

Milner, Anna

From: Sanchez, Kimberly
Sent: Friday, August 26, 2022 1:33 PM
To: Milner, Anna; Hackett, Richard; L'Orange, Pete
Subject: Fwd: [EXTERNAL] Please relay to the Planning Commission
Attachments: 013-0003_2018 INSP RPT_95OPBO082_11_8_2018.pdf; 013-0003_2019 INSP RPT_95OPBO082_1_25_2019.pdf; 013-0003_2020 INSP RPT_95OPBO082_8_4_2020.pdf; 013-0003_COC_9_3_2019.pdf; 013-0003_ESA_1_7_2022.pdf; 013-0003_ESA_95OPBO082_6_30_2020.pdf; 013-0003_ESA_423549_2_27_2020.pdf; 2019-158 CEMEX ESA 2019-12-05.pdf; Cemex Inquiry_Enforcement History_Aug 2022.pdf

Begin forwarded message:

From: "Sanchez, Kimberly" <ksanchez@bouldercounty.org>
Date: August 26, 2022 at 12:29:14 PM MST
To: "L'Orange, Pete" <plorange@bouldercounty.org>
Cc: "Case, Dale" <dcase@bouldercounty.org>, "James, Liana" <ljames@bouldercounty.org>, "Rogers, Erica" <erogers@bouldercounty.org>
Subject: Fwd: [EXTERNAL] Please relay to the Planning Commission

For the public comment.

Begin forwarded message:

From: Hollie Rogin <hrogin@townoflyons.com>
Date: August 26, 2022 at 8:35:06 AM MST
To: "Sanchez, Kimberly" <ksanchez@bouldercounty.org>
Subject: [EXTERNAL] Please relay to the Planning Commission

Good morning Kim,
Attached please find information regarding CEMEX violations, provided by CDPHE. Would you please forward this to members of the Planning Commission? I would also like to make it part of the public record; do I need to upload the documents via the Ask a Planner page?

Thank you so much, and have a great weekend.

Hollie

Hollie Rogin (she, her, hers)
Mayor, Town of Lyons
970-617-3168 c

My working time may not be your working time. Please don't feel obligated to respond outside of your working hours.



Air Pollution Control Division

Field Inspection Report



COUNTY NUMBER: **013**

SOURCE NUMBER: **0003**

DATE OF INSPECTION: **9/11/2018**

DATE REPORT SUBMITTED: **11/8/2018**

COUNTY: **Boulder**

INSPECTOR: **Dave Huber**

COMPANY: **CEMEX Construction Materials South, LLC.**

SITE LOCATION: **Lyons Cement Plant - 5134 Ute Highway, Lyons (I-25 to CO-66 (exit 243) west ~14 miles)**

MAILING ADDRESS: **P.O. Box 529, Lyons, CO, 80540**

CONTACT PERSON: **Scott A Harcus**

TIME: **8 am**

TELEPHONE NO.: **1(303)823-2124; Mobile: 1(614)306-8838**

EMAIL: **scotta.harcus@cemex.com**

PERMIT NO.: **95OPBO082**

SOURCE CLASS: Major SM-80 Syn Minor Minor

INSPECTION TYPE: Full Compliance Evaluation Onsite Evaluation
Partial Compliance Evaluation Offsite Evaluation

Additional Inspection

Records in File? Yes No

HOURS: Travel & Prep: **31** Inspection: **5** Report: **125** Total: **161**

This compliance assessment is based on observations made during the inspection, information provided by the source, Division resources available and a review of Division records. Based on this information, this source is:

COMPLIANCE STATUS: IN COMPLIANCE OUT OF COMPLIANCE

INTRODUCTION

An announced inspection of the Cemex Lyons Cement Plant (CEMEX) was conducted. CEMEX operates a portland cement manufacturing facility in Lyons Colorado, under Operating Permit No. 95OPBO082, AIRS ID 013-0003. Scott Harcus and Maribel Aguilos, with CEMEX, granted access to the facility, provided a tour and supplied records to determine compliance. Cemex is permitted to emit air pollution into the atmosphere in accordance with Operating Permit 95OPBO082, which was first issued February 1, 2000 and most recently renewed March 1, 2017 and last revised November 1, 2017. The revision was a simple administrative change to update of material description language for P009. This inspection report assesses compliance for the time period of 3/1/2017 to 6/30/2018 and only includes the most recently issued permit. The facility is located near Lyons, 12 miles north of Boulder on Highway 66. The area in which the facility is located is classified as attainment/maintenance for particulate matter less than 10 microns (PM₁₀). Under that classification, all SIP-approved requirements for PM₁₀ 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.

This facility manufactures portland cement. Limestone, shale, and other raw materials extracted from the 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. To improve the combustion characteristics, oxygen from an on-site oxygen generation plant, is injected through a swirl chamber directly below the first stage calciner (the oxygen plant is no longer in use and has been removed). 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 onto the clinker cooler. The clinker is cooled by large amounts of air that is forced upwards through the clinker bed by undergrate fans. A large percentage of the cooling 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 and ground to a fine material, passed through coolers and stored in the 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.

POINT AIRS ID/PERMIT NUMBERS

Operating Permit Number: 95OPBO082

013-0003

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Constructio n Permit

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
		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	P001	001	S002 - Primary Crushing (Plant)	Baghouses	P-10,225*

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
Crusher (Plant) (Section II.4)			S004 - Surge Silo		P-10,535*
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 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		
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	P008	008	S017 – Clinker Drag Chains (1 baghouse)	Baghouse	12BO444-2

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
Transfer to Storage for Finish Mill (Section II.10)			S018 - Clinker Cooler (2 baghouses, 1 stack)	(5 total)	
			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.		
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

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
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	Baghouse	C-10,316*, 10BO718*
			S019 – Material Unloading Hopper (Railcar)		
			S025 – Material Unloading Hopper and Spout (Trucks) 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

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
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

¹APEN 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).

SOURCE COMPLIANCE HISTORY

1. A 2000 stack test identified the source failed to operate the raw material dryer in compliance with the PM limit in the Operating Permit. Resolved with the issuance of a Compliance Advisory and an Order on Consent dated 10/02/00, civil penalty of \$1,400.00 and a SEP of \$8,400.00 to install video camera for control room staff to monitor plant conditions.

2. Violations identified during 2001 inspection include: failure to properly calculate and report emissions from a gasoline storage tank, failure to conduct Method 9 opacity observation as required, Failure to notify the Division of excessive opacity from an upset as required, and failure to submit annual compliance certifications which include statements of violations of conditions 1.3, 1.4, 3.2, 3.5, 3.5.7, 11.3, 11.6, 13.2, and 13.5. Resolved with a Compliance Order on Consent dated 07/25/02, SEP \$6,000.00.

3. Several violations were identified during 2003 inspections which were resolved with a Compliance Order on Consent dated 02/20/04, a civil penalty of \$37,460.00, pay at least \$149,840.00 towards a Supplemental Environmental Project, and pay \$94,839.00 for the economic benefit associated with not operating the control equipment required to control emissions from the A-Frame building.

4. Seven violations were identified during 2004 inspections and were resolved with a commitment to immediately implement procedures to control fugitive emissions, and install a new conditioning spray tower before the fall of 2005.

5. Numerous violations were identified during several 2005 and 2006 inspections and were addressed in Notice of Violations dated 9/23/05 and 6/8/06. Additional issues in 2006 were addressed in letters issued for Denial of Upset Reports dated 5/1/06 and 7/31/06 and a request for revision of Startup, Shutdown, and Malfunction Plan. All of these violations were resolved with a Compliance Order on Consent signed 12/22/06 and a penalty of \$1,500,000.00 to be paid as follows: \$300,000.00 cash penalty, \$50,000.00 non-compliance cash penalty, \$200,000.00 to operate a PM monitor for at least one year, \$450,000.00 donated to nonprofit organization for environmental projects, at least \$500,000.00 towards an Supplemental Environmental Project, and a moratorium on using tire-derived-fuels until at least January 1, 2008.

6. Violations identified in 2007 and 2008 inspections have been addressed in a Notice of Violation dated June 17, 2008. The case was resolved with a Compliance Order on Consent signed 2/11/09 with a total penalty assessed of \$528,325. Cemex agreed to pay a sum of \$105,665 in administrative penalties and perform Supplemental Environmental Projects (SEPs) totaling \$422,660. The SEPs included \$300,000 donated to the Boulder County Plug-In Hybrid and Vehicle to Grid Implementation Project and \$122,660 donated to the Governor's Energy Office (GEO) earmarked for energy efficiency and renewable energy projects for Lyons public schools.

7. A Warning Letter was issued for the 2011 inspection related to a stack test conducted on April 21, 2011 where Cemex exceeded the grain loading limit for Baghouse 625-14 (P009) found in the table in Condition 11.3. The test results indicated an emission rate of 0.038 gr/dscf in excess of the 0.03 gr/dscf limit found in the table. The baghouse was retested on May 25, 2011 indicating 0.01 gr/dscf emission rate and demonstrated compliance with the grain loading requirements.

8. Cemex was issued a Compliance Advisory (CA) dated August 23, 2013 for Case No. 2013-121. Compliance testing on April 17, 2013 on the Raw Materials Dryer (AIRS 002) demonstrated an emission rate of filterable PM of 22.8 lb/hr and 79.9 tpy, violating the limits of 6.5 lb/hr (Permit 12BO444-1, Condition 3) and 22.8 tpy (Permit 95OPBO082, Condition 5.4). Following the failed test on April 17, 2013, three bags were replaced in the baghouse controlling emissions from AIRS 002 and

compliance testing was conducted again on May 24, 2013. The results of the May 24, 2013 tests were below permitted emission limits for PM. A Compliance Order on Consent was signed April 15, 2014 and an administrative penalty of \$8,400 was paid. Compliance Requirements include requiring Cemex to perform quarterly standard calibration procedures of the dryer dust collector broken bag detector and maintain records for at least two years.

9. The 2017 inspection found the source not in compliance with conditions 10.5, 23.5 and General Permit Conditions (5/22/12 version) condition 22e (Regulation No. 3, Part A, § II.C.2) of Operating Permit 95OPBO082. Enforcement discretion was recommended.

NSPS/NESHAP/MACT APPLICABILITY

NSPS Applicability:

40 CFR part 60 Subpart OOO - Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants;

40 CFR part 60 Subpart F—Standards of Performance for Portland Cement Plants;

40 CFR part 60 Subpart A - General Provisions.

MACT Applicability:

40 CFR Part 63 Subpart LLL—National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry (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)

40 CFR Part 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

REPORTS

In the absence of credible evidence and without indications to the contrary, the reports described below were submitted in accordance with the provisions of the Record Keeping and Reporting Requirements/Certification Requirements of the General Permit Conditions.

Title V Semi Annual Monitoring Reports (SAR)

Period	Due	Received
1/1/2017 – 2/28/2017*	4/1/2017	3/31/2017
1/1/17 – 6/30/17	08/1/2017	7/28/2017
7/1/17 – 12/31/17	2/1/2018	1/22/2018
1/1/18 – 6/30/18	08/1/2018	7/17/2018

In the absence of credible evidence and without indications to the contrary, deviations were reported promptly as described in the Prompt Deviation Reporting General Permit Condition.

