 and Compliance Order on Consent 2002-124, paragraph 39.a, revised to

remove statement regarding operation of the sweeper is the sole assignment of individual.)

11.6.1.11 During the night shift, the Outdoor Clinker Discharge area shall be swept or watered as necessary while diverting clinker to the pit. Sweeping and watering will occur according to this schedule except under the following circumstances: Wet pavement, snow/ice covered pavement, or during a shutdown of the crushing/drying and kiln system for greater than 24 hours. (As provided for in Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate Compliance Order on Consent 2002-124, paragraphs 39.b and c. The COC, at paragraph 46 requires this requirement to be in the permit.

11.6.2 If the division determines that a source of activity which is subject to this Section III.D. (whether new or existing) is operating with emissions in excess of 20% opacity and such source is subject to the 20% emission limitation guideline; or if it determines that the source or activity which is subject to this Section III.D. is operating with visible emissions that are being transported off the property on which the source is located and such source is subject is to the no off property transport emission limitation guideline; or if it determines that any source or activity which is subject to this Section III.D. is operating with emissions that create a nuisance; it shall require the owner or operator of that source or activity to submit a written plan to the division for the control of fugitive particulate emissions within the time period specified in Section III.D. Provided, however, that in the case of a source or activity which already has a control plan, the division shall review said control plan and if it determines the plan does not meet the requirements of this Section III.D. it shall require the submission of a revised control plan. (Colorado Regulation No. 1, Section II.D.1.c)

The guidelines that apply to the activities associated with P015 are as follows:

11.6.2.1 Storage and Handling of Materials – Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to storage and handling operations. (Colorado Regulation No. III.D.2.c.(iii))

11.6.2.2 Haul Roads - The no off-property transport emission limitation guideline shall apply to on-site haul roads (i.e., those located on and abutted by the property owned or under control of the owner or operator of the haul road) and the nuisance guideline shall apply to off-site haul roads (i.e., those abutted on both sides by property not owned or under the control of the owner or operator of the haul road). (Colorado Regulation No. 1, Section III.D.2.e.(iii))

11.6.2.3 Haul Trucks - The no off-property transport emission limitation guideline shall apply to haul trucks; except that when operating off the property of the owner or operator, the applicable guideline shall be no off-vehicle

transport of visible emissions. (Colorado Regulation No. 1, Section III.D.2.f.(iii))

11.6.2.4 As used herein, "nuisance" shall mean the emission of fugitive particulates that constitutes a private or public nuisance as defined in common law, the essence of which is that such emissions are unreasonable interfering with another person's use and enjoyment of his property. Such interference must be "substantial" in its nature as measured by a standard that it would be of definite offensiveness, inconvenience, or annoyance to a normal person in the community. (Colorado Regulation No. 1, Section III.D.1.c)

11.6.2.5 The 20% opacity, no off-property transport, and nuisance emission limitation guidelines of this Section III.D. (as included in Conditions 11.6.2.1 through 11.6.2.3) are not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 1973, 25-7-115 as amended. (Colorado Regulation No. 1, Section III.D.1.e.(iii))

11.6.3 In the event that a revised control plan is requested under the provisions of Condition 11.6.2, the requirements in Condition 1.6.3 shall be met.

11.6.4 Violations of these fugitive particulate matter requirements and potential Division enforcement action related to those violations are defined in Condition 1.6.4.

11.7 On and after the date on which the performance test required to be conducted by §60.8 is completed, you may not discharge into the atmosphere from any affected facility other than the kiln and clinker cooler any gases which exhibit 10 percent opacity, or greater. (40 CFR Part 60 Subpart F § 60.42(c))

Any sources other than kilns (including associated alkali bypass and clinker cooler) that are subject to the 10 percent opacity limit must follow the appropriate monitoring procedures in §63.1350(f) (Condition 22.33), (m)(1) through (4), (10) and (11), (o), and (p) of this chapter. (60.64(b)(3)).

11.8 The following sources are subject to the CAM requirements set forth in Condition 23 of this permit: S024, S051, S034, S036, S037, S043, S044, S045 and S046.

11.9 These sources are subject to the requirements in 40 CFR Part 63 Subpart LLL as set forth in Condition 22 of this permit.

Specifically these sources are subject to the outdoor clinker storage pile and operation and maintenance plan requirements and any related recordkeeping and reporting requirements associated with those requirements.

Note that the opacity requirement in 40 CFR Part 60 Subpart F (Condition 11.7) that applies to these sources is more stringent than the opacity limits in 40 CFR Part 63 Subpart LLL (§§ 63.1343(b) and 63.1345, Conditions 22.4 and 22.6), so as provided for in § 63.1356 (Condition

22.62), these sources do not have to comply with the opacity requirements in §§ 63.1343(b) and 63.1345. The opacity requirements in §§ 63.1343(b) and 63.1345 are included in the permit shield for streamlined conditions (Section III.3) of this permit for these sources.

12. P014 - Material Handling System – Load-In and Load-Out

AIRs pt 014: S020 - Coal Silo/Elevator, S019 – Material Unloading Hopper (Railcar), S025 – Material Unloading Hopper and Spout (Trucks), and Outdoor Coal Storage

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	12.1			Recordkeeping	Annually
PM & PM_{10}	12.2		See Condition 12.2	Recordkeeping and Calculation	Annually
PM	12.3	See Condition 12.3		Baghouse Maintenance and Operation	See Condition 19
Opacity	12.4	Shall not exceed 20%, except as provided for below		Visible Emission Observation Method 9	Daily If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions - Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Baghouse Maintenance and Operation	See Condition 19
MACT Requirements	12.5			See 40 CFR Part 63 Subpart LLL (Condition 22)	
		Opacity Shall Not Exceed 10%		Method 22	Monthly to Annually
		O & M Plan Requirements		See Conditions 22.10 and 22.11	

12.1 Materials processed through these sources shall be monitored and recorded annually. Any information used to determine the annual quantity of materials processed shall be maintained and made available to the Division upon request.

12.2 Annual emissions for purposes of APEN reporting and the payment of annual fees shall be estimated using the annual materials processed, as required by Condition 12.1, and the emission factors listed in the table below above summary table (AP-42, Section 11.6, dated January 1995, Table 11.6-4) in the following equation:

Material	Emission Factor (lb/ton) (applies to each baghouse stack or transfer point)		Emission Factor Source	Control Efficiency
	PM	PM_{10}		
Coal	2.9×10^{-5} lb/ton	2.9×10^{-5} lb/ton	AP-42, Section 11.6 (dated 1/95), Table 11.6-4 – limestone transfer with fabric filter	N/A (factor includes control)
Clinker	2.9×10^{-5} lb/ton	2.9×10^{-5} lb/ton		
Limestone	2.9×10^{-5} lb/ton	2.9×10^{-5} lb/ton		
Other	0.0069 lb/ton	0.0033	AP-42, Section 11.12 (dated 6/06), Table 11.12-2 – aggregate transfer	99%

$$\text{Tons/mo} = \frac{[\text{EF (lbs/ton)} \times \text{annual material processed (ton/yr)}]}{2000 \text{ lb/ton}}$$

When materials other than coal and clinker are loaded, a control efficiency of 99% may be applied to the above calculation if the baghouses are operated and maintained in accordance with the requirements in Condition 19. The emission factors for coal and clinker account for baghouse control.

12.3 No owner or operator of a manufacturing process unit shall cause or permit emission of any particulate matter into the atmosphere during any consecutive sixty minute period which is in excess of the following (Colorado Regulation No. 1, III.C.1):

12.3.1 For process equipment having design rates of greater than 30 tons per hour, the allowable emission rate shall be determined by use of the equation (Colorado Regulation No. 1, III.C.1.b):

$$E = 17.31 (P)^{0.16}$$

Where:

E is the allowable particulate emissions in lbs/hr.
P is the process weight rate in tons/hr

In absence of evidence to the contrary, compliance with the PM limit is presumed provided the baghouses are operated and maintained in accordance with the requirements specified in Condition 19.

12.4 These sources are subject to the opacity limits set forth in Condition 20 of this permit.

12.5 These sources are subject to the requirements in 40 CFR Part 63 Subpart LLL as set forth in Condition 22 of this permit.

13. P007A - Handling and Processing of CKD and Raw Material Waste Dust

AIRs pt 049: S001 – Waste Dust Silo, S022 – Kiln Return Dust Silo, S066 – Cement Silo A5, S067 – CKD Loading Spout, 041 - Pug Mill/Truck Loading and 042 - Truck Hauling and Disposal at Lyons Quarry

Parameter	Permit Condition Number	Limitations		Emission Factors	Monitoring	
					Method	Interval
Process Rate	13.1	S001, S022, S066 & S067, 041 - Pug Mill/Truck Loading	Total Quantity of Materials conveyed, CKD and benification dust, together, on a dry basis: 133,000 tons/year 600 tons/day		Recordkeeping	Monthly
		042 - Hauling and Disposal	Total Quantity of material Hauled and Disposed, on Wet Basis: 173,403 tons/year 800 tons/day			
PM and PM_{10}	13.2	S001, S022, S066 & S067	PM: 19.95 tons/year PM_{10}: 9.98 tons/year 69.5 lbs/day	See Condition 13.2	Baghouse Operation and Maintenance Recordkeeping and Calculation Performance Tests S066 Pressure Drop Recording	See Condition 11.4.1 Monthly Every Five (5) Years Weekly
		041 - Pug Mill/Truck Loading	PM: 2.66 tons/year PM_{10}: 2.66 tons/year 24.00 lbs/day	PM: 0.8 lb/ton PM_{10}: 0.2 lb/ton	Recordkeeping and Calculation	Monthly
		042 - Hauling and Disposal	PM: 5.50 tons/year PM_{10}: 2.50 tons/year 23 lbs/day		Recordkeeping and Calculation Emission Control Plan	Monthly
Hours of Operation	13.3	S001, S022, S066& S067: 8064 hours/year			Recordkeeping	Monthly
Days of Operation	13.4				Recordkeeping	Monthly

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
NSPS Subpart F Opacity	13.5	Less than 10%		Method 22	Monthly to Annually
Opacity	13.6	Shall not exceed 20%, except as provided for below		Visible Emission Observation	Daily
				Method 9	If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions - Shall not exceed 30%		Baghouse Maintenance and Operation	See Condition 19 (Includes Weekly Pressure Drop for S066)
Fugitive PM Emissions	13.7			Inspection	Daily
Pit Restriction	13.8	Pit C Only		Certification	Annually
CAM	13.9	See Condition 23			
MACT Requirements	13.10			See 40 CFR Part 63 Subpart LLL (Condition 22)	
		O & M Plan Requirements		See Conditions 22.10 and 22.11	

13.1 The amount of materials handled shall not exceed the limits listed in the above table (Construction Permit 98BO0315). The quantity of materials handled shall be monitored and recorded monthly. Any information used to determine the monthly quantities of material handled shall be maintained and made available for inspection upon request. Monthly quantities of material handled shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data.

Compliance with the daily throughput limits shall be monitored by dividing the monthly quantity of material handled by the number of days of operation.

13.2 PM and PM_{10} emissions shall not exceed the limits listed in the above summary table. (Construction Permit 98BO0315, as modified under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X, to increase emission limitations for S001, S066 and S067 to include S022 (APEN submitted 2/20/13)). Compliance with the PM and PM_{10} limits shall be monitored as follows:

13.2.1 **For the pug mill/truck loading (041)** monthly emissions shall be calculated by the end of the subsequent month using the emission factors in the above summary table (from Construction Permit 98BO0315, initial approval, modification and transfer of ownership, issued April 7, 2004) and the monthly quantity of materials processed. Monthly emissions shall be used in a twelve month rolling total to monitor

compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data.

Compliance with the daily PM_{10} limitations shall be monitored by dividing the monthly PM_{10} emissions by the number of days the unit was operated.

Control efficiencies of 95% for PM and 80% for PM_{10} may be applied to the monthly calculations provided the pug mill and pelletizing machine are operated and maintained in accordance with manufacturer's recommendations and good engineering practices to provide a minimum moisture content of 20% water by weight.

A copy of the operating and maintenance procedures, schedules for maintenance and/or inspection activities and records related to the operation and maintenance of the pug mill and pelletizing machine and good engineering practices, such as records of routine maintenance and/or inspections shall be maintained and made available to the Division upon request.

13.2.2 **For S001, S022, S066, and S067**, the baghouses shall be operated and maintained in accordance with the requirements in Condition 19

13.2.3 **For S001, S022, S066, and S067**, monthly emissions shall be calculated by the end of the subsequent month using the PM and PM_{10} emission factors (in gr/dscf), hours of operation (as required by Condition 13.3) and the maximum design flow rate of the baghouse (see table below).

Note that the maximum design flow rate shall be converted to dry standard cubic feet for use in the emission calculations. The permittee shall maintain records of actual stack temperature and pressure for this conversion and shall make this information available to the Division upon request.

For all but BH 525-21 (S022): The PM and PM_{10} emission factor for any baghouse, within an emission group that has been performance tested shall be the results of the most recent performance test. The PM and PM_{10} emission factor for any baghouse within an emission group that has not been performance tested, shall be the results of the most recent performance test for any baghouse within that emission group that has been performance tested.

For BH 525-21 (S022): The PM and PM_{10} emission factor shall be the baghouse grain loading specified in the table below.

Monthly emissions of PM and PM_{10} shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data.

Stack ID / Baghouse ID	Baghouse Grain Loading (gr/dscf)		Design Flow Rate (ACFM)
	PM	PM_{10}	
S001 / BH 225-3	0.01	0.005	16,100
S022 / BH 525-21	0.03	0.015	5,278
S066 / BH 525-28	0.01	0.005	3,800
S067 / BH 825-7	0.01	0.005	2,600

Compliance with the daily PM_{10} limitations shall be monitored by dividing the monthly PM_{10} emissions by the number of days the unit was operated.

13.2.4 **For S001 and S066**, performance tests shall be conducted every five (5) years to measure the emission rates of filterable PM and PM_{10}. Performance tests shall be conducted in accordance with the appropriate EPA Test Methods.

Performance testing shall be conducted at a representative baghouse to demonstrate compliance with the grain loading (gr/dscf) requirements. A different baghouse shall be tested during each five year test event, unless all of the baghouses have been tested or Division approval has been received for tested a baghouse that had been tested previously. Once both baghouses have been testes, the permittee shall repeat the process of testing a different baghouse during each five year test event.

Note that performance tests were conducted in April and May 2011 for these sources.

Since S067 is located and vents inside a building performance testing is not required for this baghouse. Since BH 525-21 was not subject to emission limitations prior to the April 1, 2013 revised permit and the emission limitations are based on the grain-loading specified in the table below performance testing is not required for this baghouse.

For purposes of assessing compliance with the annual PM and PM_{10} emission limitations, the results of the tests shall be converted to a gr/dscf basis and compared to the grain loading requirements included in the table in Condition 13.2.3. Any test result that indicates non-compliance with the grain loading requirements in Condition 13.2.3 shall be considered a violation of the annual emission limitation.

The protocol, test notification and submittal of test report shall meet the requirements specified in Condition 21.

13.2.5 **For hauling and disposal (042)**, compliance with the emission limits shall be monitored as follows:

13.2.5.1 Monthly emissions shall be calculated by the end of the subsequent month using the equation included in Appendix H for limestone/rock hauling (from AP-42, Section 13.2.2 (dated 11/06), equation 1a (unpaved surfaces

at industrial sites)) and the number of vehicle miles traveled for the month. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual emission limitations.

Compliance with the daily PM_{10} limitations shall be monitored by dividing the monthly PM_{10} emissions by the number of days the unit was operated.

Records shall be maintained to verify that the appropriate values of required parameters (silt content and truck weight) have been used in the equation to calculate emissions.

A control efficiency of 80% can be applied to the monthly emission calculations provided the control measures in Condition 13.7.1 have been met.

13.2.5.2 Vehicle miles traveled (VMT) shall be monitored and recorded monthly for use in the emission calculations required by Condition 13.2.5.1. Logs, reports and/or other information used to record and/or determine the monthly VMT shall be maintained and made available to the Division upon request.

13.2.5.3 Records that demonstrate that the one-way haul distance to Pit "C" meets the limitation in Condition 13.8 shall be maintained and made available to the Division upon request.

13.2.6 **For S066**, the pressure drop across the inlet and outlet of the baghouse shall be monitored and recorded weekly, when the silo is operating. Results of the weekly reading will be recorded in a log book and made available for Division inspection upon request. A reading outside of the manufacturer's recommendation shall trigger the source to investigate the baghouse performance and make any repairs or adjustments necessary. A log of any repairs shall be maintained and made available upon request. The manufacturer's recommended pressure drop shall be maintained for Division inspection upon request. Note that the recording of the pressure drop readings is not required on days when the cement silo is not operating.

13.3 Annual hours of operation shall not exceed the limitations listed in the above summary table (Construction Permit 98BO0315). Hours of operation shall be monitored and recorded monthly. Monthly hours of operation shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data.

13.4 Days of operation for these sources shall be monitored and recorded monthly. Days of operation shall be used to determine daily throughput and emissions as specified in Conditions 13.1, 13.2.1, 13.2.3 and 13.2.5.1.

13.5 On and after the date on which the performance test required to be conducted by §60.8 is completed, you may not discharge into the atmosphere from any affected facility other than the

kiln and clinker cooler any gases which exhibit 10 percent opacity, or greater. (40 CFR Part 60 Subpart F § 60.42(c))

Any sources other than kilns (including associated alkali bypass and clinker cooler) that are subject to the 10 percent opacity limit must follow the appropriate monitoring procedures in §63.1350(f) (Condition 22.33), (m)(1) through (4), (10) and (11), (o), and (p) of this chapter. (CFR Part 60 Subpart F § 60.64(b)(3))

13.6 These sources, **except for hauling and disposal**, are subject to the opacity limits set forth in Condition 20 of this permit.

13.7 **Hauling and disposal** are subject to the following fugitive particulate matter requirements:

13.7.1 Every owner or operator of a new source or activity that is subject to this Section III.D. and which is required to obtain an emission permit under Regulation No. 3 shall submit a fugitive particulate emission control plan meeting the requirements of this Section III.D. at such time as, and as part of, the required permit application. Such plan shall be approved or disapproved by the division in the course of acting to approve or disapprove the permit application and no emission permit shall be issued until a fugitive particulate emission control plan has been approved. (Colorado Regulation No. 1, Section III.D.1.b)

The following approved measures shall be used to control fugitive particulate matter emissions **from hauling and disposal**. (Construction Permit 98BO0315 and Compliance Order on Consent 2002-124)

A daily inspection of hauling and disposal operations shall be conducted to ensure the emission control elements are in place and effective. In addition, at any time when a fugitive dust problem is observed, the permittee shall take action to correct the problem. The permittee shall maintain records of the date and time of any fugitive dust problem observed, and the type and time of action taken to correct the problem. These records shall be maintained on site for inspection upon request.

13.7.1.1 Transfer points shall be enclosed.

13.7.1.2 Moisture content of the materials prior to transfer to pug mill shall be adequate to effectively control emissions.

13.7.1.3 Haul roads shall be treated with chemical dust suppressants, as often as required, to maintain a surface crust. Such controls shall achieve a minimum control efficiency of 80%.

Records of such application of dust suppressants shall be maintained at the site.

13.7.1.4 At the disposal pit, the material shall be compacted and stabilized to minimize emissions.

13.7.1.5 Haul trucks of 95 tons capacity shall be used to minimize the vehicle-miles traveled. Spillage and exposure to wind shall be minimized by restricting the material load to 75 percent of the volume capacity of the trucks.

13.7.1.6 Spillages and other particulate matter accumulations shall be cleaned up with the least delay. The permittee shall operate a powered sweeper during the day shift for 12 hours a day, 7 days a week to control accumulations on paved areas. Sweeping shall occur according to this schedule except under the following circumstances: wet pavement, snow/ice covered pavement, or shutdown of the kiln and crushing/drying system for greater than 24 hours. (Construction Permit 98BO0315 and Compliance Order on Consent 2002-124, paragraph 39.a, revised to remove statement regarding operation of the sweeper is the sole assignment of individual.)

13.7.1.7 Activities causing fugitive dust emissions shall be suspended when wind speeds reach or exceed 30 miles per hour, averaged over a 60-minute period. Only those activities affected by wind speed, and for which it is possible to "suspend operation" need be shut down (i.e., the permittee cannot "shut down" storage piles, thus this condition would not apply to storage piles). Activities may continue when the average wind speed drops below 30 m.p.h. (Incorporated directly into this operating permit per Section 1, Condition 1.3 of this permit)

The permittee shall install, calibrate, and operate a wind speed instrument which will be used to alert personnel when average wind speeds reach or exceed 30 m.p.h. The permittee shall maintain records of those dates and times when wind speed reaches or exceeds 30 m.p.h, averaged over a sixty minute period.

13.7.1.8 Operate an automated sprinkler system to water the active CKD disposal site (Compliance Order on Consent 2002-124, paragraph 42.a).

a. Sprinklers will be set for 10 minutes or longer on each station. Cycle times will be set for at least one cycle every two hours, except CEMEX may reduce watering if the CKD disposal area is too wet for equipment operations.

b. The sprinklers will be positioned to cover 100% of the active CKD disposal area.

c. The sprinkler system will be in service from mid-April through mid-October each year, except during rain, snow, or freezing condition.

13.7.1.9 Water trucks will be used to water the active CKD disposal area as follows (Compliance Order on Consent 2002-124, paragraph 42.b):

a. The access road will be watered at least every three hours during the day, and as needed at night to minimize fugitive emissions. Watering may be reduced or suspended during cold weather if the road is ice covered and such ice cover is sufficient to minimize fugitive emissions.

b. When the sprinklers are not in service, water trucks will be used to water the active disposal area at least every 3 hours during the day, and as needed at night to minimize fugitive emissions.

c. Water truck operation as previously described will occur except in the following circumstances: freezing conditions, rain, or snow. As used here, the term "freezing conditions" means weather conditions severe enough to clog the water truck due to freezing. CEMEX shall take reasonable precautions, including but not limited to storing the water truck in a heated garage at night, to prevent such freezing conditions.

13.7.1.10 CEMEX agrees to limit the active disposal or working area of the CKD storage pit to 3 acres at any time. (Compliance Order on Consent 2002-124, paragraph 42.c)

a. Inactive or unused portions of the pit shall be covered with rock or treated with hydroscopic materials to minimize fugitive emissions.

b. Signage or berms shall be used to delineate the 3 acre active disposal area.

13.7.2 If the division determines that a source of activity which is subject to this Section III.D. (whether new or existing) is operating with emissions in excess of 20% opacity and such source is subject to the 20% emission limitation guideline; or if it determines that the source or activity which is subject to this Section III.D. is operating with visible emissions that are being transported off the property on which the source is located and such source is subject is to the no off property transport emission limitation guideline; or if it determines that any source or activity which is subject to this Section III.D. is operating with emissions that create a nuisance; it shall require the owner or operator of that source or activity to submit a written plan to the division for the control of fugitive particulate emissions within the time period specified in Section III.D. Provided, however, that in the case of a source or activity which already has a control plan, the division shall review said control plan and if it determines the plan does not meet the requirements of this Section III.D. it shall require the submission of a revised control plan. (Colorado Regulation No. 1, Section II.D.1.c)

The guidelines that apply to the activities associated **with hauling and disposal** are as follows:

13.7.2.1 Storage and Handling of Materials – Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to storage and handling operations. (Colorado Regulation No. III.D.2.c.(iii))

13.7.2.2 Haul Roads - The no off-property transport emission limitation guideline shall apply to on-site haul roads (i.e., those located on and abutted by the property owned or under control of the owner or operator of the haul road) and the nuisance guideline shall apply to off-site haul roads (i.e., those abutted on both sides by property not owned or under the control of the owner or operator of the haul road). (Colorado Regulation No. 1, Section III.D.2.e.(iii))

13.7.2.3 Haul Trucks - The no off-property transport emission limitation guideline shall apply to haul trucks; except that when operating off the property of the owner or operator, the applicable guideline shall be no off-vehicle transport of visible emissions. (Colorado Regulation No. 1, Section III.D.2.f.(iii))

13.7.2.4 As used herein, "nuisance" shall mean the emission of fugitive particulates that constitutes a private or public nuisance as defined in common law, the essence of which is that such emissions are unreasonable interfering with another person's use and enjoyment of his property. Such interference must be "substantial" in its nature as measured by a standard that it would be of definite offensiveness, inconvenience, or annoyance to a normal person in the community. (Colorado Regulation No. 1, Section III.D.1.c)

13.7.2.5 The 20% opacity, no off-property transport, and nuisance emission limitation guidelines of this Section III.D. (as included in Conditions 13.7.2.1 through 13.7.2.3) are not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 1973, 25-7-115 as amended. (Colorado Regulation No. 1, Section III.D.1.e.(iii))

13.7.3 In the event that a revised control plan is requested under the provisions of Condition 13.7.2, the requirements in Condition 1.6.3 shall be met.

13.7.4 Violations of these fugitive particulate matter requirements and potential Division enforcement action related to those violations are defined in Condition 1.6.4.

13.8 Only Pit "C" shall be used for disposal of CKD and Benificiation Dust. The one-way haul distance is 0.38 mile. (Construction Permit 98BO0315).

13.9 The following sources are subject to the CAM requirements set forth in Condition 23 of this permit: S001, S022 and S066.

13.10 These sources are subject to the requirements in 40 CFR Part 63 Subpart LLL as set forth in Condition 22 of this permit.

Specifically these sources are subject to the operation and maintenance plan requirements and any related recordkeeping and reporting requirements associated with those requirements.

Note that the opacity requirement in 40 CFR Part 60 Subpart F (Condition 13.5) that applies to these sources is more stringent than the opacity limit in 40 CFR Part 63 Subpart LLL (§ 63.1345, Condition 22.6), so as provided for in § 63.1356 (Condition 22.62), these sources do not have to comply with the opacity requirement in § 63.1345. The opacity requirement in § 63.1345 is included in the permit shield for streamlined conditions (Section III.3) of this permit with respect to these sources.

14. P018 –General Fugitive Emissions Requirements

AIRs pt 028: Process Fugitives (Lyons Cement Plant) Not Subject to Emission Limitations

AIRs pt 019: Haul Roads (Lyons Cement Plant/Quarry and Dowe Flats Quarry) Not Subject to Emission Limitations

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Fugitive Emission Activity Information	14.1			Recordkeeping	Annually
PM &PM_{10} Emissions	14.2			Calculation	Annually
Fugitive or Excess Emission Observations or Complaints	14.3			Document and Investigate	Each Occurrence
Fugitive Particulate Emissions Requirements	14.4			Certification	Semi-Annually

The requirements in Conditions 14.1 and 14.2 apply to process fugitives and haul road emissions not subject to emission limitations. The requirements in Conditions 14.3 and 14.4 apply to the fugitive emission sources addressed in Section II of this permit which include this Condition 14 (those fugitive emissions sources not subject to emission limitations), as well as Conditions 1 (Dowe Flats and Lyons Quarry fugitive dust sources), 3 (storage and handling of raw materials), 11 (outdoor clinker storage and handling) and 13 (CKD and waste dust hauling and disposal) of this permit.

14.1 Records of the annual amount of materials hauled, handled or stored and all other information necessary to estimate emissions from fugitive particulate matter sources, shall be maintained and made available to the Division for inspection upon request.

14.2 For APEN reporting purposes, annual PM and PM_{10} emissions shall be estimated using the records obtained under Condition 14.1, and appropriate emissions factors and/or equations and control efficiencies. Records of the calculations shall be kept on site for Division inspection upon request.

NOTE: Some haul roads and/or fugitive emission sources at the Lyons Cement Plant, Lyons Quarry and/or Dowe Flats Quarry are subject to annual emission and throughput limits. These sources are addressed in Section II, Conditions 1 (Dowe Flats and Lyons Quarry fugitive dust sources), 3 (storage and handling of raw materials), 11 (outdoor clinker storage and handling) and 13 (CKD and waste dust hauling and disposal) of this permit.

14.3 The permittee shall document all reported observations or complaints from citizens, inspectors, contractors, or employees of fugitive or excess emissions. The permittee will investigate each occurrence and will document its findings and any corrective action taken or implemented. (As provided for in Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate Compliance Order on Consent 2002-124, paragraph 44. The COC, at paragraph 46 requires this requirement to be in the permit.)

14.4 These sources are subject to the following fugitive particulate matter requirements.

NOTE: These requirements are in addition to the fugitive control measures specified in Section II, Conditions 1 (Dowe Flats and Lyons Quarry fugitive dust sources), 3 (storage and handling of raw materials), 11 (outdoor clinker storage and handling) and 13 (CKD and waste dust hauling and disposal) of this permit.