***Permit expired on Feb. 28, 2017; this report submitted for Jan. 1, 2017-Feb. 28, 2017.**

3/31/2017 Report: Deviations reported - CAM Excursions not violations



**1.) Section II, Condition 24.1.1.2a (This is a CAM Excursion not a violation)
Unit P013**

Deviation code: 8 (CAM)

On Jan. 6, 2017, and Jan. 27, 2017, the east loading spout dust collector registered differential pressure reading above 7 inches water. This was due to the cold weather freezing air lines. The differential pressure would lower to below 7 inches water as ambient temperature increased above the freezing level. Follow-up inspection by maintenance crew indicated that tubing lines were broken, and the magnehelic was defective. Maintenance conducted an inspection to assess the root cause of the problem. Tubing lines and the DP monitor were replaced.

**2.) Section II, Condition 24.1.1.2a (This is a CAM Excursion not a violation)
Unit P007A**

Deviation code: 8 (CAM)

On Feb. 24, 2017 the bulk loader reported that differential pressure reading for A5 dust collector was at 7 inches water. Maintenance conducted an inspection to assess the root cause of the problem. Tubing links were replaced and cleaned out, and the air pressure was adjusted.

**3.) Section II, Condition 24.1.1.2a (This is a CAM Excursion not a violation)
Unit P013**

Deviation code: 8 (CAM)

On Feb. 9, 2017, the differential pressure reading at 825-1 dust collector for A13 cement silo was at 10 inches water at about 7:50 a.m. Maintenance conducted an inspection to assess the root cause of the problem but found none with DP returned to within operating level. Weekly preventative maintenance inspections continued, as required by the O&M plan.

7/28/2017 Report: Deviations reported

1.) Section II, Condition 23.2.1.3

Unit: P005

Start/stop: March 13, 2017

Deviation codes: 6, 8 (record, CAM respectively)

Noted during normal operation

The differential pressure reading at the Raw Mill Feeder (325-3) Dust Collector was missed when the equipment came back on after 13:50 on March 13, 2017. Production department personnel tasked to perform daily Title V compliance monitoring were retrained on changes in permit requirements that took effect on March 1, 2017. The SOP was updated, requiring the night shift supervisor to check whether or not relevant pieces of equipment that were reported as not operating during the day shift remained down during the night shift.

2.) Section II, Condition 11.6.1.10

Unit: P015

Start/stop: March 15, 2017, 8 a.m.-10 a.m.

Deviation codes: 9 (other)

Noted during normal operation

The sweeper was down for two hours because the operator assigned for the day needed medical attention, and the substitute operator was tied up cleaning the spray tower until 10 a.m. Water truck operations, however, generally covered areas around P009, P010, P011, P012, P013 and P015. Non-availability of an operator is not a valid exemption from the sweeping requirement. Production department supervisors and truck operators were reminded to ensure that the water truck keeps wet the paved areas normally covered by the sweeper when the sweeper is not operating.

1/22/2018 Report: Deviations reported

1.) Section II, Condition 22.9.3

Unit: P007

Start/stop: July 21, 2017, for ~49 minutes

Deviation code: 2 (process)

Noted during normal operation

The production operator failed to start injecting carbon and lime at 300 degrees F on baghouse inlet temperature. The DAS started alarming at 295 degrees, as programmed. Temperatures are calculated on a five-minute rolling average. Lime and carbon injection systems were immediately turned on at ~350 degrees F. Emissions limits for mercury and HCl/SO₂ were not exceeded. Interlocks were put in place so that the system will now alarm and not allow the kiln to exceed 290 degrees F without turning on the LIS and ACI. A revision to the O&M Plan was submitted to the division, requesting removal of the temperature condition (It is unlikely to satisfy the regulation).

2.) Section II, Condition 23.2.1.1 (This is a CAM Excursion not a violation)

Unit: P010, Stack No. S051

Start/stop: Aug. 20, 2017, 9:02 a.m.-9:06 a.m.

Deviation code: 8 (CAM)

Noted during normal operation

Visible emissions were observed from the fan stack of Dust Collector 525-17 during the routine daily inspection. Production personnel took 525-17 down as an initial corrective action until maintenance could assess and fix the problem.

3.) Section II, Condition 10.9.2

Unit: P007

Start/stop: Aug. 25, 2017, 1:36 p.m.-1:41 p.m.

Deviation code: 1 (standard)

Noted as a malfunction

A six-minute kiln opacity average was recorded at 41.23 percent, exceeding the limit during a startup/shutdown operation. The kiln malfunction resulted in a high vacuum pressure that was unintentionally created within the baghouse. Plant air pressure momentarily went down due to a PLC rack fault that shut down automation

equipment across the plant, including the pneumatically activated dampers to the baghouse. As a result, the dampers inadvertently closed at the inlet to the baghouse, which ultimately resulted in high opacity spikes at the main kiln as elevated particulate matter was vacuumed from the baghouse by the high pressure developed at the baghouse. The power was restored to the PLC, which then restored plant air and pneumatic activated air damper to the baghouse. Supervisors were reminded to verify and ensure that adequate training is provided. This is considered to be a valid malfunction because an array overrun caused the PLC fault.

4.) Section II, Condition 10.9.1

Unit: P007

Start/stop: Sept. 13, 2017, 1:44 p.m.-1:48 p.m.

Deviation code: 1 (standard)

Noted as a malfunction

A six-minute average opacity of 23 percent registered at the opacity monitor for the kiln stack following maintenance of one of the bags at Compartment No. 73. Further inspection of the compartment indicated that a port was dislodged, allowing dust to bypass the bags. Compartment No. 73 was immediately taken offline for the second time, and the port was properly secured. This lowered the opacity readings to compliance level. Proper baghouse operations and work checks were reviewed with the maintenance, production and environmental departments. This is not considered to be a valid malfunction because operator error improperly secured the port resulting in the opacity exceedance.

5.) Section II, Condition 23.2.1.3 (This is a CAM Excursion not a violation)

UNIT IDENTIFICATION: P002, Raw Material Dryer Baghouse 225-11, Stack# SOOS; P005, Raw Mill Feeder Dust Collector 325-3, Stack# S012; P007A, CKD Silo AS Dust Collector 525-28, Stack # S066; and PO13 Silos A10 & A13 Dust Collector 825-1, Stack # S043, A7 Dust Collector 825-2, Stack# S044

Explanation of Period of Deviation	Duration/Date
Missed DP reading at 825-2 DC	11/13/2017
Missed DP reading at 225-11 DC	11/21/2017
Missed DP reading at 525-28 DC	11/21/2017
Missed DP reading at 825-1 DC	11/22/2017
Missed DP reading at 325-3 DC	11/22/2017

Deviation code: 8 (CAM)

Pressure Differential Reading on the day a 6-minute visible emissions observation could not be made when source did not operate for more than four hours. Shift supervisors were reminded to review the 6-minute visible emissions observation forms in order to ensure that CAM sources that did not operate during the earlier shift are monitored for DP readings when such sources are turned back on.

6.) Section II, Condition 26, Maintenance

There are no existing maintenance records on the following engines for 2017, and are therefore assumed to have had no maintenance performed on them:

- 1.A-Pit Pump - Diesel fuel-fired engine, rated at 90 hp
 - 2.Flood Engine - Diesel fuel-fired engine, rated at 99 hp (Emergency Engine)
- The abovementioned engines are rarely operated, with the A-Pit pump operated less than 200 hours a year and the flood engine operated less than 10 hours a year.

Deviation code: 5, 6

Immediately scheduled proper maintenance and established reporting protocol. An automated notification will be generated going forward that will alert mechanic to conduct maintenance or take alternative oil samples for analysis.

7.)Section II, Condition 22.33.2.1:

Six-minute visible emissions observation (Method 22) for a raw mill or finish mill.
UNIT IDENTIFICATION: P005 - Raw Mill Dust Collector 325-1 (Stack #SO10); Raw Mill Auxiliary Dust Collector 325-2 (Stack# S011); PO11 - Finish Mill Dust Collector 725-2 (Stack# S036), Finish Mill Auxiliary Dust Collector 725-3 (Stack# S037); and PO1 2 Finish Mill Separator Dust Collectors 725- 10 & 725-11 (Stack # S065)

Explanation of Period of Deviation	Duration/Date (s)
Missed Method 22 on 325-1 DC	11/21/2017 ;
Missed Method 22 on 325-2 DC	11/21/2017; 11/22/2017
Missed Method 22 on 725-2 DC	11/22/2017; 11/24/2017
Missed Method 22 on 725-3 DC	11/22/2017; 11/24/2017
Missed Method 22 on 725-10, 11 DCs	11/22/2017; 11/24/2017

Deviation code: 3

Six-minute Method 22 observations were not performed on the Raw Mill Dust Collector 325-1 when sources operated later in the day, after initial attempts to perform visible emission observation early in the day shift indicated such sources were down. Shift supervisors were reminded to review the 6-minute visible emissions observation forms in order to ensure that sources requiring daily Method 22 are not missed. Copies of the revised 6-minute Method 22 Observation Forms, with specific instructions to perform Method 22 event during nighttime, were redistributed to concerned personnel. Retraining of concerned personnel were also conducted.

7/17/2018 Report: Deviations reported

1.) Section II, Condition 22.33.2.1

Unit: P011

Start/stop: Jan. 23, 2018, 10 p.m.-11:59 p.m.

Noted during normal operation

Deviation code: 3 (monitor)

The six-minute Method 22 observation was not performed on the finish mill dust collector 725-2 and finish mill auxiliary dust collector 725-3 when the finish mill operated at approximately 10 p.m. Shift supervisors were reminded to review the six-minute visible emissions observation forms in order to ensure that sources requiring



daily Method 22s are not missed. Copies of the revised six-minute Method 22 observation forms, with specific instructions to perform Method 22 observations at night, were redistributed to concerned personnel. Retraining of personnel was also conducted.

2.) Section II, Conditions 11.6.1.2a and 14.4.1.2a

Unit: P015 and P018

Start/stop: Jan. 7, 2018, 11:23 a.m.-6 p.m.; Jan. 8, 2018, 6:40 a.m.-6 p.m.; Jan. 9, 2018, 6 a.m.-12 p.m.

Noted during normal operation

Deviation code: 9 (other)

The water truck was operated for less than 12 hours even as the crushing/drying (O2) system operated. The kiln was down for more than 24 hours. Shift supervisors were reminded that "non-availability" of the water truck is not among the exceptions for the requirement to run it for 12 hours, and the water truck still needs to run if the O2 system is operating, even if the kiln has been down for more than 24 hours.

Title V Annual Compliance Certifications (ACC)

Period	Due	Received
1/1/2017 – 2/28/2017*	4/1/2017	3/31/2017
3/1/2017 – 12/31/2017*	2/1/2018	1/22/2018

In the absence of credible evidence and without indications to the contrary, deviations were reported promptly as described in the Prompt Deviation Reporting General Permit Condition.