14.4.1 Every owner or operator of a source or activity that is subject to this Section III.D. shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere through the use of all available practical methods which are technologically feasible and economically reasonable and which reduce, prevent and control emissions so as to facilitate the achievement of the maximum practical degree of air purity in every portion of the State. (Colorado Regulation No. 1, Section III.D.1.a).

The permittee shall utilize the following control measures to minimize fugitive particulate emissions:

14.4.1.1 The permittee shall treat haul roads with chemical dust suppressants or stabilizers as often as necessary to maintain a surface crust, as required in Section II, Condition 13.7.1.3 of this permit. Such materials shall be applied to the haul road to the CKD disposal pit at least every six months. Chemical stabilizers and/or dust suppressants shall be applied in accordance with good engineering practices. Records of good engineering practices, such as records of chemical stabilizer application and manufacturer's recommendations for application shall be maintained and

made available to the Division upon request. (As provided for in Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate Compliance Order on Consent 2002-124, paragraph 43. The COC, at paragraph 46 requires this requirement to be in the permit. COC requirement was revised to allow use of any chemical stabilizer or dust suppressant.)

14.4.1.2 The permittee shall use a water application system (such as a water truck or sprinkler system) to minimize fugitive particulate emissions from roads and other traffic areas, loading areas, the edges of clinker piles, and other sources of fugitive particulate matter emissions. (As provided for in Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate Compliance Order on Consent 2002-124, paragraph 41. The COC, at paragraph 46 requires this requirement to be in the permit.) The water truck and/or sprinkler system shall meet the following requirements:

a. During the day shift, the permittee will operate the plant based water truck on a full time basis, 12 hours a day, 7 days a week. Watering will occur according to this schedule except under the following circumstances: Freezing conditions, snow/ice covered roads, rain, or during a shutdown of the crushing/drying system and the kiln system for greater than 24 hours. As used here, the term "freezing conditions" means weather conditions severe enough to clog the water truck due to freezing. The permittee shall take reasonable precautions to prevent such freezing conditions. (As provided for in Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate Compliance Order on Consent 2002-124, paragraph 41.a, revised to remove statement regarding operation of the water truck is the sole assignment of individual and to remove specific measure to prevent freezing conditions. The COC, at paragraph 46 requires this requirement to be in the permit.)

b. The water truck shall be operated during nights as necessary to water such areas adequately to control particulate emissions. (As provided for in Section I, Condition 1.3 and Colorado Regulation No. 3, Part C, Section I.A.7 and III.B.7, to incorporate Compliance Order on Consent 2002-124, paragraph 41.b. The COC, at paragraph 46 requires this requirement to be in the permit.)

c. An automated sprinkler system shall be operated in accordance with the following requirements:

(i) Sprinklers will be set for 10 minutes or longer on each station. Cycle times will be set for at least one cycle every

two hours, except that the permittee may reduce watering if the area becomes too wet for operations.

(ii) The sprinkler system shall be positioned to cover 100% of the affected area.

(iii) The sprinkler system shall be in service from mid-April through mid-October each year, except during rain, snow or freezing conditions.

14.4.1.3 The permittee shall install and operate a truck wash system to minimize tracking out of any materials. The truck wash system shall be used to wash cement spillage off of cement transport trucks before the trucks leave the facility. Operation of the truck wash is not required when ambient temperatures are such that use of the truck wash creates a safety hazard due to ice formation and when the truck wash is non-operational. When the truck wash is not in use, the permittee shall use alternate methods of removing cement spillage from the trucks before they leave the facility. The permittee shall keep records of the time periods when the truck wash is not used because it is non-operational and shall make such records available to the Division upon request. The truck wash shall be repaired as soon as practicable after break-downs.

NOTE: Some fugitive emission sources at the Lyons Cement Plant are subject to other fugitive control measures. These sources are addressed in Section II, Conditions 1 (Dowe Flats and Lyons Quarry fugitive dust sources), 3 (storage and handling of raw materials), 11 (outdoor clinker storage and handling) and 13 (CKD and waste dust hauling and disposal) of this permit.

14.4.2 If the division determines that a source of activity which is subject to this Section III.D. (whether new or existing) is operating with emissions in excess of 20% opacity and such source is subject to the 20% emission limitation guideline; or if it determines that the source or activity which is subject to this Section III.D. is operating with visible emissions that are being transported off the property on which the source is located and such source is subject is to the no off property transport emission limitation guideline; or if it determines that any source or activity which is subject to this Section III.D. is operating with emissions that create a nuisance; it shall require the owner or operator of that source or activity to submit a written plan to the division for the control of fugitive particulate emissions within the time period specified in Section III.D. Provided, however, that in the case of a source or activity which already has a control plan, the division shall review said control plan and if it determines the plan does not meet the requirements of this Section III.D. it shall require the submission of a revised control plan. (Colorado Regulation No. 1, Section III.D.1.c).

The guidelines that apply to these activities are as follows:

14.4.2.1 Storage and Handling of Materials – Both the 20% opacity and the no off-property transport emission limitation guidelines shall apply to storage and handling operations. (Colorado Regulation No. III.D.2.c.(iii))

14.4.2.2 Haul Roads - The no off-property transport emission limitation guideline shall apply to on-site haul roads (i.e., those located on and abutted by the property owned or under control of the owner or operator of the haul road) and the nuisance guideline shall apply to off-site haul roads (i.e., those abutted on both sides by property not owned or under the control of the owner or operator of the haul road). (Colorado Regulation No. 1, Section III.D.2.e.(iii))

14.4.2.3 Haul Trucks - The no off-property transport emission limitation guideline shall apply to haul trucks; except that when operating off the property of the owner or operator, the applicable guideline shall be no off-vehicle transport of visible emissions. (Colorado Regulation No. 1, Section III.D.2.f.(iii))

14.4.2.4 As used herein, "nuisance" shall mean the emission of fugitive particulates that constitutes a private or public nuisance as defined in common law, the essence of which is that such emissions are unreasonable interfering with another person's use and enjoyment of his property. Such interference must be "substantial" in its nature as measured by a standard that it would be of definite offensiveness, inconvenience, or annoyance to a normal person in the community. (Colorado Regulation No. 1, Section III.D.1.c)

14.4.2.5 The 20% opacity, no off-property transport, and nuisance emission limitation guidelines of this Section III.D. (as included in Conditions 14.4.2.1 through 14.4.2.3) are not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 1973, 25-7-115 as amended. (Colorado Regulation No. 1, Section III.D.1.e.(iii))

14.4.3 In the event that a revised control plan is requested under the provisions of Condition 14.4.2, the requirements in Condition 1.6.3 shall be met.

14.4.4 Violations of these fugitive particulate matter requirements and potential Division enforcement action related to those violations are defined in Condition 1.6.4.

15. Gasoline Storage Tank, 3,000 Gallon Capacity

Parameter	Permit Condition Number	Limitations	Compliance Emission Factor	Monitoring	
				Method	Interval
Transfer of Gasoline	15.1			See Condition 15.1	
Equipment Requirements	15.2			Certification	Annually
Vapor Control System	15.3			Certification	Annually
Disposal of Gasoline	15.4			Certification	Annually

Note that this emission unit is exempt from the APEN reporting requirements in Regulation No.3, Part A and the construction permit requirements in Regulation No. 3, Part B provided actual, uncontrolled emissions are less than the APEN de minimis level.

15.1 The owner or operator of storage tanks at a gasoline dispensing facility, which receives and stores gasoline, shall not allow the transfer of petroleum liquid from any delivery vessel into any tank unless the tank is equipped with a submerged fill pipe and the vapors displaced from the storage tank during filling are processed by a vapor control system (Colorado Regulation No. 7, Section VI.B.3). Compliance with this requirement shall be monitored by meeting the requirements in Conditions 15.2 and 15.3.

15.2 Tanks equipped with a submerged fill pipe shall meet the specifications of Regulation No. 7, Appendix A (Colorado Regulation No. 7, Section VI.B.3.c).

15.3 The vapor control system shall meet the following requirements:

15.3.1 Vapor control system shall include a vapor-tight line from the storage tank to delivery vessel (Colorado Regulation No. 7, Section VI.B.3.d.(i)).

15.3.2 The owner or operator shall ensure that operating procedures are used so that gasoline cannot be transferred into the tank unless the vapor control system is in use (Colorado Regulation No. 7, Section VI.B.3.e).

15.3.3 This tank shall only be filled with gasoline from a certified (in accordance with Colorado Regulation No. 7, Section VI.D) delivery truck equipped with an approved gasoline vapor collection system. The permittee's operating procedures shall include this requirement.

15.4 No owner or operator of a gasoline dispensing facility shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any manner that would result in evaporation (Colorado Regulation No. 7, Section V.B). The permittee's operating procedures for gasoline dispensing shall include these requirements.

16. Daily Visible Emissions Observations

16.1 A daily plant walk through shall be performed to look for visible emissions. During the walk through, an observer will survey the plant, including remote locations of the facility (i.e. Dowe Flats Quarry and conveyor and ckd disposal site) from at least five (5) observation points to observe visible emissions, except as provided for in Condition 16.3. From these locations together, all of the facility's baghouses and material transfer points can be observed.

16.1.1 If visible emissions are observed from any stack, the following applies:

16.1.1.1 The permittee shall undertake the appropriate corrective process and/or maintenance actions as soon as practicable. When these actions are completed, that stack will be observed again.

16.1.1.2 If, after the actions taken in Condition 16.1.1.1, visible emissions persist, the permittee shall perform a Method 9 test of that stack.

16.1.1.3 Subject to the provisions of C.R.S. 15-7-123 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

16.1.1.4 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certificate shall be kept on site and made available to the Division upon request.

16.1.2 If visible emissions from fugitive sources are noted, the following applies:

16.1.2.1 The permittee shall investigate to insure that the provisions of the appropriate fugitive dust control plan are being implemented. If necessary, additional actions shall be taken to minimize visible emissions.

16.2 Records shall be maintained of the daily observations including the location(s) of the visible emission observations, the results of the observations, any corrective or additional actions taken or maintenance conducted and any follow-up observations and the results of those observations.

16.3 The number of locations for the daily visible emission observations may be reduced under the following circumstances:

16.3.1 Daily visible emission observations are not required at remote locations on days when operations are not occurring at these locations.

16.3.2 Daily visible emission observations are not required at remote locations on days when operations are not occurring for four (4) consecutive daylight hours or more.

16.3.3 Daily visible emission observations are not required at the cement plant on days when the plant equipment is not operating.

16.3.4 Daily visible emission observations are not required at the cement plant on days when the plant equipment is not operating for four (4) consecutive daylight hours or more.

16.4 The daily walk through for visible emissions does not apply to the kiln and clinker cooler, which are equipped with opacity monitors.

16.5 The daily walk through for visible emissions is in addition to the other visible emission observations required by other conditions in this permit (e.g. Condition 20.5.1, CAM (Condition 23 and Appendix G), NSPS OOO (Condition 2.2) and NESHAP LLL (Condition 22))

17. Cold Cleaner Solvent Vats

Parameter	Permit Condition Number	Limitations	Compliance Emission Factor	Monitoring	
				Method	Interval
Work Practice Standards	17.1			Certification	Annually
Transfer and Storage of Waste Solvents	17.2			Certification	Annually

Note that these emission units are exempt from the APEN reporting requirements in Regulation No. 3, Part A and the construction permit requirements in Regulation No. 3, Part B.

17.1 The design and operation of these cold cleaner solvent vats shall meet the standards defined in Colorado Regulation 7, Section X.B. The permittee's operating procedures for solvent cleaning shall include these requirements.

17.2 The transfer and storage of waste and used solvents from the cold cleaner solvent vats are subject to the following requirements (Colorado Regulation No. 7, Section X.A.3 and 4):

17.2.1 In any disposal or transfer of waste or used solvent, at least 80 percent by weight of the solvent/waste liquid shall be retained (i.e., no more than 20 percent of the liquid solvent/solute mixture shall evaporate or otherwise be lost during transfers).

17.2.2 Waste or used solvents shall be stored in closed containers unless otherwise required by law.

The permittee's operating procedures for the solvent vats and contracts and/or agreements with contractors to service these vats shall include these requirements.

18. Continuous Emission Monitoring and Continuous Opacity Monitoring Systems

The requirements in this Condition 18 apply to the continuous emission and opacity monitoring systems utilized by the kiln and dryer to assess compliance with emissions limitations and standards, other than those found in 40 CFR Part 63 Subpart LLL, "National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry" (Condition 22). Those monitoring systems utilized for monitoring compliance with 40 CFR Part 63 Subpart LLL requirements, in addition to other emission limits or standards, may also be subject to requirements in 40 CFR Part 63 Subpart LLL (Condition 22).

18.1 Equipment and QA/QC Requirements

18.1.1 The Continuous Emission Monitoring Systems (CEMS) are subject to the applicable requirements in 40 CFR Part 60. These CEMS are subject to the quality assurance/quality control requirements in 40 CFR Part 60, Subpart A § 60.13(d) and Appendix F and Condition 18.1.1.3. The monitoring systems shall meet the equipment, installation and performance specifications as follows:

18.1.1.1 The NO_X, SO_2 and diluent (CO_2 or O_2) monitors shall meet the equipment, installation and performance specifications of 40 CFR Part 60 Appendix B, Performance Specifications 2 and 3. In addition, the NO_X CEMS shall meet the equipment, installation and performance specifications of 40 CFR Part 60 Appendix B, Performance Specification 6. (paragraph 11 of Consent Decree (09-cv-0019-MEK-MEH) filed on April 19, 2013)

18.1.1.2 The CO monitor shall meet the equipment, installation and performance specifications of 40 CFR Part 60 Appendix B, Performance Specification 4/4A and 6.

18.1.1.3 The NO_X, SO_2 and CO CEMS are subject to the following requirements:

a. Relative Accuracy Test Audits (RATAs): RATAs shall be conducted in the units (e.g., lb/MMBtu, ppm) of the emission limitation for all of the emission limitations that are applicable to the emissions unit. The RATAs for emissions units that have annual emission limits (tons/yr) will be conducted in terms of pounds per hour (lb/hr).

b. The DAHS shall be able to record and manipulate the data in the units (e.g., lb/MMBtu, ppm) of the emission limitation and meet the reporting requirements for all of the emission limitations that are applicable to the emissions unit.

18.1.2 The COMS are subject to the applicable requirements in 40 CFR Part 60. Each continuous opacity monitoring system shall meet the design, installation, equipment and performance specifications in 40 CFR Part 60, Appendix B, Performance Specification 1.

18.1.3 Quality assurance/quality control plans shall be prepared for the continuous emission monitoring systems in accordance with the applicable requirements in 40 CFR Part 60, Appendix F. The quality assurance/quality control plans shall be made available to the Division upon request. Revisions shall be made to the plans at the request of the Division.

18.1.4 40 CFR Part 60 Subpart A § 60.13(d) requirements:

18.1.4.1 Owners and operators of a CEMS installed in accordance with the provisions of this part, must check the zero (or low level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span must, as a minimum, be adjusted whenever either the 24-hour zero drift or the 24-hour span drift exceeds two times the limit of the applicable performance specification in Appendix B of this part. The system must allow the amount of the excess zero and span drift to be recorded and quantified whenever specified. Owners and operators of a COMS installed in accordance with the provisions of this part, must automatically, intrinsic to the opacity monitor, check the zero and upscale (span) calibration drifts at least once daily. For a particular COMS, the acceptable range of zero and upscale calibration materials is as defined in the applicable version of PS-1 in appendix B of this part. For a COMS, the optical surfaces, exposed to the effluent gases, must be cleaned before performing the zero and upscale drift adjustments, except for systems using automatic zero adjustments. The optical surfaces must be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity. (60.11(d)(1))

18.1.4.2 Unless otherwise approved by the Administrator, the following procedures must be followed for a COMS. Minimum procedures must include an automated method for producing a simulated zero opacity condition and an upscale opacity condition using a certified neutral density filter or other related technique to produce a known obstruction of the light beam. Such procedures must provide a system check of all active analyzer internal optics with power or curvature, all active electronic circuitry including the light source and photodetector assembly, and electronic or electro-mechanical systems and hardware and or software used during normal measurement operation. (60.13(d)(2))

18.2 General Provisions

18.2.1 Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under Condition 18.1.4, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows (60.13(e)):

18.2.1.1 All continuous monitoring systems referenced by paragraph (c) of this section for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period. (60.13(e)(1))

18.2.1.2 All continuous monitoring systems referenced by paragraph (c) of this section for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. (60.13(e)(2))

18.2.2 All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of this part shall be used. (60.13(f))

18.2.3 Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in § 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. (60.13(h)(1))

18.2.4 For continuous monitoring systems other than opacity, 1-hour averages shall be computed as specified in 60.13(h)(2)(i) through (ix), except that the provisions pertaining to the validation of partial operating hours are only applicable for affected facilities that are required by the applicable subpart to include partial hours in the emission calculations (60.13(h)(2)).

18.2.5 All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in the applicable subpart. After conversion into units of the standard, the data may be rounded to the same number of significant digits used in the applicable subpart to specify the emission limit. (60.13(h)(3))

18.2.6 Alternative monitoring system, alternative reference method, or any other alternative for the required continuous emission monitoring systems shall not be used without having obtained prior written approval from the appropriate agency, either the Division or the U.S. EPA, depending on which agency is authorized to approve such alternative under applicable law. Any alternative continuous emission monitoring systems or continuous opacity monitoring systems must be certified in accordance with the requirements of 40 CFR Part 60. Guidelines for alternatives to monitoring procedures or requirements and relative accuracy (RA) tests are provided in § 60.13(i) and (j).

18.2.7 All test and monitoring equipment, methods, procedures and reporting shall be subject to the review and approval by the appropriate agency, either the Division or the U.S.EPA, depending on which agency is authorized to approve such alternative under applicable law, prior to any official use. The Division shall have the right to inspect such equipment, methods and procedures and data obtained at any time. The Division shall provide a witness(s) for any and all tests as Division resources permit.

18.2.8 A file shall be maintained of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by applicable portions of 40 CFR Part 60 Subpart A and Appendices B and F recorded in a permanent form suitable for inspection.

18.3 Recordkeeping Requirements

18.3.1 Any owner or operator subject to the provisions of this part shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. (60.7(b))

18.3.2 Any owner or operator subject to the provisions of this part shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by this part recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records, except as provided for in § 60.13(f). (60.13(f))

18.4 Reporting Requirements

18.4.1 Each owner or operator required to install a continuous monitoring device shall submit excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and-or summary report form (see Condition 18.4.2) to the Division semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the Division, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each six-month period. Written reports of excess emissions shall include the following information (60.7(c)):

18.4.1.1 The magnitude of excess emissions computed in accordance with § 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period. (60.7(c)(1))

18.4.1.2 Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted. (60.7(c)(2))

18.4.1.3 The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments. (60.7(c)(3))

18.4.1.4 When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report. (60.7(c)(4))

18.4.2 The summary report form shall contain the information and be in the format shown in figure 1 of § 60.7 unless otherwise specified by the Division. One summary report form shall be submitted for each pollutant monitored at each affected facility. (60.7(d))

18.5 Specific Provisions for using an SO_2 CEMS for 40 CFR Part 63 Subpart LLL HCl limit

18.5.1 The span value for the SO_2 CEMS monitor is the SO_2 emission concentration that corresponds to 125 percent of the applicable emissions limit at full clinker production capacity and the expected maximum fuel sulfur content. (60.63(f)(3))

18.5.2 You must conduct performance evaluations of each SO_2 CEMS monitor according to the requirements in §60.13(c) and Performance Specification 2 of appendix B to this part (part 60). You must use Methods 6, 6A, or 6C of appendix A-4 to this part (part 60) for conducting the relative accuracy evaluations. The method ASME PTC 19.10-1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see §60.17) is an acceptable alternative to Method 6 or 6A of appendix A-4 to this part. (60.63(f)(4))

18.5.3 You must comply with the quality assurance requirements in Procedure 1 of appendix F to this part (part 60) for each NO_X and SO_2 CEMS, including quarterly accuracy determinations for monitors, and daily calibration drift tests. (60.63(f)(5))

19. Baghouse Operation and Maintenance

Routine maintenance of and operational procedures performed on the baghouses shall be conducted in accordance with manufacturer's specifications and/or good engineering practices. Routine maintenance and operational procedures shall be in written format. A copy of the operating and maintenance procedures, schedules for maintenance and/or inspection activities and records related to the operation

and maintenance of the baghouses and good engineering practices, such as records of routine maintenance and/or inspections shall be maintained and made available to the Division upon request.

20. Colorado Regulation No. 1 Opacity Requirements

These limits apply only to those sources, which are referred to this Condition throughout this permit.

20.1 Except as provided in Condition 20.2, below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity. This standard is based on 24 consecutive opacity readings taken at 15-second intervals for six minutes. The approved reference test method for visible emissions measurement is EPA Method 9 (40 CFR Part 60, Appendix A (July, 1992)) in all subsections of Section II.A of Regulation No. 1. (Colorado Regulation No. 1, II.A.1).

20.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from the building of a new fire, cleaning of fire boxes, soot blowing, start-up, any process modification, or adjustment or occasional cleaning of control equipment, which is in excess of 30% opacity for a period or periods aggregating more than six minutes in any sixty consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

Compliance with these opacity limits shall be monitored as follows:

20.3 Baghouses shall be operated and maintained in accordance with the requirements in Condition 19.

20.4 Daily visible emission observations shall be conducted in accordance with the requirements in Condition 16.

20.5 Compliance with the 30% limit set forth in Condition 20.2 shall be monitored as follows:

20.5.1 Visual emission observations shall be conducted in accordance with EPA Method 9, if any of the activities listed in Condition 20.2 occurs continuously for one hour or more. A reading shall be conducted within one hour and ten minutes of commencement of any of the above activities and every 1 hour thereafter during the activity.

20.5.2 The permittee shall maintain records of the type of activity and the day, time and length for which any activity listed in Condition 20.2 occurs.

20.5.3 Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

20.5.4 These records, results of Method 9 readings, and a copy of the Method 9 reader's certification, shall be maintained and made available to the Division for inspection upon request.

21. Particulate Matter Performance Testing

This requirement applies only to those sources, which are referred to this condition throughout this permit (see Conditions 5.6.2, 11.4.3 and 13.2.4). Performance testing for filterable particulate matter emissions shall be performed in accordance with the requirements and procedures set forth in the appropriate EPA Test Methods. Frequency of testing and the specific emission limitations for which testing is required shall be as specified for those sources which are referred to this condition.

A stack testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior The test protocol, test, and test report must be in accordance with the requirements of the APCD Compliance Test Manual (https://www.colorado.gov/pacific/cdphe/inspections-and-enforcement). A stack testing protocol shall be submitted for Division approval at least forty-five (45) calendar days prior to any performance of the test required under this condition. No stack test required herein shall be performed without prior approval of the protocol by the Division. The Division reserves the right to witness the test. In order to facilitate the Division's ability to make plans to witness the test, notice of the date(s) for the stack test shall be submitted to the Division at least thirty (30) calendar days prior to the test. The Division may for good cause shown, waive this thirty (30) day notice requirement. In instances when a scheduling conflict is presented, the Division shall immediately contact the permittee in order to explore the possibility of making modifications to the stack test schedule. The compliance test results shall be submitted to the Division within forty-five (45) calendar days of the completion of the test unless a longer period is approved by the Division.

22. National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry

Those sources throughout Section II of this permit that are referred to this condition are subject to the requirements of 40 CFR Part 63, Subpart LLL, "National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry".

The requirements below reflect the current rule language as of the revisions to 40 CFR Part 63 Subpart LLL published in the Federal Register on July 27, 2015. However, if revisions to this Subpart are published at a later date, the owner or operator is subject to the requirements contained in the revised version of 40 CFR Part 63, Subpart LLL.

Please note that a direct final rule was published in the Federal Register on July 25, 2016. Provided that no adverse comments are received by August 24, 2016, the provisions take effected on September 8, 2016. The direct final rule corrects an inadvertent error and temporarily revises the testing and monitoring requirements for HCl due to the current unavailability of calibration gas. Therefore, the requirements below may change in the future.

The relevant requirements in 40 CFR Part 63 Subpart LLL that apply to these sources, are as follows:

Definitions (§ 63.1341)

22.1 All definitions in § 63.1341 apply but the following definitions have been included in the permit in order to provide more clarity to the requirements.

22.1.1 *Open clinker storage pile* means a clinker storage pile on the ground for more than three days that is not completely enclosed in a building or structure.

22.1.2 *Operating day* means any 24-hour period beginning at 12:00 midnight during which the kiln produces any amount of clinker. For calculating the 30-day rolling average emissions, kiln operating days do not include the hours of operation during startup or shutdown.

22.1.3 *Rolling average* means the weighted average of all data, meeting QA/QC requirements or otherwise normalized, collected during the applicable averaging period. The period of a rolling average stipulates the frequency of data averaging and reporting. To demonstrate compliance with an operating parameter a 30-day rolling average period requires calculation of a new average value each operating day and shall include the average of all the hourly averages of the specific operating parameter. For demonstration of compliance with an emissions limit based on pollutant concentration a 30-day rolling average is comprised of the average of all the hourly average concentrations over the previous 30 operating days. For demonstration of compliance with an emissions limit based on lbs-pollutant per production unit the 30-day rolling average is calculated by summing the hourly mass emissions over the previous 30 operating days, then dividing that sum by the total production during the same period.

22.1.4 *Shutdown* means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.

22.1.5 *Startup* means the time from when a shutdown kiln first begins firing fuel until it begins producing clinker. Startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first.

Standards: General (§ 63.1342)

22.2 Table 1 to this subpart provides cross references to the 40 CFR part 63, subpart A, general provisions, indicating the applicability of the general provisions requirements to subpart LLL. (63.1342) These requirements include but are not limited to the following:

22.2.1 Prohibited activities and circumvention in § 63.4.

22.2.2 Compliance with standards and maintenance requirements in §63.6, except for paragraphs (b)(6), (c)(3) thru (4), (d), (e)(1) thru (3), (f)(1), (h)(1),(3) and (5)(ii) thru (iv) and (i)(15) Note the general duty provisions in 63.1348(d) replace those in (e)(1)(i).

22.2.3 Performance testing requirements in §63.7, except for paragraph (e)(1). Note that the conduct of performance test requirements in 63.1349(e) replace those in (e)(1).

22.2.4 Monitoring requirements in §63.8, except for paragraphs (a)(2) thru (4). Paragraph (d) applies except for the reference to SSM plan in the last sentence.

22.2.5 Notification requirements in § 63.9, except for paragraph (h)(4).

22.2.6 Recordkeeping and reporting requirements in §63.10, except for paragraphs (b)(2)(i) thru (ii) and (iv) thru (v), (c)(2) thru (4) and (9), (d)(5) and (e)(3)(vii) and (viii). Note that the reporting requirements in 63.1354(c) replace the requirements in 63.10(d)(5).

What standards apply to my kilns, clinker coolers, raw material dryers, and open clinker storage piles? (§ 63.1343)

22.3 *General.* The provisions in this section apply to each kiln and any alkali bypass associated with that kiln, clinker cooler, raw material dryer, and open clinker storage pile. All D/F, HCl, and total hydrocarbon (THC) emissions limit are on a dry basis. The D/F, HCl, and THC limits for kilns are corrected to 7 percent oxygen. All THC emissions limits are measured as propane. Standards for mercury and THC are based on a rolling 30-day average. If using a CEMS to determine compliance with the HCl standard, this standard is based on a rolling 30-day average. You must ensure appropriate corrections for moisture are made when measuring flow rates used to calculate mercury emissions. The 30-day period means all operating hours within 30 consecutive kiln operating days excluding periods of startup and shutdown. All emissions limits for kilns, clinker coolers, and raw material dryers currently in effect that are superseded by the limits below continue to apply until the compliance date of the limits below, or until the source certifies compliance with the limits below, whichever is earlier. (63.1343(a))

22.4 *Kilns, clinker coolers, raw material dryers, raw mills, and finish mills.* (1) The emissions limits for these sources are shown in the table below. (63.1343(b))

Note that the opacity requirement in 40 CFR Part 60 Subpart F for the finish mill and separator is more stringent than the opacity limit in this Condition 22.4 (§ 63.1343(b)), so as provided for in § 63.1356 (Condition 22.62) the finish mill and separator does not have to comply with the opacity limit in this Condition 22.4 (§ 63.1343(b)).

Source	Operating Mode	Emission Limitation
Existing Kiln	Normal Operation	PM[1] – 0.07 lb/ton clinker
		D/F[2] – 0.3 ng/dscm (TEQ), corrected to 7% O_2
		Mercury (Hg) – 55 lb/MM tons clinker
		THC[3, 4] – 24 ppmvd, corrected to 7% O_2
		HCl – 3 ppmvd, corrected to 7% O_2
	Startup and Shutdown	Work practices (63.1346(g))
Existing Clinker Cooler	Normal Operation	PM[1] – 0.07 lb/ton clinker
	Startup and Shutdown	Work practices (63.1348(b)(9))
Existing Dryer	Normal Operation	Total Organic HAP[4] – 12 ppmvd
	Startup and Shutdown	Work practices (63.1346(g) (Condition 22.9))
Existing or New Raw or Finish Mills	All	Opacity not to exceed 10%

[1] The initial and subsequent PM performance tests are performed using Method 5 or 5I and consist of three test runs.