*Permit expired on Feb. 28, 2017; this report submitted for Jan. 1, 2017-Feb. 28, 2017.

3/31/2017 Report: Deviations noted during the previous and current reporting periods.

1/22/2018 Report: Deviations noted during the previous and current reporting periods.

MACT/NSPS Reports

Subpart	Period	Due	Received
NSPS Subpart OOO	1/1/2017 – 6/30/2017	8/1/2017	7/20/2017
NSPS Subpart OOO	7/1/2017 – 12/31/2017	2/1/2018	11/5/2018*
NSPS Subpart OOO	1/1/2018 – 6/30/2018	8/1/2018	11/5/2018*

*The source interpreted the regulation to require reports only when there was a change that occurred. Although the regulation does not specifically state that a report must be submitted semiannually, the Division has requested that the source submit the reports semiannually to report any changes or report that there were no changes. The source stated they will submit the semiannual reports moving forward. For the purposes of this inspection the source is considered in compliance.

Report no increases in capacity.

MACT LLL reports submitted through Central Data Exchange

<u>Facility</u>	<u>Report</u>	<u>Certification Date</u>	<u>Comments</u>
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1354(b)(9) Summary Report	2018-08-29 19:12:11.466	40 CFR 63.1354(b)(9), Subpart Subpart LLL Summary Report, Kiln DF Temp Data, CMS Performance Summary, Kiln CPMS Exceedance Descriptions & Corrective Actions
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1349(d)(2) Relative Accuracy Test Audit Data and Performance Test Data	2018-04-17 16:37:34.958	Relative Accuracy Test Audit Report & Testing Data
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1354(b)(9) Summary Report	2018-03-01 20:31:41.195	40 CFR 63.1354(b)(9), Subpart Subpart LLL Summary Report, Kiln DF Temp Data, CMS Performance Summary, Kiln CPMS Exceedance Descriptions & Corrective Actions
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1349(d)(2) Relative Accuracy Test Audit Data and Performance Test Data	2017-10-12 10:22:38.835	Relative Accuracy Test Audit Report & Testing Data

<u>Facility</u>	<u>Report</u>	<u>Certification Date</u>	<u>Comments</u>
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1354(b)(9) Summary Report	2017-08-28 19:42:57.213	40 CFR 63.1354(b)(9), Subpart Subpart LLL Summary Report, Kiln DF Temp Data, CMS Performance Summary, Kiln CPMS Exceedance Descriptions & Corrective Actions
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1349(d)(2) Relative Accuracy Test Audit Data and Performance Test Data	2017-04-11 16:43:06.516	Relative Accuracy Test Audit Report & Testing Data
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1349(d)(2) Relative Accuracy Test Audit Data and Performance Test Data	2017-04-11 16:42:33.035	Relative Accuracy Test Audit Report & Testing Data

Excess Emissions and Monitoring System Summary Reports (“EER”)

007 Rotary Kiln				
Year	Period	Due	Received	Notes
2017	1	5/1/2017	4/25/2017	No excess emissions or excessive monitor downtime reported
2017	2	8/1/2017	7/27/2017	No excess emissions or excessive monitor downtime reported
2017	3	11/1/2017	10/26/2017	12 minutes of excess opacity reported (See malfunctions). No excessive monitor downtime reported
2017	4	2/1/2018	1/17/2018	No excess emissions or excessive monitor downtime reported
2018	1	5/1/2018	4/27/2018	No excess emissions or excessive

007 Rotary Kiln				
Year	Period	Due	Received	Notes
				monitor downtime reported
2018	2	8/1/2018	7/19/2018	No excess emissions or excessive monitor downtime reported

008 Clinker Cooler				
Year	Period	Due	Received	Notes
2017	1	5/1/2017	4/25/2017	No excess emissions or excessive monitor downtime reported
2017	2	8/1/2017	7/27/2017	No excess emissions or excessive monitor downtime reported
2017	3	11/1/2017	10/26/2017	No excess emissions or excessive monitor downtime reported
2017	4	2/1/2018	1/17/2018	No excess emissions or excessive monitor downtime reported
2018	1	5/1/2018	4/27/2018	No excess emissions or excessive monitor downtime reported
2018	2	8/1/2018	7/19/2018	No excess emissions or excessive monitor downtime reported

APENS

APEN Received dates are in the table below.

AIRS ID	APEN Received
001	3/30/2018
002	3/30/2018
003	3/30/2018
004	3/30/2018
005	3/30/2018
006	3/30/2018
007	3/30/2018
008	3/30/2018
009	3/30/2018
010	7/14/2015
011	7/14/2015
013	7/14/2015
014	4/28/2017
015	3/30/2018
017	8/25/2016
019	3/30/2018
024	3/30/2018
025	7/24/2015
026	7/14/2015

027	3/30/2018
028	7/14/2015
031	7/14/2015
049	3/30/2018
050	4/28/2017
052	3/30/2018
053	8/1/2018
054	4/16/2015
055	4/16/2015

In the absence of credible evidence and without indications to the contrary, APENs were submitted in accordance with the provisions of the Record Keeping and Reporting Requirements of the General Permit Conditions.

MALFUNCTION REPORT REVIEW

1.) 7/17/2017 07:10 – 07:21 (007 Rotary Kiln)

Call 7/17/2017 16:01; Report 8/11/2017

On July 17, 2017, Cemex experienced a malfunction when there was a release of a dust plume from 7:10 a.m.-7:16 a.m. The kiln feed and fuel were discontinued immediately as the kiln was placed in shutdown mode. The dust release occurred due to a buildup of material in the cooling tower, where it fell into a downstream duct, creating a stoppage of airflow. The blockage was a direct cause of the malfunction and presented a positive pressure in the kiln. This inadvertently forced out the fugitive dust plume from the process.

No CEMS exceedances were recorded during this time period.

There were 11 minutes of fugitive emissions during this event. It was initially reported as a six-minute event. Following further investigation, however, it was determined that the malfunction occurred from 7:10 a.m.-7:21 a.m. The release occurred due to a blockage of draft air flow at the base of the spray tower. Spray tower build up and gradual material sloughing is typical within the Lyons plant process, however, in this instance, an unusually large amount of material unexpectedly broke loose, stopping air flow abruptly. The sudden stoppage of air flow created positive pressure accumulation in the remaining upstream process, causing a release of fugitive emissions at the seams of the kiln discharge. When the spray tower blockage occurred, appropriate action was taken when the control room operator initiated the stop functions designed to cut the fuel, feed and air flowing into the system. The result was a short and temporary purge of fugitive emissions from the seams of the kiln before all fuel was shut off. To prevent future recurrence, the Lyons plant automation engineer has added a PLC control interlock as corrective action. The interlock will automatically and immediately stop all feed and fuel from entering the process during a similar positive-pressure event.

This is not considered to be a malfunction because no CEMS exceedances were recorded and no deviation occurred.

2.) 8/14/2017 17:03 – 17:30 (007 Rotary Kiln)

Call 8/15/2017 11:14; Report 9/12/2017

On Aug. 14, 2017, from 5:03 p.m.-5:30 p.m., A fire developed in the coal delivery system at the kiln. The unit feeding the fuel to the kiln took on heat and started to burn. When personnel noticed the fire,

the Longmont and Lyons fire departments were notified. The fire departments dispatched aid to extinguish the fire. During the fire, white smoke was released from the kiln and migrated out of the building. The kiln did have to be shut down. The scheduled gas and flow RATAs for Aug. 15, 2017, had to be postponed.

The fire lasted about 27 minutes. As a precautionary measure, this incident was promptly reported. This event occurred as the kiln coal delivery system experienced a negative backdraft, thus taking in hot gases and burning a rubber coal feed duct. The resulting fire created smoke inside the building with a residual amount of fugitive smoke exiting the building. Following further investigation, CEMEX has determined that this event does not qualify as a malfunction due to the nature of this incident. The fire was contained throughout and produced minimal fugitive dust emissions that migrated outdoors from the corners and seams of the building. This controlled fire event occurred on the kiln floor level of an enclosed building, and CEMEX did not record any compliance exceedances during this time. All possible steps were immediately taken in order to extinguish the fire and contain resulting fugitive dust. These steps included keeping doors and windows closed and immediately dialing 911 to reach the fire departments and get them on site to aid in fire suppression and dust mitigation by way of water hoses. While the kiln coal delivery system remains shut down, the source has a new design to implement an isolation valve at the coal inlet to the kiln. The valve will provide a fail-safe solution as to eliminate the risk of any hot gases or sparks entering the coal feed moving forward.

This is not considered to be a malfunction because no compliance exceedances were recorded and no deviation occurred.

3.)8/25/2017 13:36 – 13:41 (007 Rotary Kiln)

Call 8/28/2017 08:08; Report 9/21/2017

On Aug. 25, 2017, from 13:36-13:41, CEMEX Lyons experienced a malfunction. The source was in shutdown mode. The opacity limit in shutdown mode is 30 percent. The tag value for a six-minute duration was 41.2 percent.

The facility had one six-minute average exceedance. This opacity exceedance occurred due to high vacuum pressure unintentionally created within the baghouse. Plant air pressure momentarily went down due to an unforeseen PLC rack fault, which shut down automation equipment across the plant. One important piece of automated equipment affected by this fault is the pneumatically actuated dampers to the baghouse. As a result, the dampers inadvertently closed at the inlet to the baghouse during this time. As the inner duct fan continued to exhaust/pull from the baghouse, high pressure developed and elevated particulate matter (PM) was vacuumed from the baghouse, causing temporary spikes in main kiln opacity. The power was restored to the PLC, which then restored plant air and pneumatic activated air damper to the baghouse.

This is considered to be a valid malfunction because an array overrun caused the PLC fault.

4.) 9/13/2017 13:44 – 13:48 (007 Rotary Kiln)

Call 9/14/2017 11:18 Report 10/4/2017

On Sept. 13, 2017, from 13:44-13:48, CEMEX experienced a malfunction that led to an opacity deviation. Kiln baghouse compartment No. 73 was isolated and removed from service in order to perform maintenance on one of the bags. When maintenance was complete, compartment No. 73 was returned to service. Upon returning to service, the main kiln stack opacity monitor registered opacity spikes due to an uncovered port within the compartment. The control room noted the high opacity readings and removed compartment 73 from service.

A six-minute average opacity of 23 percent registered at the opacity monitor for the kiln stack following maintenance of one of the bags at Compartment No. 73. Further inspection of the compartment indicated that a port was dislodged, allowing dust to bypass the bags. Compartment No. 73 was immediately taken offline for the second time, and the port was properly secured. This lowered the opacity readings to compliance level. Proper baghouse operations and work checks were reviewed with the maintenance, production and environmental departments.

This is not considered to be a valid malfunction because operator error improperly secured the port resulting in the opacity exceedance.

5.) 11/16/2017 14:05 – 14:15 (002 Raw Material Dryer)

Call 11/17/2017 11:45 Report 11/22/2017

On Nov. 16, 2017, at 2:05 p.m., CEMEX Lyons experienced a malfunction event that led to a fugitive dust release from the raw material dryer system. The electrical room had a fault, and the system tripped, causing the dryer baghouse to be temporarily de-energized. When the dryer baghouse fan went down, the system's negative pressure was no longer able to be maintained, and the baghouse dust load spilled onto the belts and ground below. This event also coincided with a dry weather event. The site was experiencing wind gusts of up to 40 mph at the time of the malfunction. Portions of the dust were picked up by the wind, creating a fugitive dust plume. Immediate action was taken to restore power and regain proper operation of the dryer fan. While the fan did not come back into operation until 2:42 p.m., the fugitive dust event lasted only until 2:15 p.m. Cleanup of the remaining dust was immediately executed.

This is not considered to be a malfunction because no compliance exceedances were recorded and no deviation occurred.

COMPLIANCE ASSISTANCE/SOURCE ACTIONS

Several errors and issues were identified in the source's records (e.g. incorrect limits listed, values not summed) that were brought to the attention of the source and corrected.

PERMIT CONDITIONS AND COMPLIANCE STATUS

950PBO082

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 (PM₁₀). Under that classification, all SIP-approved requirements for PM₁₀ 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.

No compliance determination is necessary. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 ≥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 ≥ 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 ≥ 100 tons/year) for PM, PM₁₀, SO₂, 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 ≥ 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.

No compliance determination is necessary. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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).

No compliance determination is necessary. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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
026		S056 through S064 – Conveyor	Baghouse (8 total)	94BO593	
027	S055 - Primary Crusher (Quarry)	Baghouse			
Dowe Flats Quarry – Point Source Emissions (Section II.2)					

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
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* P-10,535*
			S004 - Surge Silo		
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 P-10,298*
			S003 - #4 Belt Transfer		
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

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
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		

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
			S038 - Surge Bin ²		
			¹ stacks vent inside A-Frame		
			² stacks vent inside mill building.		
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		C-10,316*, 10BO718*
			S019 – Material Unloading Hopper (Railcar)		
			S025 – Material Unloading Hopper and Spout (Trucks)	Baghouse	
			Outdoor Coal Storage		

Process (Permit Section)	Plant ID	AIRS ID	Description		Pollution Control Device	Construction Permit
Cold Cleaner Solvent Vats (Section II.18)		APEN Exempt ₁	Cold Cleaner Solvent Vats		Work Practice Requirements	Permit Exempt
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	

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
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

¹APEN 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).

No compliance determination is necessary. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

5. Alternate Operating Scenarios

- 5.1 The renewal permit (issued March 1, 2017) specifies that the dryer (addressed in Section II, Condition 0) 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.

The source complies with the total organic HAP requirements in 40 CFR Part 63 Subpart LLL and does not exercise the alternative operating scenario. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

The source is 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. CAM requirements are set forth in Section II, Condition 23.

In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with all General Activities and Summary.

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	1.7	Lyons - Mining		Certification	Annually

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
on Lyons Quarry		Prohibited			
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

Compliance Status:

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		Limitations	Reported Data
Dowe Flats Quarry	Process Rates	3,500,000 ton/yr	100,457 tons/yr
		25,000 ton/day	9,054 tons/day
	PM	134.2 ton/yr	87.96 tons/yr
	PM ₁₀	58.4 ton/yr	28.04 tons/yr
Lyons Quarry	PM	19 ton/yr	13.02 ton/yr
	PM ₁₀	9.4 ton/yr	5.00 ton/yr
ANFO	Consumption	1,182 tons/yr	420.33 ton/yr
	NO _x	10.0 tons/yr	0.07 ton/yr
	CO	39.6 tons/yr	0.27 ton/yr

Cemex provided the reported data above for the rolling 12-month period ending July 2018. The Lyons Quarry has been inactive for many years; however, particulate emissions from ongoing reclamation activities have been calculated.

- 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.

Cemex is tracking material handling on a daily basis and compiling monthly and 12-month totals as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source tracks ANFO usage on a monthly and 12-month rolling total basis as required. The reported rolling 12 month total usage is in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 1.3 PM and PM₁₀ 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.

	Uncontrolled Emission Factors	Control
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Activity	PM	PM ₁₀	PM _{2.5}	Units	Efficiency
Drilling	1.6 x 10 ⁻⁴	8.0 x 10 ⁻⁵	3.2 x 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 x 10 ⁻⁴	1.36 x 10 ⁻⁴	lb/ton	
Truck Unloading – Limestone Rock	0.0019	8.98 x 10 ⁻⁴	1.36 x 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.

The source calculates PM and PM10 emissions from the Dowe Flats Quarry on a 12-month rolling total basis using the factors identified above. The reported rolling 12 month total emissions are in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 1.4 PM and PM₁₀ 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:

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

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.

The source calculates PM and PM10 emissions from disturbed areas at the Lyons Quarry on a 12-month rolling total basis using the factors identified above. The reported rolling 12 month total emissions are in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source calculates NOX and CO emissions from blasting on a 12-month rolling total basis using the factors identified above. The reported rolling 12 month total emissions are in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source performs weekly inspections of the control measures to ensure the emission control measures are in place and effective. The source maintains records of the weekly inspections and results as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

No evidence of inadequate soil moisture to control emissions from topsoil and over burden was observed during the inspection. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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).

The source stated that disturbed areas of topsoil and overburden at Dowe Flats are minimized and reclaimed areas are re-vegetated as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

No fugitive emissions from material handling were observed during the inspections. Cemex employs a sprinkler system to wet the active disposal area and a water truck to control dust from haul roads. Cemex employs crews of laborers for cleaning up accumulated piles of dust on and

around equipment at the plant. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Cemex is using a wind speed monitor mounted at the top of the primary crusher building to continuously record wind speeds, the control room operators evaluate the wind speed and suspend equipment operation when the wind exceeds 30 mph. The data acquisition system continuously monitors wind velocity and automatically notifies the control room operator when the wind speed exceeds 30 mph. The control room’s computer monitors have been modified to include a visual alarm to notify operators of high wind. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Speed limit signs are posted on unpaved roads as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Haul roads at the facility are compacted and no visible emissions were observed from vehicle traffic. Chemical dust suppressant is applied at the quarry and water trucks are used to control fugitive dust. Records were reviewed during inspections and appear to be sufficient to control fugitive emissions. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

Drilling rigs have been observed during previous inspections and were equipped with bag collectors. Source is considered to be in compliance with this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

1.6.1.9 Sequential blasting shall be employed.

Sequential blasting techniques are being employed. Cemex has contracted blasting activities out to a separate company for blasts at the quarry. Blasting activities are still being videotaped by the source to provide further evidence of this requirement. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Reclamation following extraction is the operating procedure employed by Cemex. Cemex has employed extensive reclamation activities with native plants around the facility to revegetate disturbed areas. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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)

The Mining and Reclamation plans are available on-site for review. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.)

Cemex postpones the loading of explosives if the wind is forecasted to exceed 20 mph. Cemex also videotapes each quarry blast to document opacity and direction of plume travel. The source has a blasting record for each day a blast occurs with a forecast report indicating wind speed and direction printed from a local weather station. In addition, the control room operator's log also includes entries of Dowe Flats and raw material handling equipment downtime during high wind events that correspond to postponed blasts. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.)

Cemex is recording each blast with video and continues to record until the opacity is dissipated below 5%. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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 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))

No visible emissions in excess of 20% opacity and no off-property transport were noted during the inspection. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. (In Compliance)

- 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))

No visible emissions and no off-property transport were noted during the inspection. A revised control plan has not been requested under the provisions of Condition 1.6.2. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. (In Compliance)

- 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.

No visible emissions and no off-property transport were noted during the inspection. A revised control plan has not been requested. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

The Lyons Quarry is no longer being mined. However, CKD disposal and reclamation activities still persist at the site. Particulate emissions calculated for the Lyons Quarry are associated with these activities. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source monitors the daily number of haul truck trips. No exceedances were noted in the records provided. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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

The source monitors the days of operation for the Dowe Flats Quarry activities. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source maintains records of the number of blasts and whether blasts are conducted on limestone or waste rock/overburden, the number of hours the bulldozer is operated and the number of vehicle miles traveled for all vehicles used for hauling, scraping, grading and watering. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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)

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
		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.

Compliance Status: P017- Dowe Flats Quarry

S055 - S064, Primary Crusher, Belt Conveyor, Radial Stacker to Stockpiles

Parameter	Limitations	Reported Data
Process Rate	1,050,000 tons/yr	579,293 tons
PM	0.16 ton/yr	0.01 tons
PM ₁₀	0.07 ton/yr	0.0052 tons

Cemex provided the reported data above for the rolling 12-month period ending July 2018.

- 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.

The source monitors processing and conveying of raw materials at the crusher and conveyor system on a rolling 12-month total basis. The reported process rate is in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex conducted a stack test on 5/22&23/2018 on the primary crusher and a representative conveyor baghouse. The results of the test indicate compliance with the lb/ton PM emission factors in the table above and the grain loading limits in NSPS Subpart OOO (0.05 gr/dscm). Reference Method 9 readings were done simultaneously with the test runs and showed opacity of 0. Reference Method 9 readings are conducted semi-annually for as required. Nothing was discovered that indicates the source is not operating and maintaining and equipment and associated control equipment to the extent practicable using good air pollution control practices

for minimizing emissions during periods of start up, periods of shutdown, periods of malfunction, and periods of normal operations. It appears that no article, machine, equipment, or process was used to conceal an emission that would otherwise constitute a violation of an applicable standard. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

2.3 PM and PM₁₀ 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:

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

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.

Cemex is calculating emissions from material throughput on a monthly and 12-month rolling total basis as required. No exceedances of the permit limits were noted in the records provided. The baghouses are operated and maintained in accordance with the requirements in Condition 19. Cemex conducted a stack test on 5/22&23/2018 on the primary crusher and a representative conveyor baghouse. The results of the test indicate compliance with the lb/ton PM emission factors in the table above and the grain loading limits in NSPS Subpart OOO (0.05 gr/dscm). In

the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

The baghouses are operated and maintained in accordance with the requirements in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 2.5 Performance tests shall be conducted every five (5) years to measure the emission rates of filterable PM and PM₁₀ 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:

$$PM = \text{crusher test result (lb/hr)} \times 8,064 \text{ hrs/yr} + 8 \times \text{conveyor test result (lb/hr)} \times 8,064 \text{ hrs/yr}$$

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

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 PM₁₀ 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, PM₁₀ = 1.26×10^{-4} lb/ton, Conveyor (total for transfer points): PM = 1.74×10^{-5} lb/ton, PM₁₀ = 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.