[2] If the average temperature at the inlet to the first PM control device (fabric filter or electrostatic precipitator) during the D/F performance test is 400 °F or less, this limit is changed to 0.40 ng/dscm (TEQ).

[3] Measured as propane.

[4] Any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP.

22.4.1 When there is an alkali bypass and/or an inline coal mill with a separate stack associated with a kiln, the combined PM emissions from the kiln and the alkali bypass stack and/or the inline coal mill stack are subject to the PM emissions limit. Existing kilns that combine the clinker cooler exhaust and/or alkali bypass and/or coal mill exhaust with the kiln exhaust and send the combined exhaust to the PM control device as a single stream may meet an alternative PM emissions limit. This limit is calculated using Equation 1 of this section. (63.1343(b)(2))

Note that the in-line coal mill does not have a separate stack but the kiln is equipped with an alkali bypass.

22.5 *Open clinker storage pile.* The owner or operator of an open clinker storage pile must prepare, and operate in accordance with, the fugitive dust emissions control measures, described in their operation and maintenance plan (see §63.1347 of this subpart), that is appropriate for the site conditions as specified in 63.1343(c)(1) through (3) (see below). The operation and maintenance plan must also describe the measures that will be used to minimize fugitive dust emissions from piles of clinker, such as accidental spillage, that are not part of open clinker storage piles. (63.1343(c))

22.5.1 The operation and maintenance plan must identify and describe the location of each current or future open clinker storage pile and the fugitive dust emissions control measures the owner or operator will use to minimize fugitive dust emissions from each open clinker storage pile. (63.1343(c)(1))

22.5.2 For open clinker storage piles, the operations and maintenance plan must specify that one or more of the following control measures will be used to minimize to the greatest extent practicable fugitive dust from open clinker storage piles: Locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents, use of a wind barrier, compaction, use of tarpaulin or other equally effective cover or use of a vegetative cover. You must select, for inclusion in the operations and maintenance plan, the fugitive dust control measure or measures listed in this paragraph that are most appropriate for site conditions. The plan must also explain how the measure or measures selected are applicable and appropriate for site conditions. In addition, the plan must be revised as needed to reflect any changing conditions at the source. (63.1343(c)(2))

22.5.3 Temporary piles of clinker that result from accidental spillage or clinker storage cleaning operations must be cleaned up within 3 days. (63.1343(c)(3))

Emissions limits for affected sources other than kilns; clinker coolers; new and reconstructed raw material dryers. (§ 63.1345)

22.6 The owner or operator of each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; bulk loading or unloading system; raw and finish mills; and each existing raw material dryer, at a facility which is a major source subject to the provisions of this subpart must not cause to be discharged any gases from these affected sources which exhibit opacity in excess of 10 percent.. (63.1345)

Note that the opacity requirement in 40 CFR Part 60 Subpart F for the sources Sections II.5, II.11, II.13 and II.24 is more stringent than the opacity limit in this Condition 22.6 (§ 63.1345), so as provided for in § 63.1356 (Condition 22.62) the sources Sections II.5, II.11, II.13 and II.24 do not have to comply with the opacity limit in this Condition 22.6 (§ 63.1345).

Operating limits for kilns. (§ 63.1346)

22.7 The owner or operator of a kiln subject to a D/F emissions limitation under §63.1343 must operate the kiln such that the temperature of the gas at the inlet to the kiln PM control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in 63.1346(b) (Condition 22.8). (63.1346(a), excluding last sentence since no in-line kiln/raw mill)

22.8 The temperature limit for affected sources meeting the limits of 63.1346(a) (Condition 22.7) or 63.1346(a)(1) through (a)(3) is determined in accordance with §63.1349(b)(3)(iv) (Condition 22.19.4). (63.1346(b))

22.9 During periods of startup and shutdown you must meet the requirements listed in Conditions 22.9.1 through 22.9.4. (63.1346(g))

22.9.1 During startup you must use any one or combination of the following clean fuels: natural gas, synthetic natural gas, propane, distillate oil, synthesis gas (syngas), and ultra-low sulfur diesel (ULSD) until the kiln reaches a temperature of 1200 degrees Fahrenheit. (63.1346(g)(1))

22.9.2 Combustion of the primary kiln fuel may commence once the kiln temperature reaches 1200 degrees Fahrenheit. (63.1346(g)(2))

22.9.3 All dry sorbent and activated carbon systems that control hazardous air pollutants must be turned on and operating at the time the gas stream at the inlet to the baghouse or ESP reaches 300 degrees Fahrenheit (five minute average) during startup. Temperature of the gas stream is to be measured at the inlet of the baghouse or ESP every minute. Such injection systems can be turned off during shutdown. Particulate control and all remaining devices that control hazardous air pollutants should be operational during startup and shutdown. (63.1346(g)(3))

22.9.4 You must keep records as specified in §63.1355 during periods of startup and shutdown. (63.1346(g)(4))

Operation and maintenance plan requirements. (§ 63.1347)

22.10 You must prepare, for each affected source subject to the provisions of this subpart, a written operations and maintenance plan. The plan must be submitted to the Administrator for review and approval as part of the application for a part 70 permit and must include the following information (63.1347(a)):

22.10.1 Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emissions limits and operating limits, including fugitive dust control measures for open clinker piles of §§63.1343, 63.1345, and 63.1346. Your operations and maintenance plan must address periods of startup and shutdown. (63.1347(a)(1))

22.10.2 Corrective actions to be taken when required by paragraph §63.1350(f)(3). (63.1347(a)(2))

22.10.3 Procedures to be used during an inspection of the components of the combustion system of each kiln and each in-line kiln raw mill located at the facility at least once per year. (63.1347(a)(3))

22.11 Failure to comply with any provision of the operations and maintenance plan developed in accordance with this section is a violation of the standard. (63.1347(b))

Compliance requirements. (§ 63.1348)

22.12 *Initial Performance Test Requirements.* For an affected source subject to this subpart, you must demonstrate compliance with the emissions standards and operating limits by using the test methods and procedures in §§63.1349 and 63.7. (63.1348(a), last sentence not included since the kiln has not burned nonhazardous solid waste)

NOTE TO PARAGRAPH (a): The first day of the 30 operating day performance test is the first day after the compliance date following completion of the field testing and data collection that demonstrates that the CPMS or CEMS has satisfied the relevant CPMS performance evaluation or CEMS performance specification (e.g., PS 2, 12A, or 12B) acceptance criteria. The performance test period is complete at the end of the 30th consecutive operating day. See §63.1341 for definition of operating day and §63.1348(b)(1) for the CEMS operating requirements. The source has the option of performing the compliance test earlier then the compliance date if desired.

22.12.1 *PM Compliance.* If you are subject to limitations on PM emissions under §63.1343(b) (Condition 22.4), you must demonstrate compliance with the PM emissions standards by using the test methods and procedures in §63.1349(b)(1) (Condition 22.17). (63.1348(a)(1))

22.12.2 *Opacity Compliance.* If you are subject to the limitations on opacity under §63.1345 (Condition 22.6), you must demonstrate compliance with the opacity emissions standards by using the performance test methods and procedures in §63.1349(b)(2) (Condition 22.18). Use the maximum 6-minute average opacity exhibited during the performance test period to determine whether the affected source is in compliance with the standard. (63.1348(a)(2))

Note that the opacity requirements for equipment other than the kiln and clinker cooler are not new requirements (i.e. were in effect prior to December 20, 2006) and initial performance tests for opacity have been conducted, thus the requirements do not apply to existing equipment. In the event that new equipment is installed that is subject to the opacity requirements in § 63.1345 (or rather the more stringent requirements in 40 Subpart F § 60.42(c), see Condition 22.6), the initial performance test would be required, so this requirement remains in the permit.

22.12.3 *THC Compliance.* If you are subject to limitations on THC emissions under §63.1343(b) (Condition 22.4), you must demonstrate compliance with the THC emissions standards by using the performance test methods and procedures in §63.1349(b)(4)(i) (Condition 22.20). You must use the average THC concentration obtained during the first 30 kiln operating days after the compliance date of this rule to determine initial compliance. (63.1348(a)(4)(i))

22.12.4 *Total Organic HAP Emissions Tests.* If you elect to demonstrate compliance with the total organic HAP emissions limit under §63.1343(b) (Condition 22.4) in lieu of the THC emissions limit, you must demonstrate compliance with the total organic HAP

emissions standards by using the performance test methods and procedures in §63.1349(b)(7) (Condition 22.23). (63.1348(a)(4)(ii))

22.12.5 *Mercury Compliance.* If you are subject to limitations on mercury emissions in §63.1343(b) (Condition 22.4), you must demonstrate compliance with the mercury standards by using the performance test methods and procedures in §63.1349(b)(5) (Condition 22.21). You must demonstrate compliance by operating a mercury CEMS or a sorbent trap based CEMS. Compliance with the mercury emissions standard must be determined based on the first 30 operating days you operate a mercury CEMS or sorbent trap monitoring system after the compliance date of this rule. (63.1348(a)(5))

22.12.5.1 In calculating a 30 operating day emissions value using an integrating sorbent trap CEMS, assign the average Hg emissions concentration determined for an integrating period (e.g., 7 day sorbent trap monitoring system sample) to each relevant hour of the kiln operating days spanned by each integrated sample. Calculate the 30 kiln operating day emissions rate value using the assigned hourly Hg emissions concentrations and the respective flow and production rate values collected during the 30 kiln operating day performance test period. Depending on the duration of each integrated sampling period, you may not be able to calculate the 30 kiln operating day emissions value until several days after the end of the 30 kiln operating day performance test period. (63.1348(a)(5)(i))

22.12.5.2 For example, a sorbent trap monitoring system producing an integrated 7-day sample will provide Hg concentration data for each hour of the first 28 kiln operating days (i.e., four values spanning 7 days each) of a 30 operating day period. The Hg concentration values for the hours of the last 2 days of the 30 operating day period will not be available for calculating the emissions for the performance test period until at least five days after the end of the subject period. (63.1348(a)(5)(i))

22.12.6 *HCl Compliance.* If you are subject to limitations on HCl emissions under §63.1343(b) (Condition 22.4), you must demonstrate initial compliance with the HCl standards by using the performance test methods and procedures in §63.1349(b)(6) (Condition 22.22). (63.1348(a)(6))

22.12.6.1 For an affected source that is equipped with a wet scrubber, tray tower or dry scrubber, you may demonstrate initial compliance by conducting a performance test as specified in §63.1349(b)(6)(i) (Condition 22.22). You must determine the HCl concentration for each run and calculate the arithmetic average of the concentrations measured for the three runs to determine compliance. You must also establish appropriate site-specific operational parameter limits. (63.1348(a)(6)(i))

22.12.7 *Commingled Exhaust Requirements.* If the coal mill exhaust is commingled with kiln exhaust in a single stack, you may demonstrate compliance with the kiln emission limits by either §63.1348(a)(7)(i) or (ii). (63.1348(a)(7))

22.13 *Continuous Monitoring Requirements.* You must demonstrate compliance with the emissions standards and operating limits by using the performance test methods and procedures in §§63.1350 and 63.8 for each affected source. (63.1348(b))

22.13.1 *General Requirements.* (63.1348(b))

22.13.1.1 You must monitor and collect data according to §63.1350 and the site-specific monitoring plan required by §63.1350(p) (Condition 22.42). (63.1348(b)(1)(i))

22.13.1.2 Except for periods of startup and shutdown, monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), you must operate the monitoring system and collect data at all required intervals at all times the affected source is operating. (63.1348(b)(1)(ii))

22.13.1.3 You may not use data recorded during monitoring system startup, shutdown or malfunctions or repairs associated with monitoring system malfunctions in calculations used to report emissions or operating levels. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You must use all the data collected during all other periods in assessing the operation of the control device and associated control system. (63.1348(b)(1)(iii))

22.13.1.4 *Clinker Production.* If you are subject to limitations on mercury emissions (lb/MM tons of clinker) under §63.1343(b) (Condition 22.4), you must determine the hourly production rate of clinker according to the requirements of §63.1350(d) (Condition 22.32). (63.1348(b)(1)(iv))

22.13.2 *PM Compliance.* If you are subject to limitations on PM emissions under §63.1343(b) (Condition 22.4), you must use the monitoring methods and procedures in §63.1350(b) and (d) (Conditions 22.31 and 22.32). (63.1348(b)(2))

22.13.3 *Opacity Compliance.* If you are subject to the limitations on opacity under §63.1345 (Condition 22.6), you must demonstrate compliance using the monitoring methods and procedures in §63.1350(f) (Condition 22.33) based on the maximum 6-minute average opacity exhibited during the performance test period. You must initiate

corrective actions within one hour of detecting visible emissions above the applicable limit. (63.1348(b)(3))

22.13.4 *D/F Compliance.* If you are subject to a D/F emissions limitation under §63.1343(b) (Condition 22.4), you must demonstrate compliance using a CMS that is installed, operated and maintained to record the temperature of specified gas streams in accordance with the requirements of §63.1350(g) (Condition 22.34). (63.1348(b)(4))

22.13.5 *THC Compliance.* If you are subject to limitations on THC emissions under §63.1343(b) (Condition 22.4), you must demonstrate compliance using the monitoring methods and procedures in §63.1350(i) and (j) (Conditions 22.35 and 22.36). (63.1348(b)(6)(i))

22.13.5.1 THC must be measured either upstream of the coal mill or in the coal mill stack. (63.1348(b)(6)(ii))

22.13.6 *Mercury Compliance.* If you are subject to limitations on mercury emissions in §63.1343(b) (Condition 22.4), you must demonstrate compliance using the monitoring methods and procedures in §63.1350(k) (Condition 22.37). If you use an integrated sorbent trap monitoring system to determine ongoing compliance, use the procedures described in §63.1348(a)(5) (Condition 22.12.5) to assign hourly mercury concentration values and to calculate rolling 30 operating day emissions rates. Since you assign the mercury concentration measured with the sorbent trap to each relevant hour respectively for each operating day of the integrated period, you may schedule the sorbent trap change periods to any time of the day (i.e., the sorbent trap replacement need not be scheduled at 12:00 midnight nor must the sorbent trap replacements occur only at integral 24-hour intervals). (63.1348(b)(7)(i))

22.13.6.1 Mercury must be measured either upstream of the coal mill or in the coal mill stack. (63.1348(b)(7)(ii))

22.13.7 *HCl Compliance.* If you are subject to limitations on HCl emissions under §63.1343(b) (Condition 22.4), you must demonstrate compliance using the performance test methods and procedures in §63.1349(b)(6) (Condition 22.22). (63.1348(b)(8))

22.13.7.1 HCl may be measured either upstream of the coal mill or in the coal mill stack. (63.1348(b)(8)(iii))

22.13.7.2 As an alternative to 63.1348(b)(8)(ii), you may use an SO_2 CEMS to establish an SO_2 operating level during your initial and repeat HCl performance tests and monitor the SO_2 level using the procedures in §63.1350(l)(3) (Condition 22.38.1). (63.1348(b)(8)(iv))

22.13.8 *Startup and Shutdown Compliance.* All dry sorbent and activated carbon systems that control hazardous air pollutants must be turned on and operating at the time the gas stream at the inlet to the baghouse or ESP reaches 300 degrees Fahrenheit (five

minute average) during startup. Temperature of the gas stream is to be measured at the inlet of the baghouse or ESP every minute. Such injection systems can be turned off during shutdown. Particulate control and all remaining devices that control hazardous air pollutants should be operational during startup and shutdown. (63.1348(b)(9))

22.14 *Changes in operations.* (63.1348(c))

22.14.1 If you plan to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under this subpart, the source must conduct a performance test as specified in §63.1349(b). (63.1348(c)(1))

22.14.2 In preparation for and while conducting a performance test required in §63.1349(b), you may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 63.1348(c)(2)(i) through (c)(2)(iv) are met. You must submit temperature and other monitoring data that are recorded during the pretest operations. (63.1348(c)(2))

22.15 *General duty to minimize emissions.* At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (63.1348(d))

Performance testing requirements. (§ 63.1349)

22.16 You must document performance test results in complete test reports that contain the information required by 63.1349(a)(1) through (10), as well as all other relevant information. As described in §63.7(c)(2)(i), you must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing. For purposes of determining exhaust gas flow rate to the atmosphere from an alkali bypass stack or a coal mill stack, you must either install, operate, calibrate and maintain an instrument for continuously measuring and recording the exhaust gas flow rate according to the requirements in paragraphs §63.1350(n)(1) through (10) (Condition 22.40) of this subpart or use the maximum design exhaust gas flow rate. For purposes of determining the combined emissions from kilns equipped with an alkali bypass or that exhaust kiln gases to a coal mill that exhausts through a separate stack, instead of installing a CEMS on the alkali bypass stack or coal mill stack, you may use the results of the initial and subsequent performance test to demonstrate compliance with the relevant emissions limit. (63.1349(a))

22.17 *PM emissions tests.* The owner or operator of a kiln and clinker cooler subject to limitations on PM emissions shall demonstrate initial compliance by conducting a performance test using

Method 5 or Method 5I at appendix A-3 to part 60 of this chapter. You must also monitor continuous performance through use of a PM continuous parametric monitoring system (PM CPMS). (63.1349(b)(1))

22.17.1 For your PM CPMS, you will establish a site-specific operating limit. If your PM performance test demonstrates your PM emission levels to be below 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test, the milliamp or digital equivalent of zero output from your PM CPMS, and the average PM result of your compliance test to establish your operating limit. If your PM compliance test demonstrates your PM emission levels to be at or above 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test to establish your operating limit. You will use the PM CPMS to demonstrate continuous compliance with your operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. (63.1349(b)(1)(i))

22.17.1.1 Your PM CPMS must provide a 4-20 milliamp or digital signal output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps or the monitors digital equivalent. (63.1349(b)(1)(i)(A))

22.17.1.2 Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to three times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to three times your allowable emission limit. (63.1349(b)(1)(i)(B))

22.17.1.3 During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp or digital output values from the PM CPMS for the periods corresponding to the compliance test runs (*e.g.*, average all your PM CPMS output values for three corresponding Method 5I test runs). (63.1349(b)(1)(i)(C))

22.17.2 Determine your operating limit as specified in 63.1349(b)(1)(iii) through (iv) (Conditions 22.17.3 and 22.17.4). If your PM performance test demonstrates your PM emission levels to be below 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test, the milliamp or digital equivalent of zero output from your PM CPMS, and the average PM result of your compliance test to establish your operating limit. If your PM compliance test demonstrates your PM emission levels to be at or above 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test to establish your operating limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the

performance test at least annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. (63.1349(b)(1)(ii))

22.17.3 If the average of your three Method 5 or 5I compliance test runs is below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or 5I compliance test with the procedures in 63.1349(b)(1)(iii)(A) through (D). (63.1349(b)(1)(iii))

22.17.3.1 Determine your PM CPMS instrument zero output with one of the procedures in 63.1349(b)(1)(ii)(A)(1) through (4). (63.1349(b)(1)(iii)(A))

22.17.3.2 Determine your PM CPMS instrument average in milliamps or digital equivalent, and the average of your corresponding three PM compliance test runs, using equation 3 in 63.1349((b)(1)(ii)(B)). (63.1349((b)(1)(iii)(B))

22.17.3.3 With your instrument zero expressed in milliamps or a digital value, your three run average PM CPMS milliamp or digital signal value, and your three run PM compliance test average, determine a relationship of lb/ton-clinker per milliamp or digital signal value with Equation 4 in 63.1349((b)(1)(iii)(C)). (63.1349((b)(1)(ii)(C))

22.17.3.4 Determine your source specific 30-day rolling average operating limit using the lb/ton-clinker per milliamp or digital signal value from Equation 4 in Equation 5, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit. (63.1349(b)(1)(iii)(D))

22.17.4 If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your operating limit by averaging the PM CPMS milliamp or digital equivalent output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using Equation 6. (63.1349(b)(1)(iv))

22.17.5 To determine continuous operating compliance, you must record the PM CPMS output data for all periods when the process is operating, and use all the PM CPMS data for calculations when the source is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps or the digital equivalent) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 7 to determine the 30 kiln operating day average. (63.1349(b)(1)(v))

22.17.6 For each performance test, conduct at least three separate test runs each while the mill is on and the mill is off, under the conditions that exist when the affected source is operating at the level reasonably expected to occur. Conduct each test run to collect a minimum sample volume of 2 dscm for determining compliance with a new source limit and 1 dscm for determining compliance with an existing source limit. Calculate the time weighted average of the results from three consecutive runs, including applicable sources as required by (b)(1)(viii), to determine compliance. You need not determine the particulate matter collected in the impingers ("back half") of the Method 5 or Method 5I particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes. (63.1349(b)(1)(vi))

22.17.7 For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp value or digital equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital equivalent signals corresponding to each PM compliance test run. (63.1349(b)(1)(vii))

22.17.8 When there is an alkali bypass and/or an inline coal mill with a separate stack associated with a kiln, the main exhaust and alkali bypass and/or inline coal mill must be tested simultaneously and the combined emission rate of PM from the kiln and alkali bypass and/or inline coal mill must be computed for each run using Equation 8 of this section. (63.1349(b)(1)(viii))

Note that the inline coal mill does not have a separate stack but the kiln is equipped with an alkali bypass.

22.18 *Opacity tests.* If you are subject to limitations on opacity under this subpart, you must conduct opacity tests in accordance with Method 9 of appendix A-4 to part 60 of this chapter. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating. (63.1349(b)(2))

22.18.1 There are no individual readings greater than 10 percent opacity (63.1349(b)(2)(i));

22.18.2 There are no more than three readings of 10 percent for the first 1-hour period. (63.1349(b)(2)(ii))

22.19 *D/F Emissions Tests.* If you are subject to limitations on D/F emissions under this subpart, you must conduct a performance test using Method 23 of appendix A-7 to part 60 of this chapter. If your kiln or in-line kiln/raw mill is equipped with an alkali bypass, you must conduct simultaneous performance tests of the kiln or in-line kiln/raw mill exhaust and the alkali bypass.

You may conduct a performance test of the alkali bypass exhaust when the raw mill of the in-line kiln/raw mill is operating or not operating. (63.1349(b)(3))

22.19.1 Each performance test must consist of three separate runs conducted under representative conditions. The duration of each run must be at least 3 hours, and the sample volume for each run must be at least 2.5 dscm (90 dscf). (63.1349(b)(3)(i))

22.19.2 The temperature at the inlet to the kiln or in-line kiln/raw mill PMCD, and, where applicable, the temperature at the inlet to the alkali bypass PMCD must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report. (63.1349(b)(3)(ii))

22.19.3 Average temperatures must be calculated for each run of the performance test. (63.1349(b)(3)(iii))

22.19.4 The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with §63.1346(b), footnote 2 (Condition 22.4). (63.1349(b)(3)(iv))

22.20 *THC emissions test.* If you are subject to limitations on THC emissions, you must operate a CEMS in accordance with the requirements in §63.1350(i) (Condition 22.35). For the purposes of conducting the accuracy and quality assurance evaluations for CEMS, the THC span value (as propane) is 50 ppmvw and the reference method (RM) is Method 25A of appendix A to part 60 of this chapter. (63.1349(b)(4)(i))

22.20.1 Use the THC CEMS to conduct the initial compliance test for the first 30 kiln operating days of kiln operation after the compliance date of the rule. See §63.1348(a) (Condition 22.12). (63.1349(b)(4)(ii))

22.20.2 If kiln gases are diverted through an alkali bypass or to a coal mill and exhausted through a separate stack, you must calculate a kiln-specific THC limit using Equation 9. (63.1349(b)(4)(iii))

Note that the inline coal mill does not have a separate stack but the kiln is equipped with an alkali bypass.

22.20.3 THC must be measured either upstream of the coal mill or the coal mill stack. (63.1349(b)(4)(iv))

22.20.4 Instead of conducting the performance test specified in §63.1349(b)(4) (Condition 22.20), you may conduct a performance test to determine emissions of total organic HAP by following the procedures in §63.1349(b)(7) (Condition 22.23). (63.1349(b)(4)(v))

22.21 *Mercury Emissions Tests.* If you are subject to limitations on mercury emissions, you must operate a mercury CEMS or a sorbent trap monitoring system in accordance with the requirements of §63.1350(k) (Condition 22.37). The initial compliance test must be based on the first 30 kiln operating days in which the affected source operates using a mercury CEMS or a sorbent trap monitoring system after the compliance date of the rule. See §63.1348(a) (Condition 22.12). (63.1349(b)(5))

22.21.1 If you are using a mercury CEMS or a sorbent trap monitoring system, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the exhaust gas flow rate to the atmosphere according to the requirements in §63.1350(k)(5) (Condition 22.37). (63.1349(b)(5)(i))

22.21.2 Calculate the emission rate using Equation 10 of this section. (63.1349(b)(5)(ii))

22.22 *HCl emissions tests.* For a source subject to limitations on HCl emissions you must conduct performance testing by one of the methods in §63.1349(b)(6)(i). (63.1349(b)(6))

22.22.1 As an alternative to paragraph (b)(6)(i)(B) of this section, you may choose to monitor SO_2 emissions using a CEMS in accordance with the requirements of §63.1350(l)(3) (Condition 22.38.1). You must establish an SO_2 operating limit equal to the average recorded during the HCl stack test where the HCl stack test run result demonstrates compliance with the emission limit. This operating limit will apply only for demonstrating HCl compliance. (63.1349(b)(6)(iii))

22.22.2 If kiln gases are diverted through an alkali bypass or to a coal mill and exhausted through a separate stack, you must calculate a kiln-specific HCl limit using Equation 11. (63.1349(b)(6)(iv))

22.23 *Total Organic HAP Emissions Tests.* Instead of conducting the performance test specified in §53.1349(b)(4) (Condition 22.20), you may conduct a performance test to determine emissions of total organic HAP by following the procedures in 63.1349(b)(7)(i) through (v) (see below). Note that 63.1349(b)(7)(iii) does not apply since the kiln does not have an in-line raw mill. (63.1349(b)(7))

22.23.1 Use Method 320 of appendix A to this part, Method 18 of Appendix A of part 60, ASTM D6348-03 or a combination to determine emissions of total organic HAP. Each performance test must consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with §63.7(e). Each run must be conducted for at least 1 hour. (63.1349(b)(7)(i))

22.23.2 At the same time that you are conducting the performance test for total organic HAP, you must also determine a site-specific THC emissions limit by operating a THC CEMS in accordance with the requirements of §63.1350(j) (Condition 22.36). The duration of the performance test must be at least 3 hours and the average THC

concentration (as calculated from the recorded output) during the 3-hour test must be calculated. You must establish your THC operating limit and determine compliance with it according to 63.1349(b)(7)(vii) and (viii) (Conditions 22.23.6 and 22.23.7). It is permissible to extend the testing time of the organic HAP performance test if you believe extended testing is required to adequately capture organic HAP and/or THC variability over time. (63.1349(b)(7)(ii))

22.23.3 If your organic HAP emissions are below 75 percent of the organic HAP standard and you determine your operating limit with 63.1349(b)(7)(vii) (Condition 22.23.6) your THC CEMS must be calibrated and operated on a measurement scale no greater than 180 ppmvw, as carbon, or 60 ppmvw as propane. (63.1349(b)(7)(iv))

22.23.4 If your kiln has an inline coal mill and/or an alkali bypass with separate stacks, you are required to measure and account for oHAP emissions from their separate stacks. You are required to measure oHAP at the coal mill inlet or outlet and you must also measure oHAP at the alkali bypass outlet. You must then calculate a flow weighted average oHAP concentration for all emission sources including the inline coal mill and the alkali bypass. (63.1349(b)(7)(v))

Note that the in-line coal mill does not have a separate stack but the kiln is equipped with an alkali bypass.

22.23.5 Your THC CEMS measurement scale must be capable of reading THC concentrations from zero to a level equivalent to two times your highest THC emissions average determined during your performance test, including mill on or mill off operation. **Note:** This may require the use of a dual range instrument to meet this requirement and 63.1349(b)(7)(iv) (Condition 22.23.3). (63.1349(b)(7)(vi))

22.23.6 Determine your operating limit as specified in 63.1349(b)(7)(viii) and (ix) (Conditions 22.23.7 and 22.23.8). If your organic HAP performance test demonstrates your average organic HAP emission levels are below 75 percent of your emission limit (9 ppmv) you will use the average THC value recorded during the organic HAP performance test, and the average total organic HAP result of your performance test to establish your operating limit. If your organic HAP compliance test results demonstrate that your average organic HAP emission levels are at or above 75 percent of your emission limit, your operating limit is established as the average THC value recorded during the organic HAP performance test. You must establish a new operating limit after each performance test. You must repeat the performance test no later than 30 months following your last performance test and reassess and adjust the site-specific operating limit in accordance with the results of the performance test. (63.1349(b)(7)(vii))

22.23.7 If the average organic HAP results for your three Method 18 and/or Method 320 performance test runs are below 75 percent of your organic HAP emission limit, you

must calculate an operating limit by establishing a relationship of THC CEMS signal to the organic HAP concentration using the average THC CEMS value corresponding to the three organic HAP compliance test runs and the average organic HAP total concentration from the Method 18 and/or Method 320 performance test runs with the procedures in 63.1349(b)(7)(viii)(A) and (B). (63.1349(b)(7)(viii))

22.23.8 If the average of your three organic HAP performance test runs is at or above 75 percent of your organic HAP emission limit, you must determine your operating limit using Equation 14 by averaging the THC CEMS output values corresponding to your three organic HAP performance test runs that demonstrate compliance with the emission limit. If your new THC CEMS value is below your current operating limit, you may opt to retain your current operating limit, but you must still submit all performance test and THC CEMS data according to the reporting requirements in 63.1349(d)(1) (Condition 22.26.1). (63.1349(b)(7)(ix))

22.23.9 To determine continuous compliance with the THC operating limit, you must record the THC CEMS output data for all periods when the process is operating and the THC CEMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the THC CEMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (ppmvw) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 16 to determine the 30 kiln operating day average. (63.1349(b)(7)(xi))

22.23.10 Use EPA Method 18 or Method 320 of appendix A to part 60 of this chapter to determine organic HAP emissions. For each performance test, conduct at least three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur. If your source has an in-line kiln/raw mill you must conduct three separate test runs with the raw mill on, and three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur with the mill off. Conduct each Method 18 test run to collect a minimum target sample equivalent to three times the method detection limit. Calculate the average of the results from three runs to determine compliance. (63.1349(b)(7)(xii))

22.23.11 If the THC level exceeds by 10 percent or more your site-specific THC emissions limit, you must

22.23.11.1 As soon as possible but no later than 30 days after the exceedance, conduct an inspection and take corrective action to return the THC CEMS measurements to within the established value (63.1349(b)(7)(xiii)(A)); and

22.23.11.2 Within 90 days of the exceedance or at the time of the 30 month compliance test, whichever comes first, conduct another performance test to determine compliance with the organic HAP limit and to verify or re-

establish your site-specific THC emissions limit. (63.1349(b)(7)(xiii)(B))

22.24 *HCl Emissions Tests with SO_2 Monitoring.* If you choose to monitor SO_2 emissions using a CEMS to demonstrate HCl compliance, follow the procedures in 63.1349(b)(8)(i) through (ix) (see below) and in accordance with the requirements of §63.1350(l)(3) (Condition 22.38.1). You must establish an SO_2 operating limit equal to the average recorded during the HCl stack test. This operating limit will apply only for demonstrating HCl compliance. (63.1349(b)(8))

22.24.1 Use Method 321 of appendix A to this part to determine emissions of HCl. Each performance test must consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with §63.7(e). Each run must be conducted for at least one hour. (63.1349(b)(8)(i))

22.24.2 At the same time that you are conducting the performance test for HCl, you must also determine a site-specific SO_2 emissions limit by operating an SO_2 CEMS in accordance with the requirements of §63.1350(l) (Condition 22.38). The duration of the performance test must be three hours and the average SO_2 concentration (as calculated from the average output) during the 3-hour test must be calculated. You must establish your SO_2 operating limit and determine compliance with it according to 63.1349(b)(8)(vii) and (viii) (Conditions 22.24.5 and 22.24.6). (63.1349(b)(8)(ii))

22.24.3 Your SO_2 CEMS must be calibrated and operated according to the requirements of §60.63(f) (Condition 18.5). (63.1349(b)(8)(iv))

22.24.4 Your SO_2 CEMS measurement scale must be capable of reading SO_2 concentrations consistent with the requirements of §60.63(f), including mill on or mill off operation. (63.1349(b)(8)(v))

22.24.5 If the average of your three HCl compliance test runs is below 75 percent of your HCl emission limit, you may as a compliance alternative, calculate an operating limit by establishing a relationship of SO_2 CEMS signal to your HCl concentration corrected to 7 percent O_2 by using the SO_2 CEMS instrument zero, the average SO_2 CEMS values corresponding to the three compliance test runs, and the average HCl concentration from the HCl compliance test with the procedures in 63.1349(b)(8)(vii)(A) through (D). (63.1349(b)(8)(vii))

22.24.6 To determine continuous compliance with the SO_2 operating limit, you must record the SO_2 CEMS output data for all periods when the process is operating and the SO_2 CEMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the SO_2 CEMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (ppmvw) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 21 to determine the 30 kiln operating day average. (63.1349(b)(8)(viii))

22.24.7 Use EPA Method 321 of appendix A to part 60 of this chapter to determine HCl emissions. For each performance test, conduct at least three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur. If your source has an in-line kiln/raw mill you must conduct three separate test runs with the raw mill on, and three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur with the mill off. (63.1349(b)(8)(ix))

22.24.8 If the SO_2 level exceeds by 10 percent or more your site-specific SO_2 emissions limit, you must (63.1349(b)(8)(x)):

22.24.8.1 As soon as possible but no later than 30 days after the exceedance, conduct an inspection and take corrective action to return the SO_2 CEMS measurements to within the established value (63.1349(b)(8)(x)(A));

22.24.8.2 Within 90 days of the exceedance or at the time of the periodic compliance test, whichever comes first, conduct another performance test to determine compliance with the HCl limit and to verify or re-establish your site-specific SO_2 emissions limit. (63.1349(b)(8)(x)(B))

22.25 *Performance test frequency.* Except as provided in §63.1348(b), performance tests are required at regular intervals for affected sources that are subject to a dioxin, organic HAP or HCl emissions limit. Performance tests required every 30 months must be completed no more than 31 calendar months after the previous performance test except where that specific pollutant is monitored using CEMS; performance tests required every 12 months must be completed no more than 13 calendar months after the previous performance test. (63.1349(c))

Note that as specified in §63.1349(b)(1)(i) (Condition 22.17.1) and §63.1350(b)(1)(i) and (B)(1)(iii)(C) (Conditions 22.31.1 and 22.31.3.3) performance tests for PM are required at least annually.

22.26 Performance Test Reporting Requirements. (63.1349(d))

22.26.1 You must submit the information specified in §63.1349(d)(1) and (2) no later than 60 days following the initial performance test. All reports must be signed by a responsible official. (63.1349(d)(1))

22.26.1.1 The initial performance test data as recorded under §63.1349(b). (63.1349(d)(1))

22.26.1.2 The values for the site-specific operating limits or parameters established pursuant to 63.1349(b)(1), (3), (6), (7), and (8), as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test. (63.1349(d)(2))

22.26.2 As of December 31, 2011 and within 60 days after the date of completing each performance evaluation or test, as defined in §63.2, conducted to demonstrate compliance with any standard covered by this subpart, you must submit the relative accuracy test audit data and performance test data, except opacity data, to the EPA by successfully submitting the data electronically to the EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool(ERT) (see http://www.epa.gov/ttn/chief/ert/ert_tool.html/). (63.1349(d)(2))

22.27 *Conditions of performance tests.* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests. (63.1349(e))

Monitoring requirements. (§ 63.1350)

22.28 Following the compliance date, the owner or operator must demonstrate compliance with this subpart on a continuous basis by meeting the requirements of this section. (63.1350(a)(1))

22.29 For each existing unit that is equipped with a CMS, maintain the average emissions or the operating parameter values within the operating parameter limits established through performance tests. (63.1350(a)(3))

22.30 Any instance where the owner or operator fails to comply with the continuous monitoring requirements of this section is a violation. (63.1350(a)(4))

22.31 *PM monitoring requirements. PM CPMS.* (63.1350(b)(1)

22.31.1 You will use a PM CPMS to establish a site-specific operating limit corresponding to the results of the performance test demonstrating compliance with the PM limit. You will conduct your performance test using Method 5 or Method 5I at appendix A-3 to part 60 of this chapter. You will use the PM CPMS to demonstrate continuous compliance with this operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test using the procedures in §63.1349(b)(1) (i) through (vi) of this subpart (Condition 22.17.1 through 22.17.6). You must also repeat the test if you change the analytical range of the instrument, or if you replace the instrument itself or any principle analytical component of the instrument that would alter the relationship of output signal to in-stack PM concentration. (63.1350(b)(1)(i))

22.31.2 To determine continuous compliance, you must use the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30

operating day rolling average basis, updated at the end of each new kiln operating day. (63.1350(b)(1)(ii))

22.31.3 For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, you must (63.1350(b)(1)(iii)):

22.31.3.1 Within 48 hours of the exceedance, visually inspect the APCD (63.1350(b)(1)(iii)(A));

22.31.3.2 If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value (63.1350(b)(1)(iii)(B)); and

22.31.3.3 Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. You are not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph. (63.1350(b)(1)(iii)(C))

22.31.4 PM CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of this subpart. (63.1350(b)(1)(iv))

22.32 Clinker *production monitoring requirements.* In order to determine clinker production, you must (63.1350(d)):

22.32.1 Determine hourly clinker production by one of two methods as set forth in 63.1350(d)(1)(i) and (ii). (63.1350(d)(1))

22.32.2 Determine, record, and maintain a record of the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before initial use (for new sources) or by the effective compliance date of this rule (for existing sources). During each quarter of source operation, you must determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow). (63.1350(d)(2))

22.32.3 If you measure clinker production directly, record the daily clinker production rates; if you measure the kiln feed rates and calculate clinker production, record the hourly kiln feed and clinker production rates. (63.1350(d)(3))

22.32.4 Develop an emissions monitoring plan in accordance with 63.1350(p)(1) through (p)(4) (Condition 22.42). (63.1350(d)(4))

22.33 *Opacity monitoring requirements.* If you are subject to a limitation on opacity under §63.1345 (Condition 22.6), you must conduct required opacity monitoring in accordance with the provisions of 63.1350(f)(1)(i) through (vii) (Condition 22.33.1.1 through 22.33.1.7) and in accordance with your monitoring plan developed under §63.1350(p) (Condition 22.42). You must also develop an opacity monitoring plan in accordance with 63.1350(p)(1) through (4) (Condition 22.42) and paragraph (o)(5), if applicable. (63.1350(f))

22.33.1 Opacity monitoring for sources subject to opacity requirements in 63.1345

22.33.1.1 You must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of appendix A-7 to part 60 of this chapter. The performance test must be conducted while the affected source is in operation. (63.1350(f)(1)(i))

22.33.1.2 If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, you must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests. (63.1350(f)(1)(ii))

22.33.1.3 If no visible emissions are observed during the semi-annual test for any affected source, you may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests. (63.1350(f)(1)(iii))

22.33.1.4 If visible emissions are observed during any Method 22 performance test, of appendix A-7 to part 60 of this chapter, you must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of appendix A-4 to part 60 of this chapter. The Method 9 performance test, of appendix A-4 to part 60 of this chapter, must begin within 1 hour of any observation of visible emissions. (63.1350(f)(1)(iv))

22.33.1.5 Any totally enclosed conveying system transfer point, regardless of the location of the transfer point is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan. (63.1350(f)(1)(v))

22.33.1.6 If any partially enclosed or unenclosed conveying system transfer point is located in a building, you must conduct a Method 22 performance test, of appendix A-7 to part 60 of this chapter, according to the requirements of

63.1350(f)(1)(i) through (iv) (Conditions 22.33.1.1 through 22.33.1.4) for each such conveying system transfer point located within the building, or for the building itself, according to 63.1350(f)(1)(vii) (Condition 22.33.1.7). (63.1350(f)(1)(vi))

22.33.1.7 If visible emissions from a building are monitored, the requirements of 63.1350(f)(1)(i) through (f)(1)(iv) (Conditions22.33.1.1 through 22.33.1.4) apply to the monitoring of the building, and you must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes. (63.1350(f)(1)(vii))

22.33.2 Opacity monitoring for raw and finish mills.

22.33.2.1 For a raw mill or finish mill, you must monitor opacity by conducting daily visible emissions observations of the mill sweep and air separator PM control devices (PMCD) of these affected sources in accordance with the procedures of Method 22 of appendix A-7 to part 60 of this chapter. The duration of the Method 22 performance test must be 6 minutes. (63.1350(f)(2)(i))

22.33.2.2 Within 24 hours of the end of the Method 22 performance test in which visible emissions were observed, the owner or operator must conduct a follow up Method 22 performance test of each stack from which visible emissions were observed during the previous Method 22 performance test. (63.1350(f)(2)(ii))

22.33.2.3 If visible emissions are observed during the follow-up Method 22 performance test required by 63.1350(f)(2)(ii) (Condition 22.33.2.2) from any stack from which visible emissions were observed during the previous Method 22 performance test required by paragraph (f)(2)(i) of the section, you must then conduct an opacity test of each stack from which emissions were observed during the follow up Method 22 performance test in accordance with Method 9 of appendix A-4 to part 60 of this chapter. The duration of the Method 9 test must be 30 minutes. (63.1350(f)(2)(iii))

22.33.3 If visible emissions are observed during any Method 22 visible emissions test conducted under §63.1350(f)(1) or (2) (Conditions 22.33.1 and 22.33.2), you must initiate, within one-hour, the corrective actions specified in your operation and maintenance plan as required in §63.1347. (63.1350(f)(3))

22.34 *D/F monitoring requirements.* If you are subject to an emissions limitation on D/F emissions, you must comply with the monitoring requirements of 63.1350(g)(1) through (g)(6) (see below) and 63.1350(m)(1) through (m)(4) (Condition 22.39) to demonstrate continuous compliance with the D/F emissions standard. You must also develop an emissions monitoring plan in accordance with 63.1350 (p)(1) through (p)(4) (Condition 22.42). (63.1350(g)) Note that paragraphs (g)(5) and (6) were not included since the kiln does not have an in-line raw mill and there is no paragraph (g)(6).

22.34.1 You must install, calibrate, maintain, and continuously operate a CMS to record the temperature of the exhaust gases from the kiln and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln and/or alkali bypass PMCDs. (63.1350(g)(1)) The temperature CMS must meet the requirements in §63.1350(g)(1)(i) through (iii).

22.34.2 You must monitor and continuously record the temperature of the exhaust gases from the kiln and alkali bypass, if applicable, at the inlet to the kiln and/or alkali bypass PMCD. (63.1350(g)(2))

22.34.3 The required minimum data collection frequency must be one minute. (63.1350(g)(3))

22.34.4 Calculate the rolling three-hour average temperature using the average of 180 successive one-minute average temperatures. See §63.1349(b)(3) (Condition 22.19). (63.1350(g)(4))

22.35 *THC Monitoring Requirements.* If you are subject to an emissions limitation on THC emissions, you must comply with the monitoring requirements of 6.1350(i)(1) and (i)(2) (see below) and (m)(1) through (m)(4) (Condition 22.39). You must also develop an emissions monitoring plan in accordance with 6.1350 (p)(1) through (p)(4) (Condition 22.42). (63.1350(i))

22.35.1 You must install, operate, and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8 or Performance Specification 8A of appendix B to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of this part. The owner or operator must operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of appendix F in part 60 of this chapter. For THC continuous emission monitoring systems certified under Performance Specification 8A, conduct the relative accuracy test audits required under Procedure 1 in accordance with Performance Specification 8, Sections 8 and 11 using Method 25A in appendix A to 40 CFR part 60 as the reference method; the relative accuracy must meet the criteria of Performance Specification 8, Section 13.2. (63.1350(i)(1))

22.35.2 Performance tests on alkali bypass and coal mill stacks must be conducted using Method 25A in appendix A to 40 CFR part 60 and repeated every 30 months. (63.1350(i)(2))

Note that the inline coal mill does not gave a separate stack but the kiln is equipped with an alkali bypass.

22.36 *Total organic HAP monitoring requirements.* If you are complying with the total organic HAP emissions limits, you must continuously monitor THC according to 63.1350(i)(1) and (2) (Conditions 22.35.1 and 22.35.2) or in accordance with Performance Specification 8 or Performance Specification 8A of appendix B to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of

this part. You must operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of appendix F in part 60 of this chapter. In addition, your must follow the monitoring requirements in 63.1350(m)(1) through (4) (Condition 22.39). You must also develop an emissions monitoring plan in accordance with 63.1350(p)(1) through (4) (Condition 22.42). (3.1350(j))

22.37 *Mercury monitoring requirements.* If you have a kiln subject to an emissions limitation on mercury emissions, you must install and operate a mercury continuous emissions monitoring system (Hg CEMS) in accordance with Performance Specification 12A (PS 12A) of appendix B to part 60 of this chapter or an integrated sorbent trap monitoring system in accordance with Performance Specification 12B (PS 12B) of appendix B to part 60 of this chapter. You must monitor mercury continuously according to 63.1350(k)(1) through (5) (see below). You must also develop an emissions monitoring plan in accordance with 63.1350 (p)(1) through (4) (Condition 22.42). (63.1350(k)) Note that the paragraphs (k)(1) through (k)(3) are not included since the source is using a sorbent trap system.

22.37.1 Relative accuracy testing of mercury monitoring systems under PS 12A, PS 12B, or Procedure 5 must be conducted at normal operating conditions. If a facility has an inline raw mill, the testing must occur with the raw mill on. (63.1350(k)(4))

22.37.2 If you use a Hg CEMS or an integrated sorbent trap monitoring system, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the exhaust gas flow rate to the atmosphere according to the requirements in 63.1350(n)(1) through (10) (Condition 22.40). If kiln gases are diverted through an alkali bypass or to a coal mill and exhausted through separate stacks, you must account for the mercury emitted from those stacks by following the procedures in §63.1350(k)(5)(i) through (iv). (63.1350(k)(5))

Note that the inline coal mill does not have a separate stack but the kiln is equipped with an alkali bypass.

22.37.3 If you operate an integrated sorbent trap monitoring system conforming to PS 12B, you may use a monitoring period at least 24 hours but no longer than 168 hours in length. You should use a monitoring period that is a multiple of 24 hours (except during relative accuracy testing as allowed in PS 12B). (63.1350(k)(6))

22.38 *HCl Monitoring Requirements.* If you are subject to an emissions limitation on HCl emissions in §63.1343, you must monitor HCl emissions continuously according to 63.1350(l)(1) or (2) and 63.1350(m)(1) through (4) (Condition 22.39) or, if your kiln is controlled using a wet or dry scrubber or tray tower, you alternatively may parametrically monitor SO_2 emissions continuously according to 63.1350(l)(3) (Condition 22.38.1). You must also develop an emissions monitoring plan in accordance with 63.1350(p)(1) through (4) (Condition 22.42). (63.1350(l))

22.38.1 If the source is equipped with a wet or dry scrubber or tray tower, and you choose to monitor SO_2 emissions, monitor SO_2 emissions continuously according to the

requirements of §60.63(e) and (f) of part 60 subpart F of this chapter. If SO_2 levels increase above the 30-day rolling average SO_2 operating limit established during your performance test, you must (63.1350(l)(3)):

22.38.1.1 As soon as possible but no later than 48 hours after you exceed the established SO_2 value conduct an inspection and take corrective action to return the SO_2 emissions to within the operating limit (63.1350(l)(3)(i)); and

22.38.1.2 Within 60 days of the exceedance or at the time of the next compliance test, whichever comes first, conduct an HCl emissions compliance test to determine compliance with the HCl emissions limit and to verify or re-establish the SO_2 CEMS operating limit. (63.1350(l)(3)(ii))

22.39 *Parameter monitoring requirements.* If you have an operating limit that requires the use of a CMS, you must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the procedures in 63.1350(m)(1) through (4) by the compliance date specified in §63.1351. You must also meet the applicable specific parameter monitoring requirements in paragraphs (m)(5) through (11) that are applicable to you. (63.1350(m))

Note that the requirements in 63.1350(m)(5) through (11) do not apply because the source is using an SO_2 CEMS ((m)(5), (7) & (9)), does not use activated carbon for D/F limit ((m)(6)) and does not use bag leak detection systems (m(10) and (11)).

22.40 *Continuous Flow Rate Monitoring System.* You must install, operate, calibrate, and maintain instruments, according to the requirements in 63.1350(n)(1) through (10), for continuously measuring and recording the stack gas flow rate to allow determination of the pollutant mass emissions rate to the atmosphere from sources subject to an emissions limitation that has a pounds per ton of clinker unit and that is required to be monitored by a CEMS. (63.1350(n))

22.41 *Alternate monitoring requirements approval.* You may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of this subpart subject to the provisions of 63.1350(o)(1) through (6). (63.1350(o))

22.42 *Development and submittal (upon request) of monitoring plans.* If you demonstrate compliance with any applicable emissions limit through performance stack testing or other emissions monitoring, you must develop a site-specific monitoring plan according to the requirements in 63.1350(p)(1) through (4). This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under 63.1350(o) and §63.8(f). If you use a BLDS, you must also meet the requirements specified in 63.1350 (p)(5). (63.1350(p))

Note that the source does not use a BLDS so the requirements in 63.1350 (p)(5) do not apply.

Compliance dates. (§ 63.1351)

22.43 The compliance date for any affected existing source subject to any rule requirements that were in effect before December 20, 2006, is June 14, 2002, for sources that commenced construction before or on March 24, 1998. (63.1351(a)(1))

22.44 The compliance date for any affected existing source subject to any rule requirements that became effective on December 20, 2006, is December 21, 2009, for sources that commenced construction after December 2, 2005 and before or on December 20, 2006. (63.1351(b)(1)

22.45 The compliance date for existing sources for all the requirements that became effective on February 12, 2013, except for the open clinker pile requirements will be September 9, 2015. (63.1351(c))

Note that in a letter dated June 11, 2015, the Division extended the compliance date until March 9, 2016.

22.46 The compliance date for existing sources with the requirements for open clinker storage piles in §63.1343(c) is February 12, 2014. (63.1351(e))

Additional test methods (§ 63.1352)

22.47 If you are conducting tests to determine the rates of emission of HCl from kilns and associated bypass stacks at portland cement manufacturing facilities, for use in applicability determinations under §63.1340, you may use Method 320 or Method 321 of appendix A of this part. (63.1352(a))

22.48 Owners or operators conducting tests to determine the rates of emission of specific organic HAP from raw material dryers, and kilns at Portland cement manufacturing facilities, solely for use in applicability determinations under §63.1340 of this subpart are permitted to use Method 320 of appendix A to this part, or Method 18 of appendix A to part 60 of this chapter. (63.1352(b))

Notification requirements. (§ 63.1353)

22.49 The notification provisions of 40 CFR part 63, subpart A that apply and those that do not apply to owners and operators of affected sources subject to this subpart are listed in Table 1 of this subpart (table of applicable general provisions (Condition 22.2), see also Condition 22.50). If any State requires a notice that contains all of the information required in a notification listed in this section, the owner or operator may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification. (63.1353(a))

22.50 Each owner or operator subject to the requirements of this subpart shall comply with the notification requirements in §63.9 as specified in §63.1353(b)(1) through (6). (53.1353(b))

Reporting requirements. (§ 63.1354)

22.51 The reporting provisions of subpart A of this part that apply and those that do not apply to owners or operators of affected sources subject to this subpart are listed in Table 1 of this subpart table of applicable general provisions (Condition 22.2), see also Condition 22.52). If any State requires a report that contains all of the information required in a report listed in this section, the owner or operator may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report. (63.1354(a))

22.52 The owner or operator of an affected source shall comply with the reporting requirements specified in §63.10 of the general provisions of this part 63, subpart A as specified in §63.1354(b)(1) through (10). (63.1354(b))

22.53 Reporting a failure to meet a standard due to a malfunction. For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, you must report the failure in the semi-annual compliance report required by §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.1348(d) (Condition 22.15), including actions taken to correct a malfunction. (63.1354(c))

Recordkeeping requirements. (§ 63.1355)

22.54 The owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. (63.1355(a))

22.55 The owner or operator shall maintain records for each affected source as required by §63.10(b)(2) and (b)(3) of this part; and §63.1355(b)(1) through (3). (63.1355(b))

22.56 In addition to the recordkeeping requirements in 63.1355(b) (Condition 22.55), the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by §63.10(c). (63.1355(c))

22.57 You must keep records of the daily clinker production rates and kiln feed rates. (63.1355(e))

22.58 You must keep records of the date, time and duration of each startup or shutdown period for any affected source that is subject to a standard during startup or shutdown that differs from the

standard applicable at other times, and the quantity of feed and fuel used during the startup or shutdown period. (63.1355(f))

22.59 You must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions. (63.1355(g)(1))

22.60 You must keep records of actions taken during periods of malfunction to minimize emissions in accordance with §63.1348(d) (Condition 22.15) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. (63.1355(g)(2))

22.61 For each exceedance from an emissions standard or established operating parameter limit, you must keep records of the date, duration and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions and repeat performance tests and the results of those actions. (63.1355(h))

Sources with multiple emissions limit or monitoring requirements. (§ 63.1356)

22.62 If you have an affected source subject to this subpart with a different emissions limit or requirement for the same pollutant under another regulation in title 40 of this chapter, once you are in compliance with the most stringent emissions limit or requirement, you are not subject to the less stringent requirement. Until you are in compliance with the more stringent limit, the less stringent limit continues to apply. (63.1356)

23. Compliance Assurance Monitoring (CAM)

The Compliance Assurance Monitoring (CAM) requirements in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV, apply to the sources listed below with respect to the PM/PM_{10} and Pb limitations identified in the table below**,** as follows:

Source	Condition/Limit
P002 – Raw Materials Drying	
S005 – Raw Materials Dryer	Condition 5.6 - 22.8 tons/year PM/PM_{10} 6.5 lbs/hour PM_{10} Condition 5.7 - 1.6 tons/year Pb
P005 – Raw Material Grinding	
S010 – Raw Material Grinding	Condition 8.3 – PM not to exceed the following: PM (lb/hr) = 17.31 (P) $^{0.16}$ Where P = process weight rate in tons/hr
S011 – Raw Mill Auxiliary Dust Collector	
S012 – Raw Mill Feeders	
P007 – Kiln Burning	

Source	Condition/Limit
S016 – Precalciner Kiln	Condition 10.5 - 133 tons/year PM/PM_{10} (Kiln) Condition 10.16 - 4.4 tons/year Pb (Kiln)
P009 – Clinker and Gypsum/Additive Silos and Weigh Feeders (Storage and Transfer to Finish Mill)	
S024 - #2 Clinker Silo	Condition 11.4 – 9.3 tons/year PM
P010 – Sheltered (A-Frame) Clinker Storage and Reclaim	
S051 – Top of A Frame – Transfer from 529-29 belt to 529-30 belt	Condition 11.4 - 21.96 tons/year PM 10.98 tons/year, 201 lb/day PM_{10}
S034- #6 Reclaim Feeder and A Frame Building	
P011 – Cement Finish Mill and Auxiliaries	
S036 – Finish Mill	Condition 11.4 – 17.05 ton PM/year 8.65 ton PM_{10}/year 48 lbs PM_{10}/day
S037 – Finish Mill Auxillary Dust Collector	
P013 – Cement Silos/Packhouse/Loadout	
S043 –Cement Storage Silos A10 and A13	Condition 11.4 – 12.3 ton PM/year 6.2 ton PM_{10}/year 43 lbs PM_{10}/day For S046 – PM limit only
S044 – Cement Storage Silo A7	
S045 – Cement Finish Silo A2	
S046 – Packhouses West and East (loading spouts) – baghouses vent to a common stack	
P007A – Handling & Processing of CKD & Raw Material Waste Dust	
S001 – Waste Dust Silo	Condition 13.2 - 15.39 tpy PM 7.7 tpy, 69.5lbs/day PM_{10} For S066 PM only
S022 – Kiln Return Dust Silo	
S066 – Cement Silo A5	

23.1 **For the kiln (P007/S016)**, the permittee shall conduct the monitoring for PM as required by 40 CFR Part 63 Subpart LLL (Condition 22). Excursions for purposes of CAM reporting are as follows:

23.1.1 Any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit.

23.2 **For all sources except the kiln (P007/S016)**, the permittee shall follow the CAM Plan provided in Appendix G of this permit. Excursions for purposes of reporting are as follows

23.2.1 For Visible Emissions:

23.2.1.1 Any calendar day (midnight to midnight) in which visible emissions are observed, or

23.2.1.2 Failure to conduct a daily visible emission observation on any calendar day (midnight to midnight) in which the equipment was operating, except as provided for in Condition 23.2.1.3.

23.2.1.3 A daily visible emission observation is not required for any calendar day in which the equipment was not operating for four (4) consecutive

daylight hours or more, provided a pressure differential reading is recorded for that day.