The source conducted a stack test on 5/22&23/2018 on points 026 & 027; within 5 years of the previous test. The protocol was submitted and the Division testing group observed and accepted the test. The results of the performance test shows that the PM and/or PM10 emission rates/factors are not greater than the relevant ones set forth in the permit; the source does not need apply for a modification to this permit. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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))

Nothing was discovered that indicates the source is not operating and maintaining and equipment and associated control equipment to the extent practicable using good air pollution control practices for minimizing emissions during periods of start up, periods of shutdown, periods of malfunction, and periods of normal operations. It appears that no article, machine, equipment, or process was used to conceal an emission that would otherwise constitute a violation of an applicable standard. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 Baghouse Operation and Maintenance	Daily If Required (See Conditions 16.1.1.2 and 20.5.1) See Condition 19
		Certain Operating Conditions - Shall not exceed 30%			
PM Emission Control Plan	3.5			Inspection	Weekly

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

Compliance Status: 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	Limitations	Reported Data
Process Rate Front End Loader	1,050,000 tons/yr	579,293 tons
	4,170 tons/day	2,147 tons/day
Process Rate Iron Containing Material	50,000 tons/year	0
PM	15.5 tons/yr	8.17 tons
PM ₁₀	7.0 tons/yr	3.68 tons
	53 lbs/day	27.27 lbs/day

Cemex provided the reported data above for the rolling 12-month period ending July 2018. Magnetite has replaced iron slag as the iron source for the kiln; therefore, no iron slag has been stored or handled

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 PM₁₀ limit is ensured based on the PM₁₀ 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.

Records provided by Cemex indicate compliance with the process rates and emissions limits stated above. Cemex is maintaining daily, monthly and rolling 12-month total as required. No exceedances of the permit limits have been noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

3.2 PM and PM₁₀ 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:

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

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.

Cemex is maintaining and calculating daily, monthly and rolling 12-month total of particulate emissions as required. No exceedances of the permit limits have been noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex monitors days of operation for these activities to determine daily throughput and emissions. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

The baghouses are operated and maintained in accordance with the requirements in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source performs weekly inspections of the control measures to ensure the emission control measures are in place and effective. The source maintains records of the weekly inspections and results as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Cemex installed a new stacker in 2009 equipped with a baghouse and a second foam system application at the transfer point to the new stacker from the two mile conveyor from Dowe Flats. Foam is first applied to material on the belt at Dowe Flats. The stacker was not operating during the inspection and the drop distance was not observed. The stacker is equipped with a “tattle-tail” sensor that maintains the stacker’s height above the stock pile and has a water spray bar to control particulate emissions at the discharge. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

The transfer points are shrouded and a dust collector capture fugitive dust and periodically release the collected material back onto the conveyor belt before the water spray nozzles. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

No material handling was observed during the inspection. The material transported during previous inspections contained adequate moisture to control emissions. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

A line is marked on the back of the primary crusher indicating the maximum drop height into the crusher. The equipment operator has been observed loading material into the hopper during previous inspections and the drop distance was minimized. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

No visible emissions were observed from the operation of the loader. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

The vacuum sweeper vehicle was observed on site during the inspection and no visible emissions were observed from vehicle use on the paved areas. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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)

Wind monitoring data and daily equipment operation logbooks are maintained onsite and equipment is suspended during high wind events. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Cemex is using a wind speed monitor mounted at the top of the primary crusher building at Dowe Flats to continuously record wind speeds. The data acquisition system continuously monitors wind velocity and automatically notifies the control room operator when the wind speed exceeds 30 mph. The control room's computer monitors have been modified to include a visual alarm to notify operators of high wind. The anemometer was replaced in 2008 and routine calibrations are performed semiannually. Wind speed and equipment shut down records are maintained onsite; equipment and activities are shut down when the wind speed exceeded 30 mph. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 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.

No visible emissions in excess of 20% opacity and no off-property transport were noted during the inspection. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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) See Condition 19
		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	

**Compliance Status: S002 - Primary Crusher at Plant Site
S004 - Surge Silo**

Parameter	Limitations	Actual Data
Material Throughput	No limit	579,293 tons/yr
Crusher	PM	0.29 tons
	PM ₁₀	0.29 tons
Surge Silo	PM	0.008 tons
	PM ₁₀	0.008 tons

Cemex provided the reported data above for the rolling 12-month period ending July 2018. Source is in compliance with calculating and reporting of monthly and annual production throughput values.

- 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.

Cemex is recording monthly and annual raw material throughput as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is calculating emissions using the raw material throughputs and the emission factors in the table above, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

P002 - Raw Materials Drying

AIRs pt 002: S005 Raw Materials Dryer

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Operating Hours	5	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)
PM ₁₀		22.8 tons/year and 6.5 lbs/hour		Recordkeeping and Calculation	Monthly
				Baghouse Maintenance and Operation CAM	See Condition 5.6.1 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 Monthly
NO _x		13.9 tons/year			
CO		57.3 tons/year			
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)

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
		Certain Operating Conditions - Shall not exceed 30%		Baghouse Maintenance and Operation	See Condition 19
RACT – VOC	5.9	Process Design		Certification	Annually
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

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

Compliance Status: P002 - Raw Materials Drying (S005)

Parameter	Limitations	Reported Data
Operating Hours	7000 hrs	4,405hrs
Dryer Feed	1,050,000 tons/yr	579,293 tons
	160 tons/hr	134.59 tons/hr
Natural Gas Fuel	No limit	122,165 mscf
Coal Fuel	1.4 tons/hr	0.0 tons/hr
Dryer Heat Input	210,000 mmBtu/yr	133,912 MMBtu
PM	22.8 tons/yr	6.38 tons
PM ₁₀	22.8 tons/yr	5.36 tons
	6.5 lbs/hr	1.11 lbs/hr
SO ₂	36.7 tons/yr	0.04 tons
NO _x	13.9 tons/yr	4.45 tons
VOC	144.8 tons/yr	20.24 tons

CO	57.3 tons/yr	0.14 tons
Lead	1.6 tons/yr (3200lbs)	0.0002 lbs

Cemex provided the reported data above for the rolling 12-month period ending July 2018. The source conducted oHAP testing 2/23/2018 that showed 7.28 ppmvd, below the 12.0 ppmvd limit.

- 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.

Cemex is recording operating hours, feed rates and fuel consumption as required. No exceedances of the permit limits were noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is recording operating hours, feed rates and fuel consumption as required. No exceedances of the permit limits were noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex reported that natural gas was the only fuel supply used for the dryer during the inspection period. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is tracking the heat input to the dryer monthly and rolling 12-month total, the heat content of the fuel is provided quarterly, and records reviewed indicate no exceedances of the permit limits. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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 be used to determine the heat content and weight percent sulfur provided that the sampling and analysis was performed using the appropriate ASTM methods.

Cemex is tracking the heat input to the dryer monthly and rolling 12-month total, the heat content of the fuel is provided quarterly, and records reviewed indicate no exceedances of the permit limits. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

5.6 PM and PM₁₀ 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 PM₁₀)). 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 PM₁₀ emission limit shall be assessed by comparing the lb/hr PM₁₀ 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). 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	

¹The 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.

²These 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 PM₁₀ 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.

Cemex is calculating emissions on a monthly and a rolling 12-month total basis as required. No exceedances were noted in the records provided. The source conducted PM and PM10 testing on 2/23/2018 that resulted in new emission factors of 2.35 lbs/hr for PM and 1.11 lbs/hr for PM10. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 5.7 SO₂, 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 SO₂, 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	

¹The 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.

²These 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 SO₂ emission limitations in Conditions 5.13.1.1 and 5.13.1.2 (Regional Haze NO_x and SO₂ limits), compliance with the NO_x and SO₂ 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 SO₂ monitoring) indicates compliance with the PM emission limitations in Conditions 5.13.1.1 and 5.13.1.2 (Regional Haze NO_x and SO₂ limits).

Cemex performed the previous stack test for lead, sulfur dioxide, nitrogen oxides, carbon monoxide, and volatile organic compounds on 6/14/2016. A VOC test will be required by 12/14/2018 and lead, sulfur dioxide, nitrogen oxides and carbon monoxide testing will be required by 6/14/2021. Cemex is calculating emissions on a monthly and a rolling 12-month total basis as required. No exceedances were noted in the records provided during the inspection. In the

absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

The raw materials dryer is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

5.9 This source shall utilize Reasonably Available Control Technology (RACT) for VOC emissions (Colorado Regulation No. 7, I.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.

No modifications have been made to the dryer's operation or design. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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))

See Condition 22.

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

See Condition 23.

- 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.

See Condition 22.

- 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 SO₂ 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. SO₂ – July 1, 2017
- c. PM - April 17, 2014 (note that the PM emission limit is included in Condition 5.6)

5.13.3 SO₂ 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 Number 3, 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 SO₂ 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 SO₂ 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)

The source maintains records of emissions on a 12-month rolling total basis. The source is using the emission factors identified in 5.7.2. The reported rolling 12 month total production is in the table above. NO_x & SO₂ testing was required to be completed between 1/1/2017 and 8/30/2017. The most recent testing of NO_x & SO₂ from the materials dryer was completed 6/14/2016. It should be noted that the source provided a Regional Haze Final Determination letter dated

10/1/2013 from the Division's SIP Development Supervisor. The Final Determination response letter from the Division identifies the testing deadline for NOx and SO2 stack tests to "demonstrate compliance" on the "Dryer no later than July 1, 2017". In response to this letter and in effort to meet the RH deadline requirements, CEMEX submitted a Division-accepted protocol and conducted compliance NOx and SO2 emissions testing on June 14, 2016, which was observed by the Division. The source failed to complete testing of NOX & SO2 from the materials dryer between 1/1/2017 and 8/30/2017. Enforcement discretion is recommended for this issue because the source was taking action based on the Final Determination response letter from the Division's SIP Development Supervisor and because the testing was completed only about 6.5 months early. This was not reported on the SAR because the source was operating under the notion that the 6/14/2016 test satisfied this condition. (Not In Compliance)

6. P003 - Secondary Crushing

AIRS pt 003: Secondary Crushing and Screening (vents to S001) and S003 - #4 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) See Condition 19
		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	

**Compliance Status: P003 - Secondary Crushing
S001 - Crusher and Screen
S003 - #4 Belt Transfer**

Parameter		Limitations	Reported Data
Material Throughput		No limit	579,293 tons
Screening & Crushing	PM	No limit	0.09 tons

	PM ₁₀	No limit	0.09 tons
Silo & Belt Transfer	PM	No limit	0.008 tons
	PM ₁₀	No limit	0.008 tons

Cemex provided the reported data above for the rolling 12-month period ending July 2018. The emissions calculations for PM and PM₁₀ are based on the emission factors stated in the permit and the actual material throughput.

- 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.

Cemex is tracking raw material throughput on a monthly and annual basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is using the correct emission factor to calculate PM and PM₁₀ emission from the Secondary Crusher activities on a monthly and annual basis as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

Wind speed and equipment shut down records are maintained onsite. This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 x 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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
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) See Condition 19
		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	
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	

**Compliance Status: P004 - Raw Materials Storage
S006 through S008 - Raw Materials Storage Silos**

Parameter		Limitations	Reported Data
Material Throughput		No limit	579,293 tons
Raw Material Storage (S006, S007, S008)	PM	No limit	0.002 tons
	PM ₁₀	No limit	0.002 tons

Cemex provided the reported material throughput data above for the rolling 12-month period ending July 2018. Particulate emissions are calculated on a monthly and annual basis as required. The emissions calculations for PM and PM₁₀ are based on the emission factors stated in the permit and the actual material throughput.

- 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.

Cemex is tracking raw material throughput on a monthly and annual basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is using the correct emission factor to calculate PM and PM₁₀ emission from the Raw Material Storage areas on a monthly and annual basis as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

See Condition 22.

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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
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) See Condition 19
		Certain Operating Conditions – Shall not exceed 30%		Baghouse Maintenance and Operation	
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)			

Compliance Status: P005 - Raw Mill Grinding
S010 - Raw Mill
S011 - Raw Mill Auxiliary (Separator)
S012 - Raw Mill Weigh Feeder
S013 - Iron/Silica Silo

Parameter		Limit	Reported Data
Process Rate		No limit	570,696 tons
S010	PM	No limit	3.42 tons
	PM ₁₀	No limit	3.08 tons
S011	PM	No limit	9.13 tons
	PM ₁₀	No limit	9.13 tons
S012	PM	No limit	5.42 tons
	PM ₁₀	No limit	5.42 tons
S013	PM	No limit	0.04 tons
	PM ₁₀	No limit	0.04 tons

Cemex provided the Reported Data above for the rolling 12-month period ending July 2018. The emissions calculations for PM and PM₁₀ are based on the emission factors stated in the permit and the actual material throughput.

- 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.

Cemex is tracking raw material throughput on a monthly and annual basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is using the correct emission factor to calculate PM and PM₁₀ emission from the Raw Mill point sources S010, S011, S012, and S013 on a monthly and annual basis as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

See Condition 22.

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

See Condition 23.

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 x 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) See Condition 19
		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	
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	

**Compliance Status: P006 - Homogenizing and Blending
S014 - Homogenizing Silo**

S015 - Kiln Feed Silo

Parameter		Limit	Reported Data
Process Rate		No limit	570,696 tons
S014	PM	No limit	0.008 tons
	PM ₁₀	No limit	0.008 tons
S015	PM	No limit	0.008 tons
	PM ₁₀	No limit	0.008 tons

Cemex provided the Reported Data above for the rolling 12-month period ending July 2018. The emissions calculations for PM and PM₁₀ are based on the emission factors stated in the permit and the actual material throughput.

- 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.

Cemex is tracking raw material throughput on a monthly and annual basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 9.2 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 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.

Cemex is using the correct emission factor to calculate PM and PM₁₀ emission from the Homogenizing and Blending silos on a monthly and annual basis as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

See Condition 22.

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	Annually Monthly

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
				Baghouse Operation and Maintenance	See Condition 19
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 Method 9	Continuously
		Certain Operating Conditions - Shall not exceed 30%			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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
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
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	

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Prohibition on Netting Credits or Offsets from Required Controls	10.21			See Condition 10.21	
Regional Haze Requirements	10.22	<p>Kiln: Opacity shall not exceed 20%. NO_x – 255.3 lbs/hr, on a 30-day rolling average and 901.0 tons/year SO₂ – 25.3 lbs/hr, on a 12-month rolling average and 95 tons/yr</p>		COMS, CEMS	Continuous

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

²40 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.

**Compliance Status: P007- Kiln, Calciner (S016)
 P008 - Clinker Cooler (S018)**

Parameter		Limitations	Reported Data
Clinker Production		No limit	355,435 tons
Operating Hours		8,064 hrs/yr	6,352 hrs
Kiln Feed Rate		120 tons/hr	86.91 tons/hr
		967,680 tons/yr	566,401 tons
Fuel	Natural Gas	2,438 Mmscf/yr	1,347 Mmscf
	Coal	113,945 tons/yr	27,318 tons
PM from Kiln		133 tons/yr	5.29 tons
PM ₁₀ from Kiln		133 tons/yr	5.29 tons
NO _x		2649.0 tons/yr	279.60 tons
NO _x (Regional Haze)		901.0 tons/yr	

CO	396.0 tons/yr	255.14 tons
SO ₂	1340.0 tons/yr	12.52 tons
SO ₂ Facility Wide Limit	7.0 lbs/ton material	3.628 (7/20/2017)
SO ₂ (Regional Haze)	95 tons/yr	12.52 tons
VOC	138.0 tons/yr	1.13 tons/yr
HCl	No limit	6.77 tons/yr
Lead	4.4 tons/yr	0.00148 tons/yr

Cemex provided the Reported Data above for the rolling 12-month period ending July 2018. The emissions calculations are based on the continuous emission monitoring systems and emission factors derived from stack tests and stated in the permit.

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

Cemex is recording the daily production rates, kiln feed rates, raw material consumption and clinker production rates. The daily production rates are compiled into monthly and annual records as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is tracking operating hours daily and maintaining monthly and annual records as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is tracking operating hours and the kiln feed rate as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex uses both coal and natural gas as fuel sources in the kiln and has incorporating used tires as an alternative fuel source. No TDF or pet coke has been burned in the kiln since before March 2008. Cemex tracks kiln fuel consumption and kiln feed rates on an hourly, daily, monthly and rolling 12-month total basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

No tire derived fuels (TDF) or petroleum coke/coal blends have been used during the inspection period. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

No tire derived fuels (TDF) or petroleum coke/coal blends have been used during the inspection period. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 10.5 Emissions of PM and PM₁₀ **from the kiln (P007)** shall not exceed the limits listed in the above summary table. (Construction Permit 12BO444-2). Compliance with the PM and PM₁₀ 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 = PM₁₀) 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

Cemex conducts annual performance tests on the kiln and uses the emission factors from the most recent performance test to calculate emissions as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 10.6 Annual emissions of PM and PM₁₀ **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 PM₁₀ emission factors (in lbs/ton clinker) from the most recent performance test (assumes PM = PM₁₀) 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 PM₁₀ 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.

Cemex is calculating PM and PM₁₀ emissions from the clinker cooler using the appropriate emission factors as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 10.8 The following requirements apply when TDF is 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".

No tire derived fuels (TDF) have been used during the inspection period. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

During the inspection no visible emissions were observed. No spray tower blasting with dynamite occurred during the inspection period. A straightening vane added to the spray tower has changed the airflow inside the tower reducing buildup and the need for blasting. All cleaning of

the spray tower was conducted using cardox or spray cannons as reported in quarterly reports received by the Division. Cemex is monitoring opacity during startup, shutdown, process modifications and control equipment cleaning with the COMS, as required. Cemex submits quarterly CEMS reports, as required. The source reported the following opacity events.

The source reported a malfunction on Aug. 25, 2017, 1:36 p.m.-1:41 p.m.: A six-minute kiln opacity average was recorded at 41.23 percent, exceeding the limit during a startup/shutdown operation. The kiln malfunction resulted in a high vacuum pressure that was unintentionally created within the baghouse. Plant air pressure momentarily went down due to a PLC rack fault that shut down automation equipment across the plant, including the pneumatically activated dampers to the baghouse. As a result, the dampers inadvertently closed at the inlet to the baghouse, which ultimately resulted in high opacity spikes at the main kiln as elevated particulate matter was vacuumed from the baghouse by the high pressure developed at the baghouse. The power was restored to the PLC, which then restored plant air and pneumatic activated air damper to the baghouse. This is considered to be a valid malfunction because an array overrun caused the PLC fault.

The source reported a malfunction on Sept. 13, 2017, 1:44 p.m.-1:48 p.m.: A six-minute average opacity of 23 percent registered at the opacity monitor for the kiln stack following maintenance of one of the bags at Compartment No. 73. Further inspection of the compartment indicated that a port was dislodged, allowing dust to bypass the bags. Compartment No. 73 was immediately taken offline for the second time, and the port was properly secured. This lowered the opacity readings to compliance level. Proper baghouse operations and work checks were reviewed with the maintenance, production and environmental departments. This is not considered to be a valid malfunction because operator error improperly secured the port resulting in the opacity exceedance.

(Not In Compliance)

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 (NO_x) 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.

The source monitors NO_x emissions from the kiln with a certified CEMS, as required. Cemex submits quarterly CEMS reports, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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
 $K = 7.267 \times 10^{-8}$ (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.

The source monitors CO emissions from the kiln with a certified CEMS, as required. Cemex submits quarterly CEMS reports, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

10.12 Emissions of SO₂ **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 SO₂ annual emission limit shall be monitored using the SO₂ 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 SO₂ 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 SO₂ 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 = SO₂ concentration, dry basis, ppm
 Q_h = volumetric flow rate, wet basis, scfm
 $K = 1.660 \times 10^{-7}$ (lb/scf)/ppm
 B_{wo} = gas moisture, %

The resulting SO₂ lb/hr value is then multiplied by the unit operating time for that hour to produce a SO₂ lbs value. The hourly SO₂ lbs values shall be used as follows:

10.12.1.1 For use in assessing compliance with the facility wide SO₂ limit in Condition 10.13, hourly SO₂ mass emissions (lbs) shall be summed to determine daily SO₂ emissions.

10.12.1.2 For use in assessing compliance with the annual SO₂ emission

limit in Condition 10.12, Hourly SO₂ mass emissions (lbs) shall be summed and divided by 2000 lbs/ton to determine monthly SO₂ 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 SO₂ emission limitation in Condition 10.22.1.2 (Regional Haze SO₂ limits), compliance with the SO₂ 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 SO₂ monitoring) indicates compliance with the SO₂ emission limitations in Condition 10.22.1.2 (Regional Haze SO₂ limits).

The source monitors SO₂ emissions from the kiln with a certified CEMS, as required. Cemex submits quarterly CEMS reports, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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 SO₂ 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)

The source monitors SO₂ emissions from the kiln with a certified CEMS. The source provided a Facility Wide Limit Sulfur dioxide emissions pounds per ton of material (including fuel) value after the inspection. The highest 24-hour period of daily NO_x pounds per ton of material

(including fuel) processed emissions noted during the inspection period is in the table above. (In Compliance)

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.

The source performs annual stack testing to determine VOC emissions. The source uses the results of the stack testing to calculate VOC emissions from the main kiln stack. No TDF have been used during the inspection period. The most recent stack tests were conducted on 8/31/2016 and 8/17/2017. The source conducted a stack test 8/30/2018 that was rejected by the Division because the fuel during the test was natural gas but should have been done on coal; a retest was requested. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source reported the most recent stack tests were conducted on 8/31/2016 and 8/17/2017 and the emission factors from the most recent performance test are used in a rolling twelve month total. The source conducted a stack test 8/30/2018 that was rejected by the Division because the fuel during the test was natural gas but should have been done on coal. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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, SO₂, NO_x (including diluent gas either CO₂ or O₂), 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 SO₂, 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.

The source maintains and operates continuous monitor systems to monitor and track emissions of NO_x, SO₂ (including diluent gas), CO, opacity and flow from the kiln and opacity from the clinker cooler exhaust stream. The CEMS and COMS meet the requirements in Condition 18. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

¹The 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.

The source reported the most recent stack test for lead from the kiln was conducted on 8/31/2016 and the emission factors from the most recent performance test are used in a rolling twelve month total. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 10.17 This source shall utilize Reasonably Available Control Technology (RACT) for VOC emissions (Colorado Regulation No. 7, I.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.

The source operates the kiln and clinker cooler as designed. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

See Condition 22.

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

See Condition 23.