23.2.2 For Pressure Differential:

23.2.2.1 Any weekly pressure drop reading that is at or below 0 or above 7 inches of water.

23.2.2.2 Failure to record the pressure drop in any calendar week in which the equipment was operated.

23.2.3 Excursions shall be reported as required by Section IV, Conditions 21 and 22.d of this permit.

23.3 Operation of Approved Monitoring

23.3.1 At all times, the owner or operator shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment (40 CFR Part 64 § 64.7(b), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.3.2 Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of these CAM requirements, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions (40 CFR Part 64 § 64.7(c), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.3.3 Response to excursions or exceedances

23.3.3.1 Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal

operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable (40 CFR Part 64 § 64.7(d)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.3.3.2 Determination of whether the owner of operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process (40 CFR Part 64 § 64.7(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.3.4 After approval of the monitoring required under the CAM requirements, if the owner or operator identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the owner or operator shall promptly notify the Division and, if necessary submit a proposed modification for this permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters (40 CFR Part 64 § 64.7(e), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.4 Quality Improvement Plan (QIP) Requirements

23.4.1 Based on the results of a determination made under the provisions of Condition 23.3.3.2, the Division may required the owner or operator to develop and implement a QIP (40 CFR Part 64 § 64.8(a), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.4.2 The owner or operator shall maintain a written QIP, if required, and have it available for inspection (40 CFR Part 64 § 64.8(b)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.4.3 The QIP initially shall include procedures for evaluating the control performance problems and, based on the results of the evaluation procedures, the owner or

operator shall modify the plan to include procedures for conducting one or more of the following actions, as appropriate:

23.4.3.1 Improved preventative maintenance practices (40 CFR Part 64 § 64.8(b)(2)(i), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.4.3.2 Process operation changes (40 CFR Part 64 § 64.8(b)(2)(ii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.4.3.3 Appropriate improvements to control methods (40 CFR Part 64 § 64.8(b)(2)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.4.3.4 Other steps appropriate to correct control performance (40 CFR Part 64 § 64.8(b)(2)(iv), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.4.3.5 More frequent or improved monitoring (only in conjunction with one or more steps under Conditions 23.4.3.1 through 23.4.3.4 above) (40 CFR Part 64 § 64.8(b)(2)(v), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.4.4 If a QIP is required, the owner or operator shall develop and implement a QIP as expeditiously as practicable and shall notify the Division if the period for completing the improvements contained in the QIP exceeds 180 days from the date on which the need to implement the QIP was determined (40 CFR Part 64 § 64.8(c), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.4.5 Following implementation of a QIP, upon any subsequent determination pursuant to Condition 23.3.3.2, the Division or the U.S. EPA may require that an owner or operator make reasonable changes to the QIP if the QIP is found to have:

23.4.5.1 Failed to address the cause of the control device performance problems (40 CFR Part 64 § 64.8(d)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV); or

23.4.5.2 Failed to provide adequate procedures for correcting control device performance problems as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions (40 CFR Part 64 § 64.8(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.4.6 Implementation of a QIP shall not excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under federal, state, or local law, or any other applicable requirements under the federal

clean air act (40 CFR Part 64 § 64.8(e), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.5 Reporting and Recordkeeping Requirements

23.5.1 Reporting Requirements: The reports required by Section IV, Condition 22.d, shall contain the information specified in Appendix B of the permit and the following information, as applicable:

23.5.1.1 Summary information on the number, duration and cause (including unknown cause, if applicable), for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable) ((40 CFR Part 64 § 64.9(a)(2)(ii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV); and

23.5.1.2 The owner or operator shall submit, if necessary, a description of the actions taken to implement a QIP during the reporting period as specified in Condition 23.4 of this permit. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring (40 CFR Part 64 § 64.9(a)(2)(iii), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.5.2 General Recordkeeping Requirements: In addition to the recordkeeping requirements in Section IV, Condition 22.a through c.

23.5.2.1 The owner or operator shall maintain records of any written QIP required pursuant to Condition 23.4 and any activities undertaken to implement a QIP, and any supporting information required to be maintained under these CAM requirements (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions) (40 CFR Part 64 § 64.9(b)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.5.2.2 Instead of paper records, the owner or operator may maintain records on alternative media, such as microfilm, computer files, magnetic tape disks, or microfiche, provided that the use of such alternative media allows for expeditious inspection and review, and does not conflict with other applicable recordkeeping requirements (40 CFR Part 64 § 64.9(b)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.6 Savings Provisions

23.6.1 Nothing in these CAM requirements shall excuse the owner or operator of a source from compliance with any existing emission limitation or standard, or any existing monitoring, testing, reporting or recordkeeping requirement that may apply under

federal, state, or local law, or any other applicable requirements under the federal clean air act. These CAM requirements shall not be used to justify the approval of monitoring less stringent than the monitoring which is required under separate legal authority and are not intended to establish minimum requirements for the purposes of determining the monitoring to be imposed under separate authority under the federal clean air act, including monitoring in permits issued pursuant to title I of the federal clean air act. The purpose of the CAM requirements is to require, as part of the issuance of this Title V operating permit, improved or new monitoring at those emissions units where monitoring requirements do not exist or are inadequate to meet the requirements of CAM (40 CFR Part 64 § 64.10(a)(1), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

23.6.2 Nothing in these CAM requirements shall restrict or abrogate the authority of the U.S. EPA or the Division to impose additional or more stringent monitoring, recordkeeping, testing or reporting requirements on any owner or operator of a source under any provision of the federal clean air act, including but not limited to sections 114(a)(1) and 504(b), or state law, as applicable (40 CFR Part 64 § 64.10(a)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

24. P050 - Cement Rail Car Unloading System

AIRs pt 050: Cement Rail Car Unloading and Handling System – hopper, screw conveyor and pneumatic transfer system

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	24.1	50,000 tons/yr of imported cement		Recordkeeping	Monthly
PM & PM_{10}	24.2	PM - 0.6 tons/yr PM_{10} – 0.4 tons/yr	See Condition 24.2	Recordkeeping and Calculation	Monthly
Control Device and Operating Requirements	24.3	See Condition 24.3		Control Equipment Maintenance	Annual Certification
Opacity	24.4	Shall not exceed 20%, except as provided for below		Visible Emission Observation	Daily
				Method 9	If Required (See Conditions 16.1.1.2 and 20.5.1)
		Certain Operating Conditions -Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Baghouse Maintenance and Operation	See Condition 19
NSPS Subpart F Opacity	24.5	Less than 10%		Method 22	Monthly to Annually
MACT Requirements	24.6			See 40 CFR Part 63 Subpart LLL (Condition 22)	
		O & M Plan Requirements		See Conditions 22.10 and 22.11.	

24.1 The amount of cement processed through the rail car unloading system shall not exceed the limitation listed in the table above (Construction Permit 05BO0703). Any information used to determine the monthly quantity of cement processed shall be maintained and made available to the Division upon request. The quantity of cement unloaded shall be monitored and recorded monthly. Monthly quantities of cement unloaded shall be used in a twelve month rolling total to monitor compliance with the annual limitation. Each month a new twelve month total shall be calculated using the previous twelve months' data.

24.2 PM and PM_{10} emissions from the rail car unloading system shall not exceed the limitations listed in the table above (Construction Permit 05BO0703, as modified under the provisions of Section I, Condition 1.3 to increase the PM_{10} emission limitation). Compliance with the PM and PM_{10} emission limitations shall be monitored by calculating emissions monthly using the emission

factors specified in the table below and the monthly quantity of cement unloaded. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data.

Pollutant	Activity	Emission Factor	Control Efficiency	Source
PM	Rail car to hopper	0.60	98 %	From Division's Preliminary Analysis for Construction Permit – AP-42, cement handling portion of concrete batching, section 11.12, corrected for site differences.
	hopper to pneumatic pump (screw conveyor)	0.45	99 %	
	Pneumatic trans to silo	0.27	98 %	
PM_{10}	Rail car to hopper	0.40	98 %	
	hopper to pneumatic pump (screw conveyor)	0.29	99 %	
	Pneumatic trans to silo	0.17	98 %	

Note that the control efficiencies listed in the above table may be applied to the emission calculations provided the requirements in Condition 24.3 have been met.

24.3 The rail car unloading system shall is subject to the following control device and operational requirements:

24.3.1 This source shall be equipped with a pulse jet fabric filter baghouse capable of limiting particulate matter emissions to 0.02 grains per dry standard cubic feet. (Construction Permit 05BO0703)

In the absence of credible evidence to the contrary, compliance with the grain loading limitation is presumed provided the baghouse is operated and maintain in accordance with the requirements specified in Condition 19.

24.3.2 Prior to initiating the discharge from the railcar into the unloading hopper, the seals between the railcar and hopper shall be firmly engaged and the exhaust fan started to maintain a negative pressure of at least 3 inch water gauge in the hopper. After the railcar is emptied and the hopper is also emptied, the negative pressure shall be maintained for at least an additional five minutes to ensure all particulate matter is vented. A gauge showing the negative pressure shall be readily visible to the operator. (Construction Permit 05BO0703)

24.4 These sources are subject to the opacity limits set forth in Condition 20 of this permit.

24.5 On and after the date on which the performance test required to be conducted by §60.8 is completed, you may not discharge into the atmosphere from any affected facility other than the kiln and clinker cooler any gases which exhibit 10 percent opacity, or greater. (40 CFR Part 60 Subpart F § 60.42(c))

Any sources other than kilns (including associated alkali bypass and clinker cooler) that are subject to the 10 percent opacity limit must follow the appropriate monitoring procedures in §63.1350(f) (Condition 22.33), (m)(1) through (4), (10) and (11), (o), and (p) of this chapter. (60.64(b)(3))

24.6 These sources are subject to the requirements in 40 CFR Part 63 Subpart LLL as set forth in Condition 22 of this permit.

Specifically these sources are subject to the operation and maintenance plan requirements and any related recordkeeping and reporting requirements associated with those requirements.

Note that the opacity requirement in 40 CFR Part 60 Subpart F (Condition 24.5) that applies to these sources is more stringent than the opacity limit in 40 CFR Part 63 Subpart LLL (§ 63.1345, Condition 22.6), so as provided for in § 63.1356 (Condition 22.62), these sources do not have to comply with the opacity requirement in § 63.1345. The opacity requirement in § 63.1345 is included in the permit shield for streamlined conditions (Section III.3) of this permit for these sources.

25. Kiln Control Device Support Equipment

AIRS Pt 055 – LIS-1: Lime Storage Silo

AIRS pt 054 – LIS-2: Lime Weigh Hopper

Parameter	Permit Condition Number	Limitations*	Compliance Emission Factor	Monitoring	
				Method	Interval
PM	25.1	**LIS-1** 0.67 lb/mo and 0.004 tons/yr **LIS-2** 0.67 lb/mo and 0.004 tons/yr	**LIS-1** 0.61 lb/ton **LIS-2** 0.61 lb/ton	Recordkeeping and Calculation	Monthly
PM_{10}		**LIS-1** 0.67 lb/mo and 0.004 tons/yr **LIS-2** 0.67 lb/mo and 0.004 tons/yr	**LIS-1** 0.61 lb/ton **LIS-2** 0.61 lb/ton		
$PM_{2.5}$		**LIS-1** 0.67 lb/mo and 0.004 tons/yr **LIS-2** 0.67 lb/mo and 0.004 tons/yr	**LIS-1** 0.61 lb/ton **LIS-2** 0.61 lb/ton		
Lime Processed	25.2	**LIS-1** 1,008 tons/mo and 12,096 tons/yr		Recordkeeping	Monthly
		LIS-2 1,008 tons/mo and 12,096 tons/yr			
Opacity	25.3	Shall Not Exceed 20%		See Condition 25.3	
Hours of Operation	25.4			Recordkeeping	Monthly
Hours of Operation	25.5			See Condition 25.5	
Commence Construction	25.6	Construction Must Commence within 18 Months		See Condition 25.6	
Startup Notice	25.7	Notify Division 15 Days After Startup		Notification	Within 15 Days After Startup
Compliance Certification	25.8	Certify Compliance within 180 Days of Startup		See Condition 25.8	

*Monthly limits apply for the first year of operation only.

25.1 Particulate Matter (PM, PM_{10} and $PM_{2.5}$) emissions from the lime silo (LIS-1) and the lime weigh hopper (LIS-2) shall not exceed the above limitations (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X, based on requested emissions included on the APEN submitted on April 16, 2015). Monthly emissions for each unit shall be calculated by the end of the subsequent month using the above emission factors (EPA's Compilation of Emission Factors (AP-42), Section 11.17 (dated 2/98), Table 11.17-4, product loading enclosed truck) and the monthly throughput, as required by Condition 25.2, in the following equation:

$$\text{Tons/month} = \frac{\text{EF (lbs/hr) x monthly throughput (tons/month)}}{\text{2000 lbs/ton}}$$

Note that a control efficiency of 99.9% may be applied to the above equation provided the baghouses are operated and maintained in accordance with the requirements in Condition 19.

Compliance with the monthly limits shall be monitored by comparing the monthly emissions from each unit with the monthly limitations. Compliance with the monthly emissions limitations must be monitored for one year following startup. After the first year of operation the monthly emissions limitations are no longer applicable. (Note that startup commenced on July 1, 2016 therefore, the monthly limits apply until June 30, 2017.)

Monthly emissions from each unit shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

25.2 The quantity of lime processed through the lime silo (LIS-1) and the lime weigh hopper (LIS-2) shall not exceed the above limitations (as provided for under the provisions of Section I, Condition 1.3 and Colorado Regulation No. 3, Part B, Section II.A.6 and Part C, Section X, based on the requested throughput included on the April 16, 2015 APEN). The quantity of lime handled through the lime silo (LIS-1) and the lime weigh hopper (LIS-2) shall be monitored and recorded monthly and used in the emission calculations in Condition 25.1.

Compliance with the monthly processing limits shall be monitored by comparing the monthly quantities of lime processed through each unit with the monthly limitations. Compliance with the monthly processing limits must be monitored for one year following startup. After the first year of operation the monthly processing limits are no longer applicable. (Note that startup commenced on July 1, 2016 therefore, the monthly limits apply until June 30, 2017.)

Monthly quantities of lime processed through each unit shall be used in a twelve month rolling total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months data.

25.3 Opacity of emissions from the lime silo (LIS-1) and the lime weigh hopper (LIS-2) shall not exceed 20% (Colorado Regulation No. 1, Section II.A.1). In the absence of credible evidence to the contrary, the lime silo (LIS-1) and the lime weigh hopper (LIS-2) shall be presumed to be in compliance with the 20% opacity limit provided the baghouses are operated and maintained in accordance with the requirements in Condition 25.5.

25.4 Hours of operation shall be monitored and recorded monthly. Monthly hours of operation shall be used to estimate emissions are specified in Condition 25.1.

25.5 The baghouses shall be operated and maintained in accordance with manufacturer's recommendations and good engineering practices. A copy of the operating and maintenance procedures, schedules for maintenance and/or inspection activities and records related to the operation and maintenance of the baghouses and good engineering practices, such as records of routine maintenance and/or inspections shall be maintained and made available to the Division upon request.

25.6 The permit conditions in this Section II.25 of this permit, shall expire if construction of the lime silo (LIS-1) and the lime weigh hopper (LIS-2) does not commence within 18 months of

submittal of a complete minor modification application [received April 16, 2015]; construction is discontinued for a period of 18 months of more; or construction is not completed within a reasonable time of the estimated completion date (Colorado Regulation No. 3, Part B, Section III.F.4.a.(i) thru (ii)).

25.7 Unless prior and mutually acceptable arrangements have been made, the applicant shall give notice to the Division within fifteen calendar days after the date on which commencement of operation takes place. (Colorado Regulation No. 3, Part B, Section III.G.1)

25.8 Within one hundred eighty (180) calendar days after commencement of operation of the lime silo (LIS-1) and the lime weigh hopper (LIS-2), the permittee shall certify compliance with the conditions in this Section II.25 of this permit. (Colorado Regulation No. 3, Part B, Section III.G.2). Submittal of the first required semi-annual monitoring report (Appendix B), after startup of these units shall serve as the self-certification that the newly installed lime silo and lime weigh hopper can comply with the conditions in this Section II.25 of this permit.

26. Stationary Internal Combustion Engines

AIRS Pt 053 – A-Pit Pump: Diesel Fuel-Fired Engine (rated at 90 hp)

Diesel Fuel-Fired Engines Rated at 80 hp (Dowe Flats 6" Pump) and 84 hp (Dowe Flats 8" Pump)

Natural Gas-Fired Emergency Engine rated at 230 hp (Kiln Donkey Engine)

Parameter	Permit Condition Number	Limitation	Compliance Emission Factor	Monitoring	
				Method	Interval
MACT Subpart ZZZZ Requirements	26.1	Change Oil and Filter Inspect Air Cleaner Inspect all Hoses and Belts		See Condition 26.1	
SO_2 – **Pump Engines only**	26.2	0.8 lb/MMBtu		Fuel Restriction	Only Diesel Fuel is Used as Fuel
Hours of Operation	26.3			Recordkeeping	Annually
Annual Emissions – **A-Pit Pump Only**	26.4		NO_X: 0.031 lb/hp-hr CO: 0.0067 lb/hp-hr	Recordkeeping and Calculation	Annually
Opacity	26.5	Not to Exceed 20% Except as Provided for Below		See Condition 26.5	
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			

Note that these emission units are exempt from the APEN reporting requirements in Regulation No. 3, Part A and the construction permit requirements in Regulation No. 3, Part B provided actual, uncontrolled emissions do not exceed the APEN de minimis level (1 ton/yr of NO_X). An APEN is triggered for these engines if hours of operation meet or exceed the following: 716 hrs/yr, 806 hrs/yr (80 hp engine), 768 hrs/yr (84 hp engine) and 1,261 hrs/yr (230 hp engine). An APEN was submitted for the A-pit pump on July 1, 2013.

Diesel Fuel-Fired Emergency Engine Rated at 99 hp/73.8 kW (Flood Response Engine)

Parameter	Permit Condition Number	Limitation	Compliance Emission Factor	Monitoring	
				Method	Interval
Hours of Operation	26.3			Recordkeeping	Annually
Opacity	26.5	Not to Exceed 20% Except as Provided for Below For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes		See Condition 26.5	
NSPS Subpart IIII	26.6	NO_X-NMHC – 4.7 g/kw-hr CO – 5.0 g/kw-hr PM – 0.40 g/kw-hr		See Condition 26.6	
MACT ZZZZ Requirements	26.7	Compliance with MACT met by complying with NSPS Subpart IIII		See Condition 26.7	

Note that this emission unit is exempt from the APEN reporting requirements in Regulation No. 3, Part A and the construction permit requirements in Regulation No. 3, Part B provided actual, uncontrolled emissions do not exceed the APEN de minimis level (1 ton/yr of NO_X). An APEN is triggered for this engine if hours of operation meet or exceed the 2,615 hrs/yr.

26.1 The **Pump and Kiln engines** are subject to the requirements in 40 CFR Part 63 Subpart ZZZZ, "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines", as follows:

The requirements below reflect the current rule language as of the revisions to 40 CFR Part 63 Subpart ZZZZ published in the Federal Register on January 30, 2013 (including the corrections published March 6, 2013 and revisions to test methods published February 27, 2014). However, if revisions to this Subpart are promulgated at a later date, the owner or operator is subject to the requirements contained in the revised version of 40 CFR Part 63 Subpart ZZZZ.

The D. C. Circuit Court issued a mandate on May 4, 2016 for vacatur for certain requirements allowing emergency engines to operate for limited hours for demand response. Upon issuance of the mandate § 63.6640(f)(2)(ii)-(iii) (Conditions 26.1.12.2.b and 26.1.12.2.c) have no legal effect. Operation of emergency engines is limited to emergency situations specified in 63.6640(f)(1) (Condition 26.1.12.1); maintenance checks and readiness testing for a limited number of hours per year as specified in 63.6640(f)(2)(i) (Condition 26.1.12.2.a); and certain non-emergency situations for a limited number of hours per year as specified in 63.6640(f)(3)–(4) (Condition 26.1.12.3). See EPA memorandum dated April 15, 2016 regarding "Guidance on Vacatur of RICE NESHAP and NSPS Provisions for Emergency Engines" for more information.

It should be noted that additional revisions to the requirements in 40 CFR Part 63 Subpart ZZZZ are expected to be made in response to issues related to legal action associated with the allowable hours of operation provisions for emergency engines regarding engines used for demand response. If such revisions are finalized prior to issuance of the permit, they will be included in the permit.

As of the date of this permit issuance [March 1, 2017], the requirements in 40 CFR Part 63 Subpart ZZZZ promulgated after July 1, 2007 have not been adopted into Colorado Regulation No. 8, Part E and are therefore not state-enforceable. In the event that these requirements are adopted into Colorado Regulations, they will become state-enforceable.

When do I have to comply with this subpart (§ 60.6595)

26.1.1 If you have an existing stationary CI RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions, you must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. (§ 63.6595(a)(1))

What emission limitations and other requirements must I meet if I own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions? (§ 63.6602)

26.1.2 If you own or operate an existing stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions, you must comply with the emission limitations and other requirements in Table 2c to this subpart which apply to you. Compliance with the numerical emission limitations established in this subpart is based on the results of testing the average of three 1-hour runs using the testing requirements and procedures in §63.6620 and Table 4 to this subpart. (§ 63.6602) Note that this engine is not subject to numerical emission limitations.

The requirements in Table 2c that apply to **the pump engines** are as follows:

26.1.2.1 Change oil and filter every 1,000 hours of operation or annually, whichever comes first. (Table 2c, item 2.a)

26.1.2.2 Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. (Table 2c, item 2.a)

26.1.2.3 Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. (Table 2c, item 2.c)

The requirements in Table 2C that apply to **the kiln engine** are as follows:

26.1.2.4 Change oil and filter every 500 hours of operation or annually, whichever comes first. (Table 2c, item 6.a)

26.1.2.5 Inspect spark plugs every 1,000 hours of operation or annually, whichever

comes first, and replace as necessary. (Table 2c, item 6.b)

26.1.2.6 Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. (Table 2c, item 6.c)

Notwithstanding the above requirements, the following applies:

26.1.2.7 **Kiln engine only.** If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable. (Table 2c, footnote 2)

26.1.2.8 Sources have the option to utilize an oil analysis program as described in Conditions 26.1.8 or 26.1.9 in order to extend the specified oil change requirement in Table 2c of this subpart. (Table 2c, footnote 2)

26.1.2.9 Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices. (Table 2c, footnote 3)

What are my general requirements for complying with this subpart? (§ 63.6605)

26.1.3 You must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to you at all times. (§63.6605(a))

26.1.4 At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. (§ 63.6605(b))

What are my monitoring, installation, collection, operation, and maintenance requirements? (§ 63.6625)

26.1.5 If you own or operate an existing stationary RICE with a site rating of less than 100 HP or an existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. (§ 63.6625(e), (e)(1) and (e)(1))

26.1.6 If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed. (60.6625(f))

26.1.7 If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply. (§ 63.6625(h))

26.1.8 If you own or operate a stationary CI engine that is subject to the work, operation or management practices in Condition 26.1.2, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition 26.1.2.1. The oil analysis must be performed at the same frequency specified for changing the oil in Condition 26.1.2.1. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. (§ 63.6625(i))

26.1.9 **Kiln Engine only.** If you own or operate a stationary SI engine that is subject to the work, operation or management practices in Condition 26.1.2, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Condition 26.1.2.4. The oil analysis must be performed at the same

frequency specified for changing the oil in Condition 26.1.2.4. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements? (§ 63.6640)

26.1.10 You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d [Condition 26.1.2] to this subpart that apply to you according to methods specified in Table 6 to this subpart. (§ 63.6630(a))

26.1.10.1 Operating and maintaining the stationary RICE according to the manufacturer's emission-related operation and maintenance instructions (Table 6, item 9.a.i); or

26.1.10.2 Develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. (Table 6, item 9.a.ii)

26.1.11 You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you (Condition 26.1.16). (§ 63.6640(e))

26.1.12 **Kiln engine only.** If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in Conditions 26.1.12.1 through 26.1.12.3. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in Conditions 26.1.12.1 through 26.1.12.3, is prohibited. If you do not operate the engine according to the requirements in Conditions 26.1.12.1 through 26.1.12.3, the engine will not be

considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (§ 63.6640(f))

26.1.12.1 There is no time limit on the use of emergency stationary RICE in emergency situations. (§ 63.6640(f)(1))

26.1.12.2 You may operate your emergency stationary RICE for any combination of the purposes specified in Conditions 26.1.12.2.a through 26.1.12.2.c for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by Condition 26.1.12.3 counts as part of the 100 hours per calendar year allowed by this condition. (§ 63.6640(f)(2))

a. Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year. (§ 63.6640(f)(2)(i))

b. Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3. (§ 63.6640(f)(2)(ii))

c. Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. (§ 63.6640(f)(2)(iii))

26.1.12.3 Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in Condition 26.1.12.2

26.1.12.4 . The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income

for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (§ 63.6640(f)(3))

What records must I keep? (§ 63.6655)

26.1.13 You must keep records of the maintenance conducted on the stationary RICE in order to demonstrate that you operated and maintained the stationary RICE and after-treatment control device (if any) according to your own maintenance plan if you own or operate an existing stationary RICE with a site rating of less than 100 brake HP located at a major source of HAP emissions or an existing stationary emergency engine. (§ 63.6655(e), (e)(1) and (e)(2))

26.1.14 **Kiln engine only.** If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions that does not meet the standards applicable to non-emergency engines, you must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. The owner or operator must document how many hours are spent for emergency operation, including what classified the operation as emergency and how many hours are spent for non-emergency operation. If the engine is used for the purposes specified in Conditions 26.1.12.2.b or 26.1.12.2.c or §63.6640(f)(4)(ii), the owner or operator must keep records of the notification of the emergency situation, and the date, start time, and end time of engine operation for these purposes. (§ 63.6655(f) and (f)(2))

In what form and how long shall I keep my records? (§ 63.6660)

26.1.15 Records shall be kept in the form and for the duration specified in § 63.6660.

What parts of the General Provisions apply to me? (§ 63.6665)

26.1.16 Table 8 to Subpart ZZZZ shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you. (§ 63.6665) The general provisions that apply to these engine include, but are not limited to the following:

26.1.16.1 Prohibited activities in § 63.4(a).

26.1.16.2 Circumvention in § 63.4(b).

26.2 Sulfur Dioxide (SO_2) emissions from **each pump engines** shall not exceed 0.8 lb/MMBtu (Colorado Regulation No. 1, Section VI.B.4.b.(i)). In the absence of credible evidence to the contrary, compliance with the SO_2 emission limitation shall be presumed since only diesel fuel is permitted to be used as fuel in these engines.

26.3 Hours of operation **for each engine** shall be monitored annually (calendar year) and recorded in a log to be made available to the Division upon request.

If annual hours of operation exceed 806 hours for the 6 inch pump, 768 hours for the 8 inch pump, 1,261 hours for the kiln engine or 2,615 hours for the flood response engine, an APEN is required for that engine and an APEN shall be filed.

Hours of operation for the A-pit pump shall be used to calculate annual emissions as required by Condition 26.4

26.4 Annual emissions for purposes of APEN reporting and the payment of annual fees shall be estimated using hours of operation (as required by Condition 26.3), the maximum horsepower (90 hp) and the above emission factors (AP-42, Section 3.3 (dated 10/96), Table 3.3-1) in the following equation:

$$\text{Emissions (tons/yr)} = \frac{\text{EF (lb-hp-hr) x annual hours of operation (hr/yr) x max hp}}{\text{2000 lb/ton}}$$

Note that if emissions from the A-pit pump engine fall below 1 ton per year of NO_X (716 hours per year of operation), then the APEN can be cancelled for this engine by submitting an APEN cancellation form. However, if in any calendar year, emissions of NO_X exceed 1 ton per year, an APEN must be re-filed.

26.5 Opacity of emissions **from each engine** shall not exceed the following:

26.5.1 Except as provided for in Condition 26.5.2 below, no owner or operator of a source shall allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity (Colorado Regulation No. 1, Section II.A.1).

26.5.2 No owner or operator of a source shall allow or cause to be emitted into the atmosphere any air pollutant resulting from startup which is in excess of 30% opacity for a period or periods aggregating more than six (6) minutes in any sixty (60) consecutive minutes (Colorado Regulation No. 1, Section II.A.4).

Compliance with these limitations shall be monitored by conducting opacity observations in accordance with EPA Reference Method 9 as follows:

26.5.3 **For natural gas-fired engines (kiln engine).** In the absence of credible evidence to the contrary, compliance with eh opacity requirements will be presumed since only natural gas is used as fuel in this engine. The permittee shall maintain records that verify that only natural gas is used as fuel in this engine.