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 is 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)

The source operates a non-selective catalytic reduction unit. The source reported the control devices is inspected, monitored, maintained / renewed, and operated as per the manufacturers’ recommendations, or maintained in accordance with good air pollution control practices to ensure the satisfactory performance of the devices. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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)

This condition is informational only, it does not have any actionable items nor does it require the source to provide any records to demonstrate compliance. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 SO₂ 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. SO₂ – December 31, 2017
- c. PM – May 15, 2014

10.22.3 SO₂ 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 SO₂, NO_x and diluents, if diluent is required. The CEMS shall be used to determine compliance with the SO₂ 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 SO₂ 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 NO_x and SO₂ 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))

The source maintains and operates continuous monitor systems to monitor and track emissions of NO_x, SO₂ (including diluent gas), opacity and flow from the kiln. During the inspection no visible emissions were observed. Cemex is monitoring opacity during startup, shutdown, process modifications and control equipment cleaning with the COMS, as required. Cemex submits quarterly CEMS reports, as required. The source reported the following opacity events.

The source reported a malfunction on Aug. 25, 2017, 1:36 p.m.-1:41 p.m.: A six-minute kiln opacity average was recorded at 41.23 percent, exceeding the limit during a startup/shutdown operation. The kiln malfunction resulted in a high vacuum pressure that was unintentionally created within the baghouse. Plant air pressure momentarily went down due to a PLC rack fault that shut down automation equipment across the plant, including the pneumatically activated dampers to the baghouse. As a result, the dampers inadvertently closed at the inlet to the baghouse, which ultimately resulted in high opacity spikes at the main kiln as elevated particulate matter was vacuumed from the baghouse by the high pressure developed at the baghouse. The power was restored to the PLC, which then restored plant air and pneumatic activated air damper to the baghouse. This is considered to be a valid malfunction because an array overrun caused the PLC fault.

The source reported a malfunction on Sept. 13, 2017, 1:44 p.m.-1:48 p.m.: A six-minute average opacity of 23 percent registered at the opacity monitor for the kiln stack following maintenance of one of the bags at Compartment No. 73. Further inspection of the compartment indicated that a port was dislodged, allowing dust to bypass the bags. Compartment No. 73 was immediately taken offline for the second time, and the port was properly secured. This lowered the opacity readings to compliance level. Proper baghouse operations and work checks were reviewed with the maintenance, production and environmental departments. This is not considered to be a valid malfunction because operator error improperly secured the port resulting in the opacity exceedance.

(Not In Compliance)

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.

The source maintains and operates COMS to monitor and track opacity from the kiln. The COMS meet the requirements in Condition 18. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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			

Parameter	Permit Condition Number	Limitations		Emission Factors	Monitoring	
					Method	Interval
		P011	Overall Fresh Feed to Mill: 631,600 tons/year 4,500 tons/day 15,000 tons/year limestone			
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			
			PM ₁₀ : 8.65 tons/year 48 lbs/day			
					Recordkeeping and Calculation	Monthly

Parameter	Permit Condition Number	Limitations		Emission Factors	Monitoring		
					Method	Interval	
		P012	PM: 21.9 tons/year		Performance Tests	Every Five (5) Years	
			PM ₁₀ : 10.95 tons/year 107 lbs/day				
		P013	PM: 12.3 tons/year				
			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
			PM ₁₀ : 0.92 ton/year 78 lbs/day				
0.3 mile one way haul distance							
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) See Condition 19	
		Certain Operating Conditions - Shall not exceed 30%					Baghouse Maintenance and Operation
Fugitive Particulate Emissions	11.6				Inspection	Weekly	

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
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	

Compliance Status: P009 - Clinker/Gypsum Silos and Weigh Feeders
P010 - Sheltered Clinker Storage Stockpile with Underground Reclamation
P015 - Outdoor Clinker Storage, and Handling of Clinker with Front End Loaders (formerly 10A)
P011 - Cement Finish Mill and Bucket Elevator/Auxiliaries
P012 - High Efficiency Separator (Classifier) and Baghouse Collector
P013 - Cement Storage Silos/Packhouse/Loadout

Parameter	Source	Limitations	Reported Data
Process Limits	P009	600,000 tons/yr	348,079 tons
		4,000 tons/day	1,044 tons/day
	P010	600,000 tons/yr	13,648 tons
		5,500 tons/day	1,276 tons/day
	P015	180,000 tons/yr	35,544 tons
		5,500 tons/day	175.55 ton/day
	P011	631,600 tons/yr	348,079 tons
		4,500 tons/day	1,044 tons/day
		15,000 tons/yr (limestone)	2,128 tons
	P012	631,600 tons/yr	378,311 tons
		4,500 ton/day	1,136 tons/day
		161,280 tons/yr (SEP baghouse)	147,840 tons
	P013	681,600 tons/yr	375,134 tons
		4,500 ton/day	1,396 tons/day
Operating Hours		8,064 hrs/yr	6,352 hrs

Parameter	Source	Limitations	Reported Data
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PM	P009	9.3 tons/yr	0.39 tons
	P010	21.96 tons/yr	1.74 tons
	P011	17.05 tons/yr	0.17 tons
	P012	21.9 tons/yr	2.37 tons
	P013	12.3 tons/yr	0.10 tons
	P015	2.05 tons/yr	1.35 tons
PM ₁₀	P009	4.65 tons/yr	0.16 tons
		52 lbs/day	1.04 lbs/day
	P010	10.98 tons/yr	1.74 tons
		201 lbs/day	11.33 lbs/day
	P011	8.65 tons/yr	0.08 tons
		48 lbs/day	5.63 lbs/day
	P012	10.95 tons/yr	4.21 tons
		107 lbs/day	27.39 lbs/day
	P013	6.2 tons/yr	0.02 tons
		43 lbs/day	0.14 lbs/day
	P015	0.92 tons/yr	0.12 tons
		78 lbs/day	0.87 lbs/day

Cemex provided the Reported Data above for the rolling 12-month period ending July 2018. The emissions are calculated based on daily, monthly and yearly material throughputs.

- 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.

Cemex is tracking the amount of clinker handled daily, monthly, and rolling 12-month total as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is tracking the hours of operation on a daily, monthly, and rolling 12-month total as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Days of operation are used to determine daily throughput and emissions. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 11.4 PM and PM₁₀ 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 PM₁₀ 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 PM₁₀ 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.

For all but BH 725-28 (S069/SEP baghouse): The PM and PM₁₀ 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 PM₁₀ 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 725-28 (S069/SEP baghouse): The PM and PM₁₀ 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 PM₁₀ 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 PM₁₀ emission limitations shall be monitored by dividing the monthly PM₁₀ 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 PM₁₀. 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 PM₁₀ 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 PM₁₀ 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.

Monthly PM and PM10 emissions are calculated using the appropriate emission factors. No exceedances of the permit limits have been noted. The source conducts performance tests to measure the emission rates of filterable PM and PM10 in accordance with the appropriate EPA Test Methods. The source tracks VMT for use in the emission calculations. Baghouses are not operated and maintained in accordance with the requirements in Condition 19. During the inspection it was observed that the east-facing man-access door at the top of A-frame (P010) was open and the baghouse controlling the area (BH 525-17) had a differential pressure (DP) that was out of the acceptable range identified (see photo below). The photohelic reading was 0" and responded by moving during the baghouse cleaning cycle indicating that it was working. Fugitive emissions were observed and the source shutdown the process once the problem was noticed; no Method 9 was performed. After the inspection the source provided a follow-up stating a proper seal to the door had been achieved. The source also stated the baghouse hopper was found to be full, the unit was emptied and normal operation was resumed. During the inspection baghouse BH 525-17 was not operating in accordance with the requirements in Condition 19. (Not In Compliance)



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

See Condition 20.

- 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 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.

No opacity or off property transport was observed from the outdoor clinker area. The source performs weekly inspections of the control measures to ensure the emission control measures are in place and effective. The source maintains records of the weekly inspections and results as required.

The source reported on March 15, 2017, 8 a.m.-10 a.m. during normal operation: The sweeper was down for two hours because the operator assigned for the day needed medical attention, and the substitute operator was tied up cleaning the spray tower until 10 a.m. Water truck operations, however, generally covered areas around P009, P010, P011, P012, P013 and P015. Non-availability of an operator is not a valid exemption from the sweeping requirement. Production department supervisors and truck operators were reminded to ensure that the water truck keeps wet the paved areas normally covered by the sweeper when the sweeper is not operating.

The source reported on Jan. 7, 2018, 11:23 a.m.-6 p.m.; Jan. 8, 2018, 6:40 a.m.-6 p.m.; Jan. 9, 2018, 6 a.m.-12 p.m.: The water truck was operated for less than 12 hours even as the crushing/drying (O2) system operated.

The source failed to operate a powered sweeper during day shift for 12 hours and the source failed to operate the plant based water truck on full-time basis, 12 hours a day. (Not In Compliance)

- 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)).

No opacities in excess of 10% have been documented from sources subject to this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

See Condition 23.

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.

See Condition 22.

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		Baghouse	See Condition 19

		12.3		Maintenance and Operation	
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) See Condition 19
		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	
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	

**Compliance Status: 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		Limitations	Reported Data
S019	Coal Feed	No limit	25,114.2 tons
	PM	No limit	0.0004 tons
	PM ₁₀	No limit	0.0004 tons
S020	PM	No limit	0.0004 tons
	PM ₁₀	No limit	0.0004 tons
S025	PM	No limit	0.0004 tons
	PM ₁₀	No limit	0.0004 tons

Cemex provided the Reported Data above for the rolling 12-month period ending July 2018. The emissions are calculated based on daily, monthly and yearly material throughputs.

- 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.

The source is tracking emissions on a monthly and annual basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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 x 10 ⁻⁵ lb/ton	2.9 x 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 x 10 ⁻⁵ lb/ton	2.9 x 10 ⁻⁵ lb/ton		
Limestone	2.9 x 10 ⁻⁵ lb/ton	2.9 x 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.

The source is calculating emissions using the raw material throughputs and the emission factor below, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Compliance with the PM limit is presumed because baghouses are operated and maintained in accordance with the requirements specified in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

See Condition 22.

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

Parameter	Permit Condition Number	Limitations		Emission Factors	Monitoring	
					Method	Interval
		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
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)	

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
ts		O & M Plan Requirements		See Conditions 22.10 and 22.11	

Compliance Status: P007A - Handling and Processing of CKD And Raw Material Waste Dust
S001 - Waste Dust Silo
S066 - Cement Silo A5
S067 - CKD Loading Spout
041 - Pug Mill
042 - Truck Hauling to Lyons Quarry

Parameter		Limitations	Reported Data
Process Rate	S001, S066, S067	133,000 tons/yr	25,835 tons
		600 tons/day	64.25 tons/day
	041	133,000 tons/yr	25,835 tons
		600 tons/day	64.25 tons/day
	042	173,403 tons/yr	337.73 tons
		800 tons/day	17.74 tons/day
PM	S001, S066, S067	19.95 tons/yr	2.78 tons
	041	2.66 tons/yr	0.15 tons
	042	5.50 tons/yr	0.01 tons
PM ₁₀	S001, S066, S067	9.98 tons/yr	1.27 tons
		69.5 lbs/day	9.31 lbs/day
	041	2.66 tons/yr	0.15 tons
		24.00 lbs/day	0.57 lbs/day
	042	2.50 tons/yr	0.005 tons
		23 lbs/day	0.02 lbs/day
Hours of Operation	S001	8064 hours/yr	6,352 hours

Cemex provided the Reported Data above for the rolling 12-month period ending March 2017. The emissions are calculated based on daily, monthly and yearly material throughputs.