26.5.4 **For diesel fuel fired engines (pump engines and flood relief engine).** Compliance with the opacity limitations shall be monitored by conducting opacity observations in accordance with Method 9 as follows:

26.5.4.1 As specified in Condition 26.1.7 engine startup shall not exceed 30 minutes. An engine startup period of less than 30 minutes shall not

require an opacity observation to monitor compliance with the opacity limit in Condition 26.5.2. A record shall be kept of the date and time the engine started and when it was shutdown.

26.5.4.2 An opacity observation shall be conducted annually (calendar year period) on each engine to monitor compliance with the opacity limit in Condition 26.5.1. Annual opacity observations for an individual engine shall be separated by a period of four (4) months.

If an engine is operated more than 250 hours in any calendar year period, a second opacity observation shall be conducted. If two opacity readings are conducted in the annual (calendar year) period, such readings shall be conducted at least thirty days apart.

26.5.4.3 If an engine is not operated during the annual (calendar year) period, then no opacity observation is required.

26.5.4.4 Subject to the provisions of C.R.S. 25-7-123.1 and in the absence of credible evidence to the contrary, exceedance of the opacity limit shall be considered to exist from the time a Method 9 reading is taken that shows an exceedance of the opacity limit until a Method 9 reading is taken that shows the opacity is less than the opacity limit.

26.5.4.5 All opacity observations shall be performed by an observer with current and valid Method 9 certification. Results of Method 9 readings and a copy of the certified Method 9 reader's certificate shall be kept on site and made available to the Division upon request.

26.6 The **flood response engine** is subject to the requirements in 40 CFR Part 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines", as adopted by reference in Colorado Regulation No. 6, Part A, including but not limited to the following requirements:

The requirements below reflect the rule language in 40 CFR Part 60 Subpart IIII as of the latest revisions to 40 CFR Part 60 Subpart IIII published in the Federal Register on July 7, 2016. However, if revisions to this Subpart are promulgated at a later date, the owner or operator is subject to the requirements contained in the revised version of 40 CFR Part 60 Subpart IIII.

The D. C. Circuit Court issued a mandate on May 4, 2016 for vacatur for certain requirements allowing emergency engines to operate for limited hours for demand response. Upon issuance of the mandate § 60.4211(f)(2)(ii)-(iii) (Conditions 26.6.8.2.b and c) have no legal effect. Operation of emergency engines is limited to emergency situations specified in 60.4211(f)(1) (Condition 26.6.8.1); maintenance checks and readiness testing for a limited number of hours per year as specified in 60.4211(f)(2)(i) (Condition 26.6.8.2.a); and certain non-emergency situations for a limited number of hours per year as specified in 60.4211(f)(3) (Condition 26.6.8.3). See EPA memorandum dated April 15, 2016 regarding "Guidance on Vacatur of RICE NESHAP and NSPS Provisions for Emergency Engines" for more information.

It should be noted that additional revisions to the requirements in 40 CFR Part 60 Subpart IIII are expected to be made in response to issues related to the vacatur or requirements associated with the allowable hours of operation provisions for emergency engines discussed in the above paragraph. If such revisions are finalized prior to issuance of the permit, they will be included in the permit.

What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine? (§ 60.4205)

26.6.1 Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in § 60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. (§ 60.4205(b))

Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section. (§ 60.4202(a))

For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007. (§ 60.4202(a)(2))

The specific emission limitations in 40 CFR 89.112 that apply to engine E001 are as follows:

Tier 3 requirements for Model Engines Greater than or Equal to 37 kW and Less than 75 kW					
Emission Standards (g/kW-hr)			Emission Standards (g/hp-hr)		
NMHC + NOX	CO	PM	NMHC + NOX	CO	PM
4.7	5.0	0.40	3.50	3.72	0.30

How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine? (§ 60.4206)

26.6.2 Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine. (§ 60.4206)

What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart? (§ 60.4207)

26.6.3 Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted. ((§ 60.4207(a))

The fuel limitations in 80.510(b) are: sulfur content of 15 ppm maximum for NR diesel fuel and 500 ppm maximum for LM diesel fuel and a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

Compliance with the fuel limitations shall be monitored by sampling and analyzing each shipment of diesel fuel to determine the sulfur and cetane and/or aromatic content using appropriate ASTM methods, or equivalent if approved in advance by the Division. In lieu of sampling, vendor data may be used to verify that the diesel fuel delivered meets the sulfur and cetane and/or aromatic requirements.

What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine? (§ 60.4209)

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

26.6.4 If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine. (§ 60.4209(a))

26.6.5 If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached. (§ 60.4209(b))

What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine? (§ 60.4211)

26.6.6 If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under § 60.4211(g) (Condition 26.6.9):

26.6.6.1 Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

26.6.6.2 Change only those emission-related settings that are permitted by the manufacturer; and

26.6.6.3 Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you. (§ 60.4211(a)(1) – (3))

26.6.7 If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in § 60.4211(g) (Condition 26.6.9). (§ 60.4211(c))

26.6.8 If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in 60.4211(f)(1) through (3) (Conditions 26.6.8.1 through 26.6.8.3). In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in 60.4211(f)(1) through (3) (Conditions 26.6.8.1 through 26.6.8.3), is prohibited. If you do not operate the engine according to the requirements in 60.4211(f)(1) through (3) (Conditions 26.6.8.1 through 26.6.8.3), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. (§ 60.4211(f))

26.6.8.1 There is no time limit on the use of emergency stationary ICE in emergency situations. (60.4211(f)(1))

26.6.8.2 You may operate your emergency stationary ICE for any combination of the purposes specified in 60.4211(f)(2)(i) through (iii) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by 60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2). (60.4211(f)(2))

a. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require

maintenance and testing of emergency ICE beyond 100 hours per calendar year. (60.4211(f)(2)(i))

b. Emergency stationary ICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. (60.4211(f)(2)(ii))

c. Emergency stationary ICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency. (60.4211(f)(2)(iii))

26.6.8.3 Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in 60.4211(f)(2) (Condition 26.6.8.2). Except as provided in 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. (60.4211(f)(3))

a. The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the requirements in 60.4211(f)(3)(i)(A) through (E) are met. (60.4211(f)(3)(i))

26.6.9 If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as specified in § 60.4211(g)(1) through (3), as applicable. (§ 60.4211(g))

What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine? (§ 60.4214)

26.6.10 If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial

notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time. (§ 60.4214(b))

26.6.11 If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached. (§ 60.4214(c))

What parts of the general provisions apply to me? (§ 60.4218)

26.6.12 Table 8 of this subpart shows which parts of the General Provisions in §§ 60.1 through 60.19 apply to you. (§ 60.4218) The general provisions that apply to these engines include, but are not limited to the following:

26.6.12.1 No article, machine, equipment or process shall be used to conceal an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gasses discharged to the atmosphere (§ 60.12).

26.7 The **flood response engine** is subject to the requirements in 40 CF Part 63 Subpart ZZZZ, "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines." The specific applicable requirements are as follows:

Note that as of the date of renewal permit issuance [March 1, 2017], the requirements in 40 CFR Part 63 Subpart ZZZZ promulgated after July 1, 2007 have not been adopted into Colorado Regulation No. 8, Part E by the Division and are therefore not state-enforceable. In the event that the Division adopts these requirements they will be state-enforceable.

A new or reconstructed emergency or limited use stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines. No further requirements apply for such engines under this part. (63.6590(c) and (c)(6))

SECTION III - Permit Shield

Regulation No. 3, 5 CCR 1001-5, Part C, §§ I.A.4, V.D., & XIII.B; § 25-7-114.4(3)(a), C.R.S.

1. Specific Non-Applicable Requirements

No requirements were specifically identified as being non-applicable for this facility, except for those which any reasonable person would determine are obviously not applicable.

2. General Conditions

Compliance with this Operating Permit shall be deemed compliance with all applicable requirements specifically identified in the permit and other requirements specifically identified in the permit as not applicable to the source. This permit shield shall not alter or affect the following:

2.1 The provisions of §§ 25-7-112 and 25-7-113, C.R.S., or § 303 of the federal act, concerning enforcement in cases of emergency;

2.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

2.3 The applicable requirements of the federal Acid Rain Program, consistent with § 408(a) of the federal act;

2.4 The ability of the Air Pollution Control Division to obtain information from a source pursuant to § 25-7-111(2)(I), C.R.S., or the ability of the Administrator to obtain information pursuant to § 114 of the federal act;

2.5 The ability of the Air Pollution Control Division to reopen the Operating Permit for cause pursuant to Regulation No. 3, Part C, § XIII.

2.6 Sources are not shielded from terms and conditions that become applicable to the source subsequent to permit issuance.

3. Streamlined Conditions

The following applicable requirements have been subsumed within this operating permit using the pertinent streamlining procedures approved by the U.S. EPA. For purposes of the permit shield, compliance with the listed permit conditions will serve as a compliance determination for purposes of the associated subsumed requirements.

Permit Condition(s)	Streamlined (Subsumed) Requirement
	Colorado Regulations No. 1 and 6
Section II, Conditions 2.2, 3.2, 10.18, 11.4, 13.2 and 24.2	Colorado Regulation No. 1, III.C.1.b and Colorado Regulation No. 6, Part B, III.C.2 [particulate matter emissions – process weight rate limit] **- State-only Requirement**
Section II, Condition 5.6	Colorado Regulation No. 1, III.C.1.b [particulate matter emissions – process weight rate limit]
Section II, Condition 26.2	Colorado Regulation No. 1, IV.B.4.b.(i) [SO2 emissions shall not exceed 0.8 lb/MMBtu] – Flood response engine only
Section II, Conditions 2.2, 11.7, 13.5 and 24.5	Colorado Regulation No. 6, Part B, III.C.3 [20% opacity requirement] **- State-only Requirement**
	Regional Haze Requirements (Colorado Regulation No. 3, Part F)
Section II, Condition 10.18	Colorado Regulation No. 3, Part F, Section IV.A.2 [PM limit (0.275 lb/ton of dry feed for kiln]
Section II, Condition 5.10	Colorado Regulation No. 3, Part F, Section IV.A.2 {10% opacity requirement for dryer]
Section II, Condition 10.18	Colorado Regulation No. 3, Part F, Section VII.C.2.a [PM monitoring for kiln, EXCEPT FOR the last paragraph regarding opacity monitoring]
Section IV, Conditions 22.a thru c.	Colorado Regulation No. 3, Part F, Section VII.D [Recordkeeping requirements] Section VII.D.1 & 2 applied to the kiln only, Section VII.D.2 applied to both the kiln and dryer
Section II, Condition 18.4	Colorado Regulation No. 3, Part F, Section VII.E [ONLY the paragraph related to submittal of excess emission reports] This applied to the kiln.
Section II, Condition 23.2.3	Colorado Regulation No. 3, Part F, Section VII.E [ONLY the paragraph related to submittal of semi-annual reports for any excursions under CAM] This applied to both the kiln and dryer
Section II, Condition 21.	Colorado Regulation No. 3, Part F, Section VII.E [ONLY the paragraph related to submittal of PM performance test results within 60 days] This applied to the dryer.
	40 CFR Part 60 Subpart F Requirements
Section II, Condition 10.18	40 CFR Part 60 Subpart F § 60.62(a)(1)(i) and (b)(1)(iii) [for kiln - PM not to exceed 0.30 lb/ton feed & for clinker cooler PM not to exceed 0.10 lb/ton feed]
	40 CFR Part 63 Subpart LLL Requirements
Section II, Condition 11.7	40 CFR Part 63 Subpart LLL § 63.1343(b) [10% opacity requirement for finish and raw mill]
Section II, Conditions 5.10, , 11.7, 13.5, and 24.5	40 CFR Part 63 Subpart LLL § 1345 [10% opacity requirement for affected sources other than kilns, clinker coolers, and raw material dryers]
	Construction Permit Requirements
Section II, Condition 5.6	Colorado Construction Permit 12BO444-1, Condition 3 [ONLY, the TSP limit of 22.8 tons/yr]
Section II, Condition 10.18	Colorado Construction Permit 12BO444-2, as modified under Section I, Condition 1.3 of this permit [PM limit of 0275 lb/ton of dry feed]

SECTION IV - General Permit Conditions

5/22/12 version

1. Administrative Changes

Regulation No. 3, 5 CCR 1001-5, Part A, § III.

The permittee shall submit an application for an administrative permit amendment to the Division for those permit changes that are described in Regulation No. 3, Part A, § I.B.1. The permittee may immediately make the change upon submission of the application to the Division.

2. Certification Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.9., V.C.16.a.& e. and V.C.17.

a. Any application, report, document and compliance certification submitted to the Air Pollution Control Division pursuant to Regulation No. 3 or the Operating Permit shall contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

b. All compliance certifications for terms and conditions in the Operating Permit shall be submitted to the Air Pollution Control Division at least annually unless a more frequent period is specified in the applicable requirement or by the Division in the Operating Permit.

c. Compliance certifications shall contain:

(i) the identification of each permit term and condition that is the basis of the certification;

(ii) the compliance status of the source;

(iii) whether compliance was continuous or intermittent;

(iv) method(s) used for determining the compliance status of the source, currently and over the reporting period; and

(v) such other facts as the Air Pollution Control Division may require to determine the compliance status of the source.

d. All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

e. If the permittee is required to develop and register a risk management plan pursuant to § 112(r) of the federal act, the permittee shall certify its compliance with that requirement; the Operating Permit shall not incorporate the contents of the risk management plan as a permit term or condition.

3. Common Provisions

Common Provisions Regulation, 5 CCR 1001-2 §§ II.A., II.B., II.C., II,.E., II.F., II.I, and II.J

a. To Control Emissions Leaving Colorado

When emissions generated from sources in Colorado cross the State boundary line, such emissions shall not cause the air quality standards of the receiving State to be exceeded, provided reciprocal action is taken by the receiving State.

b. Emission Monitoring Requirements

The Division may require owners or operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division.

c. Performance Testing

The owner or operator of any air pollution source shall, upon request of the Division, conduct performance test(s) and furnish the Division a written report of the results of such test(s) in order to determine compliance with applicable emission control regulations.

Performance test(s) shall be conducted and the data reduced in accordance with the applicable reference test methods unless the Division:

(i) specifies or approves, in specific cases, the use of a test method with minor changes in methodology;

(ii) approves the use of an equivalent method;

(iii) approves the use of an alternative method the results of which the Division has determined to be adequate for indicating where a specific source is in compliance; or

(iv) waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the Division's satisfaction that the affected facility is in compliance with the standard. Nothing in this paragraph shall be construed to abrogate the Commission's or Division's authority to require testing under the Colorado Revised Statutes, Title 25, Article 7, and pursuant to regulations promulgated by the Commission.

Compliance test(s) shall be conducted under such conditions as the Division shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Division such records as may be necessary to determine the conditions of the performance test(s). Operations during period of startup, shutdown, and malfunction shall not constitute representative conditions of performance test(s) unless otherwise specified in the applicable standard.

The owner or operator of an affected facility shall provide the Division thirty days prior notice of the performance test to afford the Division the opportunity to have an observer present. The Division may waive the thirty day notice requirement provided that arrangements satisfactory to the Division are made for earlier testing.

The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for test methods applicable to such facility;

(ii) Safe sampling platform(s);

(iii) Safe access to sampling platform(s); and

(iv) Utilities for sampling and testing equipment.

Each performance test shall consist of at least three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of results of at least three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other

circumstances beyond the owner or operator's control, compliance may, upon the Division's approval, be determined using the arithmetic mean of the results of the two other runs.

Nothing in this section shall abrogate the Division's authority to conduct its own performance test(s) if so warranted.

d. Affirmative Defense Provision for Excess Emissions during Malfunctions

An affirmative defense to a claim of violation under these regulations is provided to owners and operators for civil penalty actions for excess emissions during periods of malfunction. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of evidence that:

(i) The excess emissions were caused by a sudden, unavoidable breakdown of equipment, or a sudden, unavoidable failure of a process to operate in the normal or usual manner, beyond the reasonable control of the owner or operator;

(ii) The excess emissions did not stem from any activity or event that could have reasonably been foreseen and avoided, or planned for, and could not have been avoided by better operation and maintenance practices;

(iii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded;

(iv) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

(v) All reasonably possible steps were taken to minimize the impact of the excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence;

(viii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

(ix) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This section is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement; and

(x) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in the Commissions' Regulations that could be attributed to the emitting source.

The owner or operator of the facility experiencing excess emissions during a malfunction shall notify the division verbally as soon as possible, but no later than noon of the Division's next working day, and shall submit written notification following the initial occurrence of the excess emissions by the end of the source's next reporting period. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to failures to meet federally promulgated performance standards or emission limits, including, but not limited to, new source performance standards and national emission standards for hazardous air pollutants. The affirmative defense provision does not apply to state implementation plan (sip) limits or permit limits that have been set taking into account potential emissions during malfunctions, including, but

not necessarily limited to, certain limits with 30-day or longer averaging times, limits that indicate they apply during malfunctions, and limits that indicate they apply at all times or without exception.

e. Circumvention Clause

A person shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of air pollutants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of this regulation. No person shall circumvent this regulation by using more openings than is considered normal practice by the industry or activity in question.

f. Compliance Certifications

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in the Colorado State Implementation Plan, nothing in the Colorado State Implementation Plan shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. Evidence that has the effect of making any relevant standard or permit term more stringent shall not be credible for proving a violation of the standard or permit term.

When compliance or non-compliance is determined by a test or procedure provided by permit or other applicable requirement, the owner or operator shall be presumed to be in compliance or non-compliance unless other relevant credible evidence overcomes that presumption.

g. Affirmative Defense Provision for Excess Emissions During Startup and Shutdown

An affirmative defense is provided to owners and operators for civil penalty actions for excess emissions during periods of startup and shutdown. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of the evidence that:

(i) The periods of excess emissions that occurred during startup and shutdown were short and infrequent and could not have been prevented through careful planning and design;

(ii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance;

(iii) If the excess emissions were caused by a bypass (an intentional diversion of control equipment), then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(iv) The frequency and duration of operation in startup and shutdown periods were minimized to the maximum extent practicable;

(v) All possible steps were taken to minimize the impact of excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence; and,

(viii) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This subparagraph is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement.

The owner or operator of the facility experiencing excess emissions during startup and shutdown shall notify the Division verbally as soon as possible, but no later than two (2) hours after the start of the next working day, and shall

submit written quarterly notification following the initial occurrence of the excess emissions. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to State Implementation Plan provisions or other requirements that derive from new source performance standards or national emissions standards for hazardous air pollutants, or any other federally enforceable performance standard or emission limit with an averaging time greater than twenty-four hours. In addition, an affirmative defense cannot be used by a single source or small group of sources where the excess emissions have the potential to cause an exceedance of the ambient air quality standards or Prevention of Significant Deterioration (PSD) increments.

In making any determination whether a source established an affirmative defense, the Division shall consider the information within the notification required above and any other information the Division deems necessary, which may include, but is not limited to, physical inspection of the facility and review of documentation pertaining to the maintenance and operation of process and air pollution control equipment.

4. Compliance Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.C.9., V.C.11. & 16.d. and § 25-7-122.1(2), C.R.S.

a. The permittee must comply with all conditions of the Operating Permit. Any permit noncompliance relating to federally-enforceable terms or conditions constitutes a violation of the federal act, as well as the state act and Regulation No. 3. Any permit noncompliance relating to state-only terms or conditions constitutes a violation of the state act and Regulation No. 3, shall be enforceable pursuant to state law, and shall not be enforceable by citizens under § 304 of the federal act. Any such violation of the federal act, the state act or regulations implementing either statute is grounds for enforcement action, for permit termination, revocation and reissuance or modification or for denial of a permit renewal application.

b. It shall not be a defense for a permittee in an enforcement action or a consideration in favor of a permittee in a permit termination, revocation or modification action or action denying a permit renewal application that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

c. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of any request by the permittee for a permit modification, revocation and reissuance, or termination, or any notification of planned changes or anticipated noncompliance does not stay any permit condition, except as provided in §§ X. and XI. of Regulation No. 3, Part C.

d. The permittee shall furnish to the Air Pollution Control Division, within a reasonable time as specified by the Division, any information that the Division may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Division copies of records required to be kept by the permittee, including information claimed to be confidential. Any information subject to a claim of confidentiality shall be specifically identified and submitted separately from information not subject to the claim.

e. Any schedule for compliance for applicable requirements with which the source is not in compliance at the time of permit issuance shall be supplemental, and shall not sanction noncompliance with, the applicable requirements on which it is based.

f. For any compliance schedule for applicable requirements with which the source is not in compliance at the time of permit issuance, the permittee shall submit, at least every 6 months unless a more frequent period is specified in the applicable requirement or by the Air Pollution Control Division, progress reports which contain the following:

(i) dates for achieving the activities, milestones, or compliance required in the schedule for compliance, and dates when such activities, milestones, or compliance were achieved; and

(ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

g. The permittee shall not knowingly falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained or followed under the terms and conditions of the Operating Permit.

5. Emergency Provisions

Regulation No. 3, 5 CCR 1001-5, Part C, § VII.

An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed the technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. "Emergency" does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. An emergency constitutes an affirmative defense to an enforcement action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. an emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. the permitted facility was at the time being properly operated;

c. during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. the permittee submitted oral notice of the emergency to the Air Pollution Control Division no later than noon of the next working day following the emergency, and followed by written notice within one month of the time when emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

This emergency provision is in addition to any emergency or malfunction provision contained in any applicable requirement.

6. Emission Controls for Asbestos

Regulation No. 8, 5 CCR 1001-10, Part B

The permittee shall not conduct any asbestos abatement activities except in accordance with the provisions of Regulation No. 8, Part B, "asbestos control."

7. Emissions Trading, Marketable Permits, Economic Incentives

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.13.

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are specifically provided for in the permit.

8. Fee Payment

C.R.S. §§ 25-7-114.1(6) and 25-7-114.7

a. The permittee shall pay an annual emissions fee in accordance with the provisions of C.R.S. § 25-7-114.7. A 1% per month late payment fee shall be assessed against any invoice amounts not paid in full on the 91st day after the date of invoice, unless a permittee has filed a timely protest to the invoice amount.

b. The permittee shall pay a permit processing fee in accordance with the provisions of C.R.S. § 25-7-114.7. If the Division estimates that processing of the permit will take more than 30 hours, it will notify the permittee of its estimate of what the actual charges may be prior to commencing any work exceeding the 30 hour limit.

c. The permittee shall pay an APEN fee in accordance with the provisions of C.R.S. § 25-7-114.1(6) for each APEN or revised APEN filed.

9. Fugitive Particulate Emissions

Regulation No. 1, 5 CCR 1001-3, § III.D.1.

The permittee shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere, in accordance with the provisions of Regulation No. 1, § III.D.1.

10. Inspection and Entry

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.16.b.

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Air Pollution Control Division, or any authorized representative, to perform the following:

a. enter upon the permittee's premises where an Operating Permit source is located, or emissions-related activity is conducted, or where records must be kept under the terms of the permit;

b. have access to, and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Operating Permit;

d. sample or monitor at reasonable times, for the purposes of assuring compliance with the Operating Permit or applicable requirements, any substances or parameters.

11. Minor Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, §§ X. & XI.

The permittee shall submit an application for a minor permit modification before making the change requested in the application. The permit shield shall not extend to minor permit modifications.

12. New Source Review

Regulation No. 3, 5 CCR 1001-5, Part B

The permittee shall not commence construction or modification of a source required to be reviewed under the New Source Review provisions of Regulation No. 3, Part B, without first receiving a construction permit.

13. No Property Rights Conveyed

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.11.d.

This permit does not convey any property rights of any sort, or any exclusive privilege.

14. Odor

Regulation No. 2, 5 CCR 1001-4, Part A

As a matter of state law only, the permittee shall comply with the provisions of Regulation No. 2 concerning odorous emissions.

15. Off-Permit Changes to the Source

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.B.

The permittee shall record any off-permit change to the source that causes the emissions of a regulated pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from the change, including any other data necessary to show compliance with applicable ambient air quality standards. The permittee shall provide contemporaneous notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit . The permit shield shall not apply to any off-permit change.

16. Opacity

Regulation No. 1, 5 CCR 1001-3, §§ I., II.

The permittee shall comply with the opacity emissions limitation set forth in Regulation No. 1, §§ I.-II.

17. Open Burning

Regulation No. 9, 5 CCR 1001-11

The permittee shall obtain a permit from the Division for any regulated open burning activities in accordance with provisions of Regulation No. 9.

18. Ozone Depleting Compounds

Regulation No. 15, 5 CCR 1001-17

The permittee shall comply with the provisions of Regulation No. 15 concerning emissions of ozone depleting compounds. Sections I., II.C., II.D., III. IV., and V. of Regulation No. 15 shall be enforced as a matter of state law only.

19. Permit Expiration and Renewal

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.6., IV.C., V.C.2.

a. The permit term shall be five (5) years. The permit shall expire at the end of its term. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted.

b. Applications for renewal shall be submitted at least twelve months, but not more than 18 months, prior to the expiration of the Operating Permit. An application for permit renewal may address only those portions of the permit that require revision, supplementing, or deletion, incorporating the remaining permit terms by reference from the previous permit. A copy of any materials incorporated by reference must be included with the application.

20. Portable Sources

Regulation No. 3, 5 CCR 1001-5, Part C, § II.D.

Portable Source permittees shall notify the Air Pollution Control Division at least 10 days in advance of each change in location.

21. Prompt Deviation Reporting

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.7.b.

The permittee shall promptly report any deviation from permit requirements, including those attributable to malfunction conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.

"Prompt" is defined as follows:

a. Any definition of "prompt" or a specific timeframe for reporting deviations provided in an underlying applicable requirement as identified in this permit; or

b. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations will be submitted based on the following schedule:

(i) For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in the applicable regulation) that continue for more than an hour in excess of permit requirements, the report shall be made within 24 hours of the occurrence;

(ii) For emissions of any regulated air pollutant, excluding a hazardous air pollutant or a toxic air pollutant that continue for more than two hours in excess of permit requirements, the report shall be made within 48 hours; and

(iii) For all other deviations from permit requirements, the report shall be submitted every six (6) months, except as otherwise specified by the Division in the permit in accordance with paragraph 22.d. below.

c. If any of the conditions in paragraphs b.i or b.ii above are met, the source shall notify the Division by telephone (303-692-3155) or facsimile (303-782-0278) based on the timetables listed above. *[Explanatory note: Notification by telephone or facsimile must specify that this notification is a deviation report for an Operating Permit.]* A written notice, certified consistent with General Condition 2.a. above (Certification Requirements), shall be submitted within 10 working days of the occurrence. All deviations reported under this section shall also be identified in the 6-month report required above.

"Prompt reporting" does not constitute an exception to the requirements of "Emergency Provisions" for the purpose of avoiding enforcement actions.

22. Record Keeping and Reporting Requirements

Regulation No. 3, 5 CCR 1001-5, Part A, § II.; Part C, §§ V.C.6., V.C.7.

a. Unless otherwise provided in the source specific conditions of this Operating Permit, the permittee shall maintain compliance monitoring records that include the following information:

(i) date, place as defined in the Operating Permit, and time of sampling or measurements;

(ii) date(s) on which analyses were performed;

(iii) the company or entity that performed the analysis;

(iv) the analytical techniques or methods used;

(v) the results of such analysis; and

(vi) the operating conditions at the time of sampling or measurement.

b. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information, for this purpose, includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Operating Permit. With prior approval of the Air Pollution Control Division, the permittee may maintain any of the above records in a computerized form.

c. Permittees must retain records of all required monitoring data and support information for the most recent twelve (12) month period, as well as compliance certifications for the past five (5) years on-site at all times. A permittee shall make available for the Air Pollution Control Division's review all other records of required monitoring data and support information required to be retained by the permittee upon 48 hours advance notice by the Division.

d. The permittee shall submit to the Air Pollution Control Division all reports of any required monitoring at least every six (6) months, unless an applicable requirement, the compliance assurance monitoring rule, or the Division requires submission on a more frequent basis. All instances of deviations from any permit requirements must be clearly identified in such reports.

e. The permittee shall file an Air Pollutant Emissions Notice ("APEN") prior to constructing, modifying, or altering any facility, process, activity which constitutes a stationary source from which air pollutants are or are to be emitted, unless such source is exempt from the APEN filing requirements of Regulation No. 3, Part A, § II.D. A revised APEN shall be filed annually whenever a significant change in emissions, as defined in Regulation No. 3, Part A, § II.C.2., occurs; whenever there is a change in owner or operator of any facility, process, or activity; whenever new control equipment is installed; whenever a different type of control equipment replaces an existing type of control equipment; whenever a permit limitation must be modified; or before the APEN expires. An APEN is valid for a period of five years. The five-year period recommences when a revised APEN is received by the Air Pollution Control Division. Revised APENs shall be submitted no later than 30 days before the five-year term expires. Permittees submitting revised APENs to inform the Division of a change in actual emission rates must do so by April 30 of the following year. Where a permit revision is required, the revised APEN must be filed along with a request for permit revision. APENs for changes in control equipment must be submitted before the change occurs. Annual fees are based on the most recent APEN on file with the Division.

23. Reopenings for Cause

Regulation No. 3, 5 CCR 1001-5, Part C, § XIII.

a. The Air Pollution Control Division shall reopen, revise, and reissue Operating Permits; permit reopenings and reissuance shall be processed using the procedures set forth in Regulation No. 3, Part C, § III., except that proceedings to reopen and reissue permits affect only those parts of the permit for which cause to reopen exists.

b. The Division shall reopen a permit whenever additional applicable requirements become applicable to a major source with a remaining permit term of three or more years, unless the effective date of the requirements is later than the date on which the permit expires, or unless a general permit is obtained to address the new requirements; whenever additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program; whenever the Division determines the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or whenever the Division determines that the permit must be revised or revoked to assure compliance with an applicable requirement.

c. The Division shall provide 30 days' advance notice to the permittee of its intent to reopen the permit, except that a shorter notice may be provided in the case of an emergency.

d. The permit shield shall extend to those parts of the permit that have been changed pursuant to the reopening and reissuance procedure.

24. Section 502(b)(10) Changes

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.A.

The permittee shall provide a minimum 7-day advance notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permittee shall attach a copy of each such notice given to its Operating Permit.

25. Severability Clause

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.10.

In the event of a challenge to any portion of the permit, all emissions limits, specific and general conditions, monitoring, record keeping and reporting requirements of the permit, except those being challenged, remain valid and enforceable.

26. Significant Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, § III.B.2.

The permittee shall not make a significant modification required to be reviewed under Regulation No. 3, Part B ("Construction Permit" requirements) without first receiving a construction permit. The permittee shall submit a complete Operating Permit application or application for an Operating Permit revision for any new or modified source within twelve months of commencing operation, to the address listed in Item 1 in Appendix D of this permit. If the permittee chooses to use the "Combined Construction/Operating Permit' application procedures of Regulation No. 3, Part C, then the Operating Permit must be received prior to commencing construction of the new or modified source.

27. Special Provisions Concerning the Acid Rain Program

Regulation No. 3, 5 CCR 1001-5, Part C, §§ V.C.1.b. & 8

a. Where an applicable requirement of the federal act is more stringent than an applicable requirement of regulations promulgated under Title IV of the federal act, 40 Code of Federal Regulations (CFR) Part 72, both provisions shall be incorporated into the permit and shall be federally enforceable.

b. Emissions exceeding any allowances that the source lawfully holds under Title IV of the federal act or the regulations promulgated thereunder, 40 CFR Part 72, are expressly prohibited.

28. Transfer or Assignment of Ownership

Regulation No. 3, 5 CCR 1001-5, Part C, § II.C.

No transfer or assignment of ownership of the Operating Permit source will be effective unless the prospective owner or operator applies to the Air Pollution Control Division on Division-supplied Administrative Permit Amendment forms, for reissuance of the existing Operating Permit. No administrative permit shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage, and liability between the permittee and the prospective owner or operator has been submitted to the Division.

29. Volatile Organic Compounds

Regulation No. 7, 5 CCR 1001-9, §§ III & V.

The requirements in paragraphs a, b and e apply to sources located in an ozone non-attainment area or the Denver 1-hour ozone attainment/maintenance area. The requirements in paragraphs c and d apply statewide.

a. All storage tank gauging devices, anti-rotation devices, accesses, seals, hatches, roof drainage systems, support structures, and pressure relief valves shall be maintained and operated to prevent detectable vapor loss except when opened, actuated, or used for necessary and proper activities (e.g. maintenance). Such opening, actuation, or use shall be limited so as to minimize vapor loss.

   Detectable vapor loss shall be determined visually, by touch, by presence of odor, or using a portable hydrocarbon analyzer. When an analyzer is used, detectable vapor loss means a VOC concentration exceeding 10,000 ppm. Testing shall be conducted as in Regulation No. 7, Section VIII.C.3.

b. Except when otherwise provided by Regulation No. 7, all volatile organic compounds, excluding petroleum liquids, transferred to any tank, container, or vehicle compartment with a capacity exceeding 212 liters (56 gallons), shall be transferred using submerged or bottom filling equipment. For top loading, the fill tube shall reach within six inches of the bottom of the tank compartment. For bottom-fill operations, the inlet shall be flush with the tank bottom.

c. The permittee shall not dispose of volatile organic compounds by evaporation or spillage unless Reasonably Available Control Technology (RACT) is utilized.

d. No owner or operator of a bulk gasoline terminal, bulk gasoline plant, or gasoline dispensing facility as defined in Colorado Regulation No. 7, Section VI, shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any other manner that would result in evaporation.

e. Beer production and associated beer container storage and transfer operations involving volatile organic compounds with a true vapor pressure of less than 1.5 PSIA actual conditions are exempt from the provisions of paragraph b, above.

30. Wood Stoves and Wood burning Appliances

Regulation No. 4, 5 CCR 1001-6

The permittee shall comply with the provisions of Regulation No. 4 concerning the advertisement, sale, installation, and use of wood stoves and wood burning appliances.

OPERATING PERMIT APPENDICES

A - INSPECTION INFORMATION
B - MONITORING AND PERMIT DEVIATION REPORT
C - COMPLIANCE CERTIFICATION REPORT
D - NOTIFICATION ADDRESSES
E - PERMIT ACRONYMS
F - PERMIT MODIFICATIONS
G - COMPLIANCE ASSURANCE MONITORING PLAN
H – DOWE FLATS QUARRY EMISSION FACTORS
I- PREVENTION OF SIGNIFICANT DETERIORATION (PSD) REVIEW APPLICABILITY TESTS

*DISCLAIMER:

None of the information found in these Appendices shall be considered to be State or Federally enforceable, unless otherwise stated in this permit, and is presented to assist the source, permitting authority, inspectors, and citizens.

APPENDIX A - Inspection Information

Directions to Plant:

Follow US Route 36 north from Boulder to Lyons, Colorado. From Lyons, turn right onto Colorado Highway 66 for approximately 1/4 mile to plant entrance on the right.

Safety Equipment Required:

Eye Protection Hard Hat Safety Shoes Hearing Protection

Facility Plot Plan:

Please see the large plot plan submitted with the source's Title V Operating Permit Application.

List of Insignificant Activities:

The following list of insignificant activities was provided by the source to assist in the understanding of the facility layout. Since there is no requirement to update such a list, activities may have changed since the last filing.

The asterisk (*) denotes an insignificant activity source category based on the size of the activity, emissions levels from the activity or the production rate of the activity. The owner or operator of individual emission points in insignificant activity source categories marked with an asterisk (*) must maintain sufficient record keeping verifying that the exemption applies. Such records shall be made available for Division review upon request. (Colorado Regulation No. 3, Part C, Section II.E)

Insignificant activities and/or sources of emissions as submitted in the application are as follows:

Units with emissions less than APEN de minimis - criteria & non-criteria pollutants (Reg 3 Part C.II.E.3.a & b)*

Two (2) portable, self-contained conveyors, Loadmaster Model 3600
Activated carbon storage silo (ACI-1)
One-(1) aqueous ammonia storage tank (concentration less than 20%)

Landscaping and site housekeeping devices < 10 hp (Reg 3 Part C.II.E.3.bb)*

Storage of butane, propane, or liquefied petroleum gas in a tank < 60,000 gallons, provided the requirements of Regulation No. 7, Section IV are met, where applicable (Reg 3, Part C.II.E.3.zz)

One propane storage tank

Lubricating oil storage tanks < 40,000 gal (Reg 3, Part C.II.E.3.aaa)

8,000 gallon lube oil tank at Dowe Flats Quarry

Storage tanks with annual throughput less than 400,000 gal/yr and meeting content specifications (Reg 3 Part C.II.E.3.fff)*

10,000 gallon diesel storage tank at Lyons Plant
20,000 gallon diesel storage tank at Dowe Flats Quarry

Fuel (gaseous) burning equipment < 10 MMBtu/hr used for comfort heat (Reg 3, Part C.II.E.3.ggg)

One (1) natural gas fired 0.80 mmBtu/hr space heating furnace
Four (4) natural gas fired 0.20 mmBtu/hr space heaters

Surface mining activities that mine 70,000 tons/yr or less. Fugitive dust plans are required. Crushers, screens and other processing equipment activities not include in this exemption. (Reg 3, Part C.II.E.3.qqq)*

Sandstone Quarry

Note that the quarry was previously addressed construction permit 02BO0176F, which was canceled at the request of CEMEX on January 22, 2013, since the quarry is exempt from construction permit requirements under Reg 3, Part B.II.D.1.g (throughput less than 70,000 tons/yr). The quarry was also previously identified under AIRS id 013-0124. Note that AIRS pt 052 was assigned for this point prior to

Fugitive Dust Control Measures for the quarry include the following:

- Adequate soil moisture must be maintained in topsoil and overburden to control emissions during removal. Water shall be implemented if necessary.
- Topsoil and overburden stockpiles shall be compacted and revegetated within one year.
- Emissions from material handling (i.e. removal, loading and hauling) shall be controlled by watering at all times unless natural moisture is sufficient to control emissions.
- Vehicle speed on unpaved roads and disturbed areas shall not exceed a maximum of 20 mph. Speed limit signs shall be posted.
- Unpaved haul roads shall be watered as often as needed to control fugitive particulate emissions.
- Reclamation works and sequential extraction of material shall be initiated to keep the total disturbed areas at any one time to a minimum.
- Wet drilling and sequential blasting shall be employed to reduce fugitive particulate matter emissions.

- Exposed portion of the quarry shall not exceed five (5) acres at any given time, and total disturbed area subject to wind erosion shall not exceed fifteen (15) acres at any time.

APPENDIX B

Reporting Requirements and Definitions

with codes ver 8/20/14

Please note that, pursuant to 113(c)(2) of the federal Clean Air Act, any person who knowingly:

(A) makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required pursuant to the Act to be either filed or maintained (whether with respect to the requirements imposed by the Administrator or by a State);

(B) fails to notify or report as required under the Act; or

(C) falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under the Act shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than 2 years, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

The permittee must comply with all conditions of this operating permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

The Part 70 Operating Permit program requires three types of reports to be filed for all permits.
All required reports must be certified by a responsible official.

Report #1: Monitoring Deviation Report (due at least every six months)

For purposes of this operating permit, the Division is requiring that the monitoring reports are due every six months unless otherwise noted in the permit. All instances of deviations from permit monitoring requirements must be clearly identified in such reports.

For purposes of this operating permit, monitoring means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit as well as the recordkeeping associated with that monitoring. This would include, for example, fuel use or process rate monitoring, fuel analyses, and operational or control device parameter monitoring.

Report #2: Permit Deviation Report (must be reported "promptly")

In addition to the monitoring requirements set forth in the permits as discussed above, each and every requirement of the permit is subject to deviation reporting. The reports must address deviations from permit

requirements, including those attributable to malfunctions as defined in this Appendix, the probable cause of such deviations, and any corrective actions or preventive measures taken. All deviations from any term or condition of the permit are required to be summarized or referenced in the annual compliance certification.

For purposes of this operating permit, "malfunction" shall refer to both emergency conditions and malfunctions. Additional discussion on these conditions is provided later in this Appendix.

For purposes of this operating permit, the Division is requiring that the permit deviation reports are due as set forth in General Condition 22. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. For example, quarterly Excess Emission Reports required by an NSPS or Regulation No. 1, Section IV.

In addition to the monitoring deviations discussed above, included in the meaning of deviation for the purposes of this operating permit are any of the following:

(1) A situation where emissions exceed an emission limitation or standard contained in the permit;

(2) A situation where process or control device parameter values demonstrate that an emission limitation or standard contained in the permit has not been met;

(3) A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit; or,

(4) A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only if the emission point is subject to CAM)

For reporting purposes, the Division has combined the Monitoring Deviation Report with the Permit Deviation Report. All deviations shall be reported using the following codes:

1 = Standard:	When the requirement is an emission limit or standard
2 = Process:	When the requirement is a production/process limit
3 = Monitor:	When the requirement is monitoring
4 = Test:	When the requirement is testing
5 = Maintenance:	When required maintenance is not performed
6 = Record:	When the requirement is recordkeeping
7 = Report:	When the requirement is reporting
8 = CAM:	A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred.
9 = Other:	When the deviation is not covered by any of the above categories

Report #3: Compliance Certification (annually, as defined in the permit)

Submission of compliance certifications with terms and conditions in the permit, including emission limitations, standards, or work practices, is required not less than annually.

Compliance Certifications are intended to state the compliance status of each requirement of the permit over the certification period. They must be based, at a minimum, on the testing and monitoring methods specified in the permit that were conducted during the relevant time period. In addition, if the owner or operator knows of other material information (i.e. information beyond required monitoring that has been specifically assessed in relation to how the information potentially affects compliance status), that information must be identified and addressed in the compliance certification. The compliance certification must include the following:

- The identification of each term or condition of the permit that is the basis of the certification;

- Whether or not the method(s) used by the owner or operator for determining the compliance status with each permit term and condition during the certification period was the method(s) specified in the permit. Such methods and other means shall include, at a minimum, the methods and means required in the permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Clean Air Act, which prohibits knowingly making a false certification or omitting material information;

- The status of compliance with the terms and conditions of the permit, and whether compliance was continuous or intermittent. The certification shall identify each deviation and take it into account in the compliance certification. Note that not all deviations are considered violations.[1]

- Such other facts as the Division may require, consistent with the applicable requirements to which the source is subject, to determine the compliance status of the source.

The Certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only for emission points subject to CAM)

Note the requirement that the certification shall identify each deviation and take it into account in the compliance certification. Previously submitted deviation reports, including the deviation report submitted at the time of the annual certification, may be referenced in the compliance certification.

[1] For example, given the various emissions limitations and monitoring requirements to which a source may be subject, a deviation from one requirement may not be a deviation under another requirement which recognizes an exception and/or special circumstances relating to that same event.

Startup, Shutdown, Malfunctions and Emergencies

Understanding the application of Startup, Shutdown, Malfunctions and Emergency Provisions, is very important in both the deviation reports and the annual compliance certifications.

Startup, Shutdown, and Malfunctions

Please note that exceedances of some New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards that occur during Startup, Shutdown or Malfunctions may not be considered to be non-compliance since emission limits or standards often do not apply unless specifically stated in the NSPS. Such exceedances must, however, be reported as excess emissions per the NSPS/MACT rules and would still be noted in the deviation report. In regard to compliance certifications, the permittee should be confident of the information related to those deviations when making compliance determinations since they are subject to Division review. The concepts of Startup, Shutdown and Malfunctions also exist for Best Available Control Technology (BACT) sources, but are not applied in the same fashion as for NSPS and MACT sources.

Emergency Provisions

Under the Emergency provisions of Part 70 certain operational conditions may act as an affirmative defense against enforcement action if they are properly reported.

DEFINITIONS

Malfunction (NSPS) means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Malfunction (SIP) means any sudden and unavoidable failure of air pollution control equipment or process equipment or unintended failure of a process to operate in a normal or usual manner. Failures that are primarily caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

Emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Monitoring and Permit Deviation Report - Part I

1. Following is the **required** format for the Monitoring and Permit Deviation report to be submitted to the Division as set forth in General Condition 22. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

2. Part II of this Appendix B shows the format and information the Division will require for describing periods of monitoring and permit deviations, or malfunction or emergency conditions as indicated in the Table below. One Part II Form must be completed for each Deviation. Previously submitted reports (e.g. EER's or malfunctions) may be referenced and the form need not be filled out in its entirety.

FACILITY NAME: CEMEX Construction Materials South, LLC– Lyons Cement Plant
OPERATING PERMIT NO: 95OPBO082
REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates)

Operating Permit Unit ID	Unit Description	Deviations Noted During Period?[1]		Deviation Code[2]		Malfunction/ Emergency Condition Reported During Period?	
		YES	NO			YES	NO
P017	Dowe Flats Quarry Fugitive Emission Sources & Lyons Quarry						
P017	Dowe Flats Quarry – Point Source Emissions						
P018	General Fugitive Emissions Requirements						
P000	Raw Material Storage and Handling at Plant Site						
P001	Primary Crusher (Plant Site)						
P002	Raw Materials Drying						
P003	Secondary Crushing, Screen, Silo, Belt Transfer						
P004	Raw Material Storage Silos						
P005	Raw Mill Grinding						
P006	Homogenizing and Blending						
P007 & P008	Kiln Burning and Clinker Cooling and Transfer to Storage for Finish Mill						
P009	Clinker and Gypsum/Additive Silos and Weigh Feeders (Storage and Transfer to Finish Mill)						
P010	Sheltered (A-Frame) Clinker Storage and Reclaim						
P015	Outdoor Clinker Piles and Handling						
P011 & P012	Cement Finish Mill and Auxiliaries						
P013	Cement Silos/Packhouse/Loadout						
P014	Material Handling System – Load-In and Load-Out						
P007A	Handling and Processing of CKD and Raw Material Waste Dust						
P050	Cement Rail Car Unloading System						

Operating Permit Unit ID	Unit Description	Deviations Noted During Period?[1]		Deviation Code[2]		Malfunction/ Emergency Condition Reported During Period?	
		YES	NO			YES	NO
	Gasoline Storage Tank						
	Cold Cleaner Solvent Vats						
LIS-1	Lime storage silo						
LIS-2	Lime weigh hopper						
A-Pit Pump	Diesel fuel-fired engine, rated at 90 hp.						
DF 6" Pump	Diesel fuel-fired engine, rated at 80 hp						
DF 8" Pump	Diesel fuel-fired engine, rated at 84 hp						
Kiln Engine	Natural gas-fired engine, rated at 230 hp (Emergency Engine)						
Flood Engine	Diesel fuel0-fired engine, rated at 99 hp (Emergency Engine)						
	Insignificant Activities						
	General Conditions						

[1] See previous discussion regarding what is considered to be a deviation. Determination of whether or not a deviation has occurred shall be based on a reasonable inquiry using readily available information.

[2]Use the following entries as appropriate:

1 = Standard: When the requirement is an emission limit or standard
2 = Process: When the requirement is a production/process limit
3 = Monitor: When the requirement is monitoring
4 = Test: When the requirement is testing
5 = Maintenance: When required maintenance is not performed
6 = Record: When the requirement is recordkeeping
7 = Report: When the requirement is reporting
8 = CAM: A situation in which an excursion or exceedance as defined in 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred.
9 = Other: When the deviation is not covered by any of the above categories

Monitoring and Permit Deviation Report - Part II

FACILITY NAME: CEMEX Construction Materials South, LLC – Lyons Cement Plant
OPERATING PERMIT NO: 95OPBO082
REPORTING PERIOD:

Is the deviation being claimed as an: Emergency _____ Malfunction_____ N/A

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction _____
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Operating Permit Condition Number Citation

Explanation of Period of Deviation

Duration (start/stop date & time)

Action Taken to Correct the Problem

Measures Taken to Prevent a Reoccurrence of the Problem

Dates of Malfunctions/Emergencies Reported (if applicable)

Deviation Code _____ Division Code QA: _____

SEE EXAMPLE ON THE NEXT PAGE

EXAMPLE

FACILITY NAME: Acme Corp.
OPERATING PERMIT NO: 96OPZZXXX
REPORTING PERIOD: 1/1/04 - 6/30/06

Is the deviation being claimed as an: Emergency _____ Malfunction __XX____ N/A

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Asphalt Plant with a Scrubber for Particulate Control - Unit XXX

Operating Permit Condition Number Citation

Section II, Condition 3.1 - Opacity Limitation

Explanation of Period of Deviation

Slurry Line Feed Plugged

Duration

START- 1730 4/10/06
END- 1800 4/10/06

Action Taken to Correct the Problem

Line Blown Out

Measures Taken to Prevent Reoccurrence of the Problem

Replaced Line Filter

Dates of Malfunction/Emergencies Reported (if applicable)

5/30/06 to A. Einstein, APCD

Deviation Code _____ Division Code QA: _____

Monitoring and Permit Deviation Report - Part III

REPORT CERTIFICATION

SOURCE NAME: CEMEX Construction Materials South, LLC – Lyons Cement Plant

FACILITY IDENTIFICATION NUMBER: 0130003

PERMIT NUMBER: 95OPBO082

REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates)

All information for the Title V Semi-Annual Deviation Reports must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B. This signed certification document must be packaged with the documents being submitted.

STATEMENT OF COMPLETENESS

I have reviewed the information being submitted in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this submittal are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in Sub-Section 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of Sub-Section 25-7 122.1, C.R.S.

Printed or Typed Name Title

Signature of Responsible Official Date Signed

Note: Deviation reports shall be submitted to the Division at the address given in Appendix D of this permit. No copies need be sent to the U.S. EPA.

APPENDIX C

Required Format for Annual Compliance Certification Report

ver 8/20/14

Following is the format for the Compliance Certification report to be submitted to the Division and the U.S. EPA annually based on the effective date of the permit. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

FACILITY NAME: CEMEX Construction Materials South, LLC – Lyons Cement Plant

OPERATING PERMIT NO: 95OPBO082
REPORTING PERIOD:

I. Facility Status

___ During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the Permit.

___ With the possible exception of the deviations identified in the table below, this source was in compliance with all terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference, during the entire reporting period. The method used to determine compliance for each term and condition is the method specified in the Permit, unless otherwise indicated and described in the deviation report(s). Note that not all deviations are considered violations.

Operating Permit Unit ID	Unit Description	Deviations Reported [1]		Monitoring Method per Permit?[2]		Was Compliance Continuous or Intermittent?[3]	
		Previous	Current	YES	NO	Continuous	Intermittent
P017	Dowe Flats Quarry Fugitive Emission Sources & Lyons Quarry						
P017	Dowe Flats Quarry – Point Source Emissions						
P018	General Fugitive Emissions Requirements						
P000	Raw Material Storage and Handling at Plant Site						
P001	Primary Crusher (Plant Site)						
P002	Raw Materials Drying						
P003	Secondary Crushing, Screen, Silo, Belt Transfer						
P004	Raw Material Storage Silos						
P005	Raw Mill Grinding						

Operating Permit Unit ID	Unit Description	Deviations Reported [1]		Monitoring Method per Permit?[2]		Was Compliance Continuous or Intermittent?[3]	
		Previous	Current	YES	NO	Continuous	Intermittent
P006	Homogenizing and Blending						
P007 & P008	Kiln Burning and Clinker Cooling and Transfer to Storage for Finish Mill						
P009	Clinker and Gypsum/Additive Silos and Weigh Feeders (Storage and Transfer to Finish Mill)						
P010	Sheltered (A-Frame) Clinker Storage and Reclaim						
P015	Outdoor Clinker Piles and Handling						
P011 & P012	Cement Finish Mill and Auxiliaries						
P013	Cement Silos/Packhouse/Loadout						
P014	Material Handling System – Load-In and Load-out						
P007A	Handling and Processing of CKD and Raw Material Waste Dust						
P050	Cement Rail Car Unloading System						
	Gasoline Storage Tank						
	Cold Cleaner Solvent Vats						
LIS-1	Lime storage silo						
LIS-2	Lime weigh hopper						
A-Pit Pump	Diesel fuel-fired engine, rated at 90 hp.						
DF 6" Pump	Diesel fuel-fired engine, rated at 80 hp						
DF 8" Pump	Diesel fuel-fired engine, rated at 84 hp						
Kiln Engine	Natural gas-fired engine, rated at 230 hp (Emergency Engine)						
Flood Engine	Diesel fuel0-fired engine, rated at 99 hp (Emergency Engine)						
	General Conditions						
	Insignificant Activities [4]						

[1] If deviations were noted in a previous deviation report , put an "X" under "previous". If deviations were noted in the current deviation report (i.e. for the last six months of the annual reporting period), put an "X" under "current". Mark both columns if both apply.

[2] Note whether the method(s) used to determine the compliance status with each term and condition was the method(s) specified in the permit. If it was not, mark "no" and attach additional information/explanation.

[3] Note whether the compliance status with of each term and condition provided was continuous or intermittent. "Intermittent Compliance" can mean either that noncompliance has occurred or that the owner or operator has data sufficient to certify compliance

only on an intermittent basis. Certification of intermittent compliance therefore does not necessarily mean that any noncompliance has occurred.

NOTE:

The Periodic Monitoring requirements of the Operating Permit program rule are intended to provide assurance that even in the absence of a continuous system of monitoring the Title V source can demonstrate whether it has operated in continuous compliance for the duration of the reporting period. Therefore, if a source 1) conducts all of the monitoring and recordkeeping required in its permit, even if such activities are done periodically and not continuously, and if 2) such monitoring and recordkeeping does not indicate non-compliance, and if 3) the Responsible Official is not aware of any credible evidence that indicates non-compliance, then the Responsible Official can certify that the emission point(s) in question were in continuous compliance during the applicable time period.

[4] Compliance status for these sources shall be based on a reasonable inquiry using readily available information.

II. Status for Accidental Release Prevention Program:

A. This facility _____ is subject _____ is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act)

B. If subject: The facility _____ is _____ is not in compliance with all the requirements of section 112(r).

1. A Risk Management Plan _____ will be _____ has been submitted to the appropriate authority and/or the designated central location by the required date.

III. Certification

All information for the Annual Compliance Certification must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B. This signed certification document must be packaged with the documents being submitted.

I have reviewed this certification in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this certification are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in § 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of § 25-7 122.1, C.R.S.

Printed or Typed Name Title

Signature Date Signed

NOTE: All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

APPENDIX D

Notification Addresses

1. **Air Pollution Control Division**

Colorado Department of Public Health and Environment
Air Pollution Control Division
Operating Permits Unit
APCD-SS-B1
4300 Cherry Creek Drive S.
Denver, CO 80246-1530

ATTN: Matt Burgett

2. **United States Environmental Protection Agency**

Compliance Notifications:

Office of Enforcement, Compliance and Environmental Justice
Mail Code 8ENF-AT
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

502(b)(10 Changes, Off Permit Changes:

Office of Partnerships and Regulatory Assistance
Air and Radiation Programs, 8P-AR
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

APPENDIX E

Permit Acronyms

Listed Alphabetically:

AIRS -	Aerometric Information Retrieval System
AP-42 -	EPA Document Compiling Air Pollutant Emission Factors
APEN -	Air Pollution Emission Notice (State of Colorado)
APCD -	Air Pollution Control Division (State of Colorado)
ASTM -	American Society for Testing and Materials
BTU -	British Thermal Unit
CAA -	Clean Air Act (CAAA = Clean Air Act Amendments)
CCR -	Colorado Code of Regulations
CEMS -	Continuous Emissions Monitor System
CKD -	Cement Kiln Dust
CF -	Cubic Feet (SCF = Standard Cubic Feet)
CFR -	Code of Federal Regulations
CO -	Carbon Monoxide
COM -	Continuous Opacity Monitor
CMS -	Continuous Monitoring System
CRS -	Colorado Revised Statute
D/F -	Dioxins and Furans
EPA -	Environmental Protection Agency
FEL -	Front End Loader
FR -	Federal Register
G -	Gram
GR -	Grain
HCL -	Hydrochloric Acid
LBS -	Pounds
MM -	Million
MMscf -	Million Standard Cubic Feet
NOx -	Nitrogen Oxides
NESHAP -	National Emission Standards for Hazardous Air Pollutants
NSPS -	New Source Performance Standards
O&M -	Operation and Maintenance
P -	Process Weight Rate in Tons/Hr
PE -	Particulate Emissions
PM -	Particulate Matter
PM_{10} -	Particulate Matter Under 10 Microns
PMCDS -	Particulate Matter Control Device
PPM -	Parts Per Million
PSD -	Prevention of Significant Deterioration
RACT -	Reasonably Available Control Technology

SCC - Source Classification Code
SCF - Standard Cubic Feet (dscf - dry standard cubic feet)
SIC - Standard Industrial Classification
SO_2 - Sulfur Dioxide
TPY - Tons Per Year
VOC - Volatile Organic Compounds

APPENDIX F

Permit Modifications

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
November 17, 2017	Administrative Amendment	Section II.11	Changed the material description for P009 in Condition 11.2 (summary table) from "clinker" to "clinker and additives." Changed the phrase in the first sentence in Condition 11.1 (text) from "clinker and cement handled" to "clinker, cement and other materials handled"

APPENDIX G

Compliance Assurance Monitoring Plan

I. Background

a. Emission Unit Description:

Facility Descriptions – This facility produces portland cement. Particulate, PM_{10}, and Pb emissions from raw material and product handling are controlled by baghouses.

b. Applicable Regulations, Emission Limits, Monitoring Requirements

1. P002 – S005 Raw Materials Dryer

Regulation:	Operating Permit Conditions 5.6 and 5.7 (underlying Colorado Construction Permit 12BO444-1)
Emission Limitations:	PM = 22.8 tons/year PM_{10} = 22.8 tons/year; 6.5 lbs/hour Pb = 1.6 tons/year
Monitoring Requirements:	Pressure Differential and Visible Emissions

1. P005 – S010 Raw Mill Feeders; S011 Raw Mill Auxiliary Dust Collector; S012 Raw Material Grinding

Regulation:	Operating Permit Condition 8.3 (Colorado Regulation No. 1, Section III.C.1.b)
Emission Limitations:	PM = 17.31 $(P)^{0.16}$ lb/hr, where P = process weight rate in tons/hr
Monitoring Requirements:	Pressure Differential and Visible Emissions

2. P009 – S024 #2 Clinker Silo

Regulation:	Operating Permit Condition 11.4 (underlying Colorado Construction Permit 98BO0259)
Emission Limitations:	PM = 9.3 tons/year
Monitoring Requirements:	Pressure Differential and Visible Emissions

3. P010 – S051 Top of A Frame Transfer from 529-29 belt to 529-30 belt; S034 #6 Reclaim Feeder and A-Frame Building

Regulation:	Operating Permit Condition 11.4 (underlying Colorado Construction Permit 98BO0259)
Emission Limitations:	PM = 21.96 tons/year PM_{10} = 10.98 tons/year; 201 lbs/day
Monitoring Requirements:	Pressure Differential and Visible Emissions

4. P011 – S036 Finish Mill; S037 Finish Mill Auxiliary Dust Collector

Regulation:	Operating Permit Condition 11.4 (underlying Colorado Construction Permit 98BO0259)
Emission Limitations:	PM = 17.05 tons/year PM_{10} = 8.65 tons/year; 48 lbs/day
Monitoring Requirements:	Pressure Differential and Visible Emissions

5. P013 – S043 Cement Storage Silos A10 and A13; S044 Cement Storage Silo A7; S045 Cement Finish Silo A2; S046 – Packhouses West and East (loading spouts)

Regulation:	Operating Permit Condition 11.4 (underlying Colorado Construction Permit 98BO0259)
Emission Limitations:	PM = 12.3 tons/year PM_{10} = 6.2 tons/year; 43 lbs/day
Monitoring Requirements:	Pressure Differential and Visible Emissions

6. P007A – S001 Waste Dust Silo; S022 Kiln Return Dust Silo; S066 Cement Silo A5

Regulation:	Operating Permit Condition 13.2 (underlying Colorado Construction Permit 98BO0315)
Emission Limitations:	PM = 19.95 tons/year PM_{10} = 9.98 tons/year; 69.5 lbs/day
Monitoring Requirements:	Pressure Differential and Visible Emissions

c. Control Technology

Each of the emission units identified above is equipped with a baghouse to control particulate matter emissions.

II. Monitoring Approach

The following monitoring approach will be used for each control device listed in Section 1.c.

	Indicator 1		**Indicator 2**
I. Indicator	Visible Emissions		Pressure Differential
	S011 Raw Mill Auxiliary Dust Collector, S012 Raw Material Grinding, & S036 Finish Mill	All Others	All Sources
Measurement Approach	Visible emissions from each baghouse shall be observed daily in accordance with the requirements in § 63.1350(f)(2) (Condition 22.33.2)	Visible emissions from each baghouse will be monitored daily by conducting a six minute visible emission observation. For baghouses with stacks in close proximity with each other, one observation may be made from a point at which all stacks may be viewed.	The pressure differential across each baghouse shall be read and recorded once per calendar week.
II. Indicator Range	An Excursion is identified as any daily observation in which visible emissions are observed. Excursions require the source to investigate the baghouse performance and make any repairs or adjustments necessary. A log of any repairs shall be maintained and made available upon request.	An Excursion is identified as any visible emissions. Excursions require the source to investigate the baghouse performance and make any repairs or adjustments necessary. A log of any repairs shall be maintained and made available upon request.	An Excursion is identified as any time during which the manometer reading is above 7" or less than or equal to 0" of water. Excursions trigger the source to investigate the baghouse performance and make any repairs or adjustments necessary. A log of any repairs shall be maintained and made available upon request.
III. Performance Criteria			
a. Data Representativeness	Visual observations are being made at each emission point (baghouse exhaust stack).	Visual observations are being made at each emission point (baghouse exhaust stack). For baghouses with stacks in close proximity with each other, one observation may be made from a point at which all stacks may be viewed.	Measurements via pressure taps are made at the inlet and outlet of the baghouse using a pressure gauge. The pressure gauge has an accuracy of $\pm$ 0.2 inches of water.

	Indicator 1		Indicator 2
b. QA/QC Practices and Criteria	Certification is not required for Method 22 observations but personnel shall be trained in general procedures for the determination of visible emissions. Persons performing the visible emission observations shall be trained in determining the presence of visible emissions. A list of observers trained to perform the visible emission observations shall be maintained.	Certification is not required for visual emission observations, but personnel shall be trained in general procedures for the determination of visible emissions. Persons performing visible emission observations shall be trained in determining the presence of visible emissions. A list of observers trained to perform the visible emission observations shall be maintained.	Pressure gauges will be inspected monthly. Repairs will be made as necessary according to manufacturer's recommendations.
c. Monitoring Frequency	Visible emission observations are conducted daily in accordance with the requirements in § 63.1350(f)(2) (Condition 22.33.2)	Six (6) minute visible emission observations are conducted daily. Results of visible emissions observations shall be recorded in a log book.	The pressure drop across the inlet and outlet of the baghouse shall be recorded once per calendar week. Results of the weekly reading will be recorded in a log book.
	Note: For purposes of CAM only, if the equipment is not operating for four (4) consecutive daylight hours or more, no visible emission observations are required for that day, provided a pressure differential reading is recorded for that day.		
	Except as discussed above, failure to conduct a visible emission observation on any day for any emission unit shall be reported as an excursion. If the emission unit is not operating on a given day, a visible emission observation is not required for that day.		Failure to record a pressure drop in any calendar week for any emission unit shall be reported as an excursion. If the emission unit was not operating during the calendar week, recording of the pressure drop is not required for that week.

III. Justification

a. Background**:**

The facility produces Portland cement. The specific emission units are listed in Section I above and each is equipped with a baghouse to control PM emissions

b. Rationale for Selection of Performance Indicators:

Visible emissions were selected as an indicator because the presence of visible emissions is indicative of baghouse performance. If the baghouse is performing properly, then there should be no visible emissions or visible emissions should be minimal.

The pressure differential was selected as an indicator because the pressure differential across a baghouse can be indicative of problems with the baghouse operation, such as broken bags or bad

seals. A high pressure differential can be an indication of plugged bags and a low pressure differential can be an indication of broken bags, both of which would affect the performance of the baghouse.

c. Rationale for Selection of Indicator Ranges:

For all emission units an indicator range of no visible emissions was selected. This level was selected because an increase in visible emissions indicates an increase in particulate matter emissions, therefore, the presence of visible emissions is used as an indicator. When visible emissions are detected, corrective action will be initiated, beginning with reporting the excursion to maintenance. Corrective action will be initiated according to manufacturer's recommendations and any corrective action taken will be recorded in a log.

For pressure differential, an indicator range of less than or equal to 0 or more than 7 inches of water was selected. This range was selected because a high or low pressure differential can be indicative of problems with the baghouse such as broken or plugged bags. The pressure differentials will be monitored and recorded electronically and the low reading of 0 is indicates that the system is not operational. The pressure differential is necessary since the pressure differential is read across the entire baghouse and in multi-compartment baghouses, the pressure differential increases temporarily when compartments cycle for cleaning. When the baghouse pressure differential either reaches or falls below 0 inches or exceeds 7 inches of water, corrective action will be initiated according to manufacturers' recommendations and any corrective action taken will be recorded in a log.

APPENDIX H

Dowe Flats Quarry Emission Factors

The emission factors in this Appendix shall be used to calculate emissions from the Dowe Flats Quarry as specified in Section I, Condition 1.3.

Drilling

The drilling emission factors are from AP-42, Section 11.19.2 (crushed stone processing and pulverized mineral processing), dated August 2004, Table 11.19.2-2 (wet drilling – unfragmented stone).

Note that wet drilling of limestone is not considered a control technology but is required in order to drill into stone to prevent damage to the drilling equipment and is considered standard for such activity. Adding water to the process is not intended as a control but is used for cooling and lubrication of the drill to effectively drill stone.

The permit requires that drills be equipped with bag collectors to control PM emissions, thus a control efficiency of 90% may be applied to the emission calculations provided the drills are operated with the bag collectors and that the bag collectors are operated and maintained in accordance with manufacturer's recommendations and good engineering practices.

	PM[1]	PM_{10}	$PM_{2.5}$[2]
Uncontrolled Emission Factor, in lbs/ton	1.6×10^{-4}	8.0×10^{-5}	3.2×10^{-5}

[1]PM assumed to be equal to 2 x PM_{10}
[2]$PM_{2.5}$ assumed to be 20% of PM

Blasting

The blasting emission factors are from AP-42, Section 11.9 (western surface coal mining), dated October 1998, Table 11.9-1 (blasting coal or overburden).

For the Dowe Flats Modification (June/August 2015), the source assumed that for limestone blasting, the horizontal area is 4,030 ft^2 and for waste rock/overburden the horizontal area is 5,037 ft^2. Using the assumptions in the AP-42 equation, the blasting emission factors are as follows:

Uncontrolled Emission Factor (lb/blast)	PM[1]	PM_{10}	$PM_{2.5}$
AP -42 Emission Factor (EF) equation	$0.000014(A)^{1.5}$	0.52 x PM	0.03 x PM
Limestone Blasting	3.582	1.862	0.107
Waste Rock/Overburden Blasting	5.005	2.602	0.150

[1]A = horizontal area (ft^2)

Note that if the assumptions used for these emission factors (i.e., horizontal area in ft^2) change and result in a more conservative (higher) emission factors, the source shall use the higher emission factors and document the reason for the change in the assumption.

Truck Loading and Unloading – Limestone/Rock

The truck loading and unloading emission factors are from AP-42, Section 13.2.4 (aggregate handling and storage piles), dated November 2006, using equation 1 (for a transfer or drop), as follows:

$$E = \frac{k \times 0.0032 \times (U/5)^{1.3}}{(M/2)^{1.4}}$$

Where: E = emission factor, lbs/ton
k = particle size multiplier, dimensionless
k = 0.74 for PM
k = 0.35 for PM_{10}
k = 0.053 for $PM_{2.5}$
U = mean wind speed, mph
M = moisture content, %

For the Dowe Flats Modification (June/August 2015), the moisture content was assumed to be 4.5% and the mean wind speed was assumed to be 10.1 miles per hour. Using the assumptions in the equation, the truck loading and unloading emission factors are as follows:

	PM	PM_{10}	$PM_{2.5}$
Emission Factor (EF), in lb/ton per transfer/drop	0.0019	8.98×10^{-4}	1.36×10^{-4}

Note that if the assumptions used for these emission factors (i.e., moisture content or wind speed) change and result in a more conservative (higher) emission factors, the source shall use the higher emission factors and document the reason for the change in the assumption.

Limestone/Rock Hauling

The limestone and/or rock hauling emission factors are from AP-42, Section 13.2.2 (unpaved roads), dated November 2006, using equation 1a (for unpaved surfaces at industrial sites), as follows:

$$E = k \times (s/12)^a \times (W/3)^b$$

where: E = emission factor, lb/VMT.
VMT = vehicle miles traveled
k = constant, dimensionless, see table below
a = constant, dimensionless, see table below
b = constant, dimensionless, see table below
s = silt content of road surface material, %

W = mean weight of vehicle, tons

Constant	PM	PM_{10}	$PM_{2.5}$
k	4.9	1.5	0.15
a	0.7	0.9	0.9
b	0.45	0.45	0.45

For the June/August 2015 Dowe Flats Modification, the silt content was assumed to be 8%, the empty truck weight was assumed to be 76 tons and the loaded haul truck was assumed to weigh 186 tons (110 tons per load). A control efficiency of 80% can be applied for watering and the application of chemical stabilizers to the unpaved roads. Using the assumptions in the equation, the hauling emission factors are as follows:

	Uncontrolled Emission Factor (EF), in lb/VMT[1]		
	PM	PM_{10}	$PM_{2.5}$
Limestone/Rock Hauling, Empty Trucks	23.632	6.671	0.667
Limestone/ Rock Hauling, Loaded Trucks	15.798	4.459	0.446

[1]VMT – vehicle miles traveled.

Note that if the assumptions used for these emission factors (i.e., silt content or truck weight) change and result in a more conservative (higher) emission factors, the source shall use the higher emission factors and document the reason for the change in the assumption.

Topsoil Removal

Emissions from topsoil removal are based on the emission factors from AP-42, Section 11.9 (western surface coal mining), dated October 1998, Table 11.9.4 (top soil removal by scraper). Table 11.9-4 only lists an emission factor for TSP (PM), so PM_{10} emissions were presumed to be 50% of PM and $PM_{2.5}$ emissions were presumed to be 20% of PM. The emission factors from topsoil removal are shown in the table below:

	PM	PM_{10}	$PM_{2.5}$
Uncontrolled Emission Factor, in lb/ton	0.058	0.029	0.0116

Note that a control efficiency of 50% can be applied to the emission estimates for maintaining adequate moisture for materials by watering.

Scraper Movement

Emissions from the scraper are generated from travel on the unpaved roads. Thus emissions from this activity are based on the emission factors are from AP-42, Section 13.2.2 (unpaved roads), dated November 2006, using equation 1a (for unpaved surfaces at industrial sites), as shown above for limestone rock hauling.

For the June/August 2015 Dowe Flats Modification, the silt content was assumed to be 8%, the empty scraper weight was assumed to be 52.43 tons and the scraper loaded with topsoil was assumed to weigh 87.43 tons (35 tons per load). A control efficiency of 80% can be applied for watering and the application of chemical stabilizers to the unpaved roads. Using the assumptions in the equation, the hauling emission factors are as follows:

	Uncontrolled Emission Factor (EF), in lb/VMT[1]		
	PM	PM_{10}	$PM_{2.5}$
Scraper Movement, Empty	16.826	4.750	0.475
Scraper Movement, Topsoil Loaded	13.367	3.773	0.377

[1]VMT – vehicle miles traveled.

Note that if the assumptions used for these emission factors (i.e., silt content or scraper weight) change and result in a more conservative (higher) emission factors, the source shall use the higher emission factors and document the reason for the change in the assumption.

Unloading of Topsoil

Emissions from topsoil unloading are based on the emission factors from AP-42, Section 11.9 (western surface coal mining), dated October 1998, Table 11.9.4 (scraper unloading). Table 11.9-4 only lists an emission factor for TSP (PM), so PM_{10} emissions were presumed to be 50% of PM and $PM_{2.5}$ emissions were presumed to be 20% of PM. The emission factors from topsoil removal are shown in the table below:

	PM	PM_{10}	$PM_{2.5}$
Uncontrolled Emission Factor, in lb/ton	0.04	0.02	0.008

Note that a control efficiency of 50% can be applied to the emission estimates for maintaining adequate moisture for materials by watering.

Grading of Haul Roads

Emissions from grading of haul roads are based on the emission factors from AP-42, Section 11.9 (western surface coal mining), dated October 1998, Table 11.9.1 (grading). Table 11.9-1 provides equations for PM (TSP < 30 µm) and PM_{15} and scaling factors for PM_{10} and $PM_{2.5}$. The PM_{10} scaling factor (0.60) is used with the PM_{15} emission factor equation and the $PM_{2.5}$ scaling factor (0.031) is used with the PM emission factor equation. The equations are as follows:

$PM = 0.040 \times (S)^{2.5}$
$PM_{15} = 0.051 \times (S)^{2.0}$
$PM_{10} = 0.60 \times PM_{15}$
$PM_{2.5} = 0.031 \times PM$

Where: S = mean vehicle speed, mph

For the June/August 2015 Dowe Flats Modification, the mean vehicle speed was assumed to be 6 mph. A control efficiency of 80% can be applied for watering and the application of chemical stabilizers to the unpaved roads. Using the assumptions in the equation, the grading of haul roads emission factors are as follows:

	PM	PM_{10}	$PM_{2.5}$
Uncontrolled Emission Factor, in lb/VMT	3.527	1.102	0.109

[1]VMT – vehicle miles traveled.

Bulldozing

Emissions from bulldozing are based on the emission factors from AP-42, Section 11.9 (western surface coal mining), dated October 1998, Table 11.9.1 (bulldozing, overburden). Table 11.9-1 provides equations for PM (TSP < 30 µm) and PM_{15} and scaling factors for PM_{10} and $PM_{2.5}$. The PM_{10} scaling factor (0.75) is used with the PM_{15} emission factor equation and the $PM_{2.5}$ scaling factor (0.105) is used with the PM emission factor equation. The equations are as follows:

$$PM = \frac{5.7 \times (s)^{1.2}}{(M)^{1.3}}$$

$$PM_{15} = \frac{1.0 \times (s)^{1.5}}{(M)^{1.4}}$$

$$PM10 = 0.75 \times PM_{15}$$

$$PM2.5 = 0.105 \times PM$$

Where: s = silt content, %
M = material moisture content, %

For the June/August 2015 Dowe Flats Modification, the silt content was assumed to be 8% and the material moisture content was assumed to be 4.5%. Using the assumptions in the equation, the grading of haul roads emission factors are as follows:

	PM	PM_{10}	$PM_{2.5}$
Uncontrolled Emission Factor, in lb/hr	9.782	2.066	1.027

Water Truck Operations

Emissions from the water truck are generated from travel on the unpaved roads. Thus emissions from this activity are based on the emission factors from AP-42, Section 13.2.2 (unpaved roads), dated November 2006, using equation 1a (for unpaved surfaces at industrial sites), as shown above for limestone rock hauling.

For the June/August 2015 Dowe Flats Modification, the silt content was assumed to be 8% and the water truck weight was assumed to be 62.9 tons. A control efficiency of 80% can be applied for

watering and the application of chemical stabilizers to the unpaved roads. Using the assumptions in the equation, the hauling emission factors are as follows:

	Uncontrolled Emission Factor (EF), in lb/VMT[1]		
	PM	PM_{10}	$PM_{2.5}$
Water Truck Operations	14.508	4.095	0.410

[1]VMT – vehicle miles traveled.

Note that if the assumptions used for these emission factors (i.e., silt content or truck weight) change and result in a more conservative (higher) emission factors, the source shall use the higher emission factors and document the reason for the change in the assumption.

Emissions from Disturbed Areas - Wind Erosion

Emissions from wind erosion of disturbed areas are based on the emission factors from AP-42, Section 11.9 (western surface coal mining), dated October 1998, Table 11.9-4 (wind erosion of exposed areas).

PM EF (ton/acre-yr) = 0.38

The factor was converted to lbs/acre-yr. PM_{10} was assumed to be PM x 0.5. $PM_{2.5}$ was assumed to be PM x 0.2. The emission factors are shown in the table below

	PM	PM_{10}	$PM_{2.5}$
Uncontrolled Emission Factor (EF), in lb/acre-yr	760	380	152

A control efficiency of 50% may be applied for wind breaks since the quarry and exposed are situated in an natural bowl depression that provides a wind break.

APPENDIX I

Prevention of Significant Deterioration (PSD) Review Applicability Tests

An owner or operator of a major stationary source must determine whether a project will trigger major stationary new source review requirements (i.e., PSD and/or NANSR) by conducting an applicability test using the procedures in Colorado Regulation No. 3, Part D, Section I.B. Sources that conduct the actual-to-projected actual test for a project that requires a minor permit modification are required to submit the information in Colorado Regulation No. 3, Part D, Section I.B.4.a through d and that information shall be included in an appendix of the Title V Operating permit (see Colorado Regulation No. 3, Part D, Section I.B.4)

SNCR Installation

The Division considered that the installation of SNCR to the kiln might cause an increase in particulate matter (PM, PM_{10} and $PM_{2.5}$) emissions from the kiln and asked the source to address any potential increases to determine whether or not a permit would be required for the installation of the SNCR. The source requested approval to install a portable SNCR unit on the kiln in order to conduct internal tests, as well as to assess particulate matter emissions. The portable SNCR was installed and tested in July 2013. The results of the July 2013 performance test were used to assess whether there would be an increase in particulate matter emissions, whether that increase would be significant and whether a permit would be required. It should be noted that the source is not subject to total (filterable plus condensable) PM_{10} or $PM_{2.5}$ emissions limitations and has not been required to test for condensable PM, so baseline and projected actual emissions for condensable PM are not available.

The July 2013 performance test results indicated that there would potentially be an increase in PM and PM_{10} emissions but that the increases would be below the significance level. The test also indicated that there was a potential for an increase in CO emissions. The source included an applicability analysis to address particulate matter emissions in the August 4, 2014 application to install SNCR. Additional information was submitted on September 5, 2014 to address the potential increase in CO emissions. The September 5, 2014 analysis also revised the particulate matter emissions evaluation but the particulate matter emissions analysis in that submittal was flawed and was unnecessary, as the information in the August 4, 2014 application for particulate matter was acceptable.

In conducting an actual-to-projected actual applicability test, sources may exclude from projected actual emissions, those emissions that could have been accommodated during the baseline period and that are unrelated to the particular project, including any increased utilization due to demand growth. The particulate matter analysis is based on the emission rates determined from the July 2013 performance test. These emission rates (lb/hr, lb/ton feed, lb/ton clinker) from the July 2013 test were converted to tons/yr of emissions based on the allowable operating limitations (hours of operation, clinker production and feed processed). It is not expected that the SNCR would result in increased utilization of the kiln, thus it is appropriate to ratchet the emission rates up to tons/yr values for pre- and post-project emissions at the same processing rate. The analysis conducted by the source is based on the allowable operating rates and is conservative, as the analysis could be based on baseline and/or projected operating rates.

This Appendix I includes the PSD review applicability test that was conducted to support the August 4, 2014 application to install SNCR on the kiln. The particulate matter applicability analysis is based on the analysis submitted with the August 4, 2014 application, however, the Division made some refinements to that analysis. The CO applicability analysis is based on the information provided in the September 5, 2014 submittal to support the August 4, 2014 application.

Particulate Matter Applicability Analysis

Summary uses the average of all runs, except that Run 1 from SNCR On - condensable PM was removed due to sample bias. Filterable PM from run 1 was also **NOT** included for the filterable only case.

	Hours of operation	Feed to kiln (tpy)	clinker produced (tpy)
Kiln Limitations	8,064	967,680	600,000

SNCR Off - average stack test values

	Emissions					
	based on hours		based on feed		based on clinker	
	lb/hr	tpy	lb/ton feed	tpy	lb/ton clinker	tpy
Total PM_{10}	27.6	111.28	0.28	135.48	0.44	132.00
Total $PM_{2.5}$	12	48.38	0.122	59.03	0.19	57.00
Filterable PM[1]	16.7	67.33	0.171	82.74	0.266	79.80

[1]According to the definition of regulated NSR pollutant in Reg 3, Part D, Section II.A.40, condensable emissions are only included in PM_{10} and $PM_{2.5}$ for assessing applicability.

SNCR On - average stack test values, excluding Run 1

	Emissions					
	based on hours		based on feed		based on clinker	
	lb/hr	tpy	lb/ton feed	tpy	lb/ton clinker	tpy
Total PM_{10}	26.4	106.44	0.29	140.31	0.45	135.00
Total $PM_{2.5}$[1]	9.8	39.51	0.11	53.22	0.17	51.00
Filterable PM[2]	18.6	75.00	0.203	98.22	0.32	96.00

[1]Based on Division's summary report, these are slightly higher values.

[2]According to the definition of regulated NSR pollutant in Reg 3, Part D, Section II.A.40, condensable emissions are only included in PM_{10} and $PM_{2.5}$ for assessing applicability.

Change in Emissions

	Emissions (tons/yr)			
	based on hours	based on feed	based on clinker	Significance Level
Total PM_{10}	-4.84	4.84	3.00	15
Total $PM_{2.5}$	-8.87	-5.81	-6.00	10
Filterable PM[1]	7.66	15.48	16.20	25

[1]According to the definition of regulated NSR pollutant in Reg 3, Part D, Section II.A.40, condensable emissions are only included in PM_{10} and $PM_{2.5}$ for assessing applicability.

CO Applicability Analysis

	CO Emissions (tons/yr)
Current Permitted (Potential) Emissions	396
Baseline Emissions (2007 – 2008)[1]	328
Change in Emissions	68
PSD/NANSR Significance Level (T5 Minor Mod Level)	100

[1]Based on calendar year emissions for 2007 and 2008 reported on APENs (2007 CO = 311 tons/yr and 2008 CO = 345 tons/yr).

Dowe Flats Quarry Modification

For the Dowe Flats Quarry modification, the source used emission factors from AP-42 for both the baseline and projected actual emissions, since the source and assumptions relied upon for the emission factors used in previous permit applications and actual emission calculations could not be verified. The Division reviewed the emission factors and calculations from the initial application and subsequent submittals. The applicability test shown below was submitted on August 10, 2015 and addressed all issues identified by the Division is subsequent submittals. Note that the August 10, 2015 submittal included two footnote c's and was revised to remove the "first" footnote c (maximum of baseline actual emissions or projected actual emissions).

The applicability test compares projected actual emissions (PAE) to baseline actual emissions (BAE The definition of PAE in Colorado Regulation No. 3, Part D, Section II.A.36.b.(iii), states the following (emphasis added), with respect to determining PAE:

> Shall exclude, in calculating any increase in emissions that results from the particular project, **that portion of the unit's emissions following the project that an existing unit could have accommodated during the consecutive twenty-four month period used to establish the baseline actual emissions under Section II.A.4. of this part D and that are also unrelated to the particular project, including any increased utilization due to product demand growth**;

For this project, CEMEX estimated PAE and also estimated emissions that could have been accommodated during the baseline period and were unrelated to the projected. The highest monthly emissions during the baseline period (August 2006) were multiplied by twelve to estimate emissions that could have been

accommodated during the baseline period. The corresponding throughput for that month (August 2006) was 240,840 tons, which when multiplied by twelve equals 2,890,080 tons/yr which is below the permitted throughput (3,200,0000 tons/yr) prior to the Dowe Flats modification. Excluded emissions (referred to as the "demand growth adjustment") are the difference between the emissions that could have been accommodated and BAE.

Table B-3. PSD Evaluation - CEMEX Lyons Cement Plant: Dowe Flats

Baseline Actual Emissions (Highest 2-year Average from last 10 years) [a]

Emission Source	AIRS ID	PM	PM10	PM2.5
		TPY	TPY	TPY
Dowe Flats Quarry	025	76.01	25.28	5.91

Actuals That Could Have Been Accommodated Due to Demand Growth [b]

Emission Source	AIRS ID	PM	PM10	PM2.5
		TPY	TPY	TPY
Dowe Flats Quarry	025	104.52	33.22	7.26

Demand Growth Adjustment [c] =	28.51	7.94	1.35

Projected Actual Emissions [d]

Emission Source	AIRS ID	PM	PM10	PM2.5
		TPY	TPY	TPY
Dowe Flats Quarry	025	128.36	40.74	8.13

Projected Actual Emissions =	128.36	40.74	8.13
Demand Growth Adjustment =	28.51	7.94	1.35
Total Project Emissions (Projected - DGA) [e] =	**99.85**	**32.80**	**6.78**
Baseline Actual Emissions =	**76.01**	**25.28**	**5.91**
Project Increase [f] =	**23.84**	**7.53**	**0.87**
PSD Significant Emission Rates=	**25**	**15**	**10**
Step 2 of PSD Evaluation (Netting) Apply?	**No**	**No**	**No**

[a] Baseline period: Jan 2006-Dec 2007

[b] Based on 12 months of maximum monthly emissions from baseline period: Aug 2006

[c] Difference between baseline actual emissions and emissions that could have been accommodated due to demand growth.

[d] Projected actual emissions. See Table B-2.

[e] Total project emissions are projected actual emissions - the demand growth adjustment (DGA)

[f] Project increase equals total projected actual emissions - baseline actuals.

During the processing of the renewal permit in 2016, which includes the Dowe Flats Modification, the Division realized that the projected emissions increases from the Dowe Flats Modification only addressed the increases in PM emissions from blasting but did not address the potential increase in combustion emissions associated with blasting. Therefore in February 2016, the Division asked CEMEX for information related to combustion emissions from blasting. Since there would be an increase in emissions (projected increases indicated an increase in the number of blasts), emission limits for combustion emissions from blasting would be included in the permit. CEMEX submitted emission estimates from blasting on April 11, 2016 and revised those estimates in an APEN submitted on August 25, 2016. Requested (permitted) emissions were below the significance level, therefore, major stationary source permitting requirements were not triggered. Requested (permitted) combustion emissions from blasting are as follows:

	Emissions (tons/yr)		
	NO_X	CO	SO_2
Requested Emissions	10.0	39.6	1.2
Significance Level	40	100	40