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.

Cemex is maintaining the number of operating days per month and the process rates on a daily, monthly, and rolling 12-month total basis, as required. No exceedances of the permit limits are noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

13.2 PM and PM₁₀ 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 PM₁₀ 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 PM₁₀ limitations shall be monitored by dividing the monthly PM₁₀ emissions by the number of days the unit was operated.

Control efficiencies of 95% for PM and 80% for PM₁₀ 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 PM₁₀ 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 PM₁₀ 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 PM₁₀ 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 PM₁₀ emission factor shall be the baghouse grain loading specified in the table below.

Monthly emissions of PM and PM₁₀ 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 PM₁₀ limitations shall be monitored by dividing the monthly PM₁₀ emissions by the number of days the unit was operated.

Cemex is using the above emission factor and control efficiencies to calculate PM and PM₁₀ emissions from the pug mill and pelletizing machines which appeared to be operated and maintained according to manufacturer's recommendations and good engineering practices. Cemex is using the maximum design flow rate of the control devices and emission rates determined from a stack test conducted on 4/21/2016 to calculate the emissions and demonstrate compliance with the permit limits of the silos and spout loading. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 PM₁₀. 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 PM₁₀ 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.

A stack test was performed on BH 225-3 on 4/7/2011 demonstrating compliance with the PM grain loading (gr/dscf) limits. A stack test was performed on BH 525-28 on 4/21/2016 demonstrating compliance with the PM grain loading (gr/dscf) limits. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 PM₁₀ limitations shall be monitored by dividing the monthly PM₁₀ 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.

Cemex is calculating PM and PM₁₀ emissions from truck hauling vehicle miles traveled using the appropriate emission factors and control efficiencies. Cemex is applying the control measures of 13.7.1 as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Differential pressures are recorded weekly to determine proper operation and ensure compliance with the emissions limit. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Cemex is maintaining a rolling 12-month total of hours of operation from these sources. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is maintaining the number of operating days per month and the process rates on a daily, monthly, and rolling 12-month total basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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))

No opacities in excess of 10% have been documented from sources subject to this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

See Condition 20.

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 hygroscopic materials to minimize fugitive emissions.
- b. Signage or berms shall be used to delineate the 3 acre active disposal area.

Cemex monitors wind speed continuously. Records of suspended operations during high wind events are maintained. Cemex operates an automated sprinkler system set to water for 10 minutes every two hours. The sprinklers appear to be effectively controlling emissions from the disposal site. No fugitive dust was observed during the inspection. Cemex operates a water truck at the plant following the above requirements. Water truck is operated each day except when there is precipitation or freezing or when repairs on the vehicles are required. Water trucks have been observed watering the active disposal site during inspections when sprinklers were not in use. Cemex has reduced the size of the active disposal to less than approximately one acre and the remaining area in the quarry was capped with material (waste shale) to control fugitive emissions. Cemex treats unpaved haul roads with calcium chloride several times per year. (In Compliance)

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 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.

No visible emissions issues were noted from these sources and no off-property transport was observed during the inspection. The source has not been required to submit a written plan to the Division for the control of fugitive particulate emissions from a source that is a source of activity which is subject to Section III.D. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

Only C Pit is used for CKD and Beneficiation Dust disposal. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

See to Condition 23.

- 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.

See Condition 22.

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.

Records provided by Cemex show the source is tracking the amount of materials hauled, number of vehicle miles traveled per year for both empty and loaded trucks, and calculating the tons of particulate matter. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 14.2 For APEN reporting purposes, annual PM and PM₁₀ 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.

Cemex is calculating emissions on an annual basis as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.)

Cemex performs daily visible emission observations as part of their daily walk through and CAM requirements and maintains records of all documented observations. Cemex also maintains a record of complaints received by the Division and Boulder County with their response and corrective action. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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 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.

Cemex treats unpaved haul roads with calcium chloride semiannually. Records reviewed during previous inspections indicate the dust suppressant solution has a calcium chloride concentration of 28-45% and treatments were applied twice per year. Watering at Dowe Flats is conducted daily with a dedicated water wagon at the mine to be used when the mine is in operation. There is no indication that fugitive dust from the unpaved haul roads at Dowe Flats was not adequately minimized. The source reported on Jan. 7, 2018, 11:23 a.m.-6 p.m.; Jan. 8, 2018, 6:40 a.m.-6 p.m.; Jan. 9, 2018, 6 a.m.-12 p.m.: The water truck was operated for less than 12 hours even as the crushing/drying (O2) system operated. Cemex is operating a truck wash, as required, and trucks are channeled through the truck wash with barricades after loading with cement. No evidence of vehicle carry out was observed. No fugitive dust issues have been noted since the last inspection requiring the submittal of a fugitive particulate emission control plan. The source failed to operate the plant based water truck on a full time basis, 12 hours a day. (Not In Compliance)

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	15.3			Certification	Annually

Parameter	Permit Condition Number	Limitations	Compliance Emission Factor	Monitoring	
				Method	Interval
System					
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.

**Compliance Status: T001 - Gasoline Storage Tank
3,000-Gallon Capacity**

Parameter	Limitations	Reported Data
Throughput Rate	No limit	9,980 gallons
VOC	No limit	0.06 tons

Cemex is recording fuel throughput and calculating emissions on a monthly and rolling 12-month total basis. Cemex provided the reported data in the table above for the rolling 12-month period ending July 2018.

- 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.

Cemex's gasoline storage tank is equipped with a submerged fill pipe and a vapor return hose that is connected to the tanker truck to capture the vapors displaced by the tank filling procedure. Fuel delivery was not observed during the inspection, however, previous inspections reviewed the standard operating procedure for Cemex employees is to observe the fuel delivery and verify the use of the vapor return lines to minimize emissions. No evidence of gasoline intentionally spilled or allowed to evaporate was observed. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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))

Cemex maintains records of daily inspections for visible emissions from 5 observation points. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

The cold cleaners are operated and maintained according to the requirements above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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, SO₂ and diluent (CO₂ or O₂) 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, SO₂ 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 SO₂ CEMS for 40 CFR Part 63 Subpart LLL HCl limit

18.5.1 The span value for the SO₂ CEMS monitor is the SO₂ 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 SO₂ 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 SO₂ CEMS, including quarterly accuracy determinations for monitors, and daily calibration drift tests. (60.63(f)(5))

The CEMS are installed and maintained in accordance with the requirements in 40 CFR Part 60 as required. Annual RATAs were performed as required. Calibrations are performed daily. The source reported no instances of excessive monitor downtime during the inspection period. COMS

are installed and maintained in accordance with the requirements in 40 CFR Part 60. The source maintains a CEMS/COMS QA/QC plan. No requests for changes have been made by the Division. The COMS DAHS calculates opacity based on 6 minute block periods as required. 1-hour averages are computed as required. The source submitted EERs on-time and did not report any excessive monitor downtime during the inspection period. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

The differential pressure change across the baghouses (kiln and clinker cooler) is monitored continually from the control room. Cemex conducts weekly inspections of the baghouses and all maintenance activities are tracked by work order requests. During the inspection it was observed that the door at the top of A-frame (P010) was open and the baghouse controlling the area (BH 525-17) had a differential pressure (DP) that was out of the acceptable range identified. During the inspection baghouse BH 525-17 was not operating in accordance with the requirements in Condition 19 (See Condition 11.4). (Not In Compliance)

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.

The sources, which are referred to this Condition throughout this permit, are below.

AIRs pt 027: S055, Primary Crusher (Quarry)

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

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

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

AIRs pt 002: S005 Raw Materials Dryer

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

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

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

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

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

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 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

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

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

AIRs pt 050: Cement Rail Car Unloading and Handling System – hopper, screw conveyor and pneumatic transfer system

During the inspection the east-facing man-access door at the top of A-frame (P010) was open and the baghouse BH 525-17 controlling P010 was not operating in accordance with the requirements in Condition 19 (See condition 11.4). Fugitive emissions were observed and the source shutdown the process once the problem was noticed; no Method 9 was performed. During the inspection baghouse BH 525-17 was not operating in accordance with the requirements in Condition 19. (Not In Compliance)

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.

The sources, which are referred to this Condition throughout this permit, are below.

AIRs pt 002: S005 Raw Materials Dryer

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 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

AIRs pt 049: S001 – Waste Dust Silo, S022 – Kiln Return Dust Silo, S066 – Cement Silo A5

The source has submitted testing protocols to the Division prior to the testing and stack tests have been conducted for each emission point as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.0, 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.0, 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 than 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 SO₂ CEMS to establish an SO₂ operating level during your initial and repeat HCl performance tests and monitor the SO₂ 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)(iii)(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 SO₂ emissions using a CEMS in accordance with the requirements of §63.1350(l)(3) (Condition 22.38.1). You must establish an SO₂ 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 §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)(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 SO₂ Monitoring.* If you choose to monitor SO₂ 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 SO₂ 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 SO₂ emissions limit by operating an SO₂ 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 SO₂ concentration (as calculated from the average output) during the 3-hour test must be calculated. You must establish your SO₂ 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 SO₂ 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 SO₂ CEMS measurement scale must be capable of reading SO₂ 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 SO₂ CEMS signal to your HCl concentration corrected to 7 percent O₂ by using the SO₂ CEMS instrument zero, the average SO₂ 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 SO₂ operating limit, you must record the SO₂ CEMS output data for all periods when the process is operating and the SO₂ CEMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the SO₂ 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 SO₂ level exceeds by 10 percent or more your site-specific SO₂ 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 SO₂ 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 SO₂ 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) (Conditions 22.33.1.1 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 have 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, you 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). (63.1350(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 SO₂ 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 SO₂ emissions, monitor SO₂ emissions continuously according to the requirements of §60.63(e) and (f) of part 60 subpart F of this chapter. If SO₂ levels increase above the 30-day rolling average SO₂ 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 SO₂ value conduct an inspection and take corrective action to return the SO₂ 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 SO₂ 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 SO₂ 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). (63.1353(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)

There is no evidence of circumvention. Cemex has submitted the results of all performance tests, opacity readings, startup, shutdown, malfunctions, and semi-annual excess emission reports as required. Source elected to demonstrate THC compliance via oHAP testing as indicated by MACT LLL §63.1349(b)(7). Cemex has conducted several stack tests to demonstrate compliance with the D/F emissions requirements at specific temperatures. The test dates, temperatures, and D/F results are summarized in the table below. The most recent D/F stack test was performed and passed on 2/7/2017. Cemex is performing quarterly calibrations of each thermocouple as required. Cemex has programmed into the FLS control system an automatic shutdown of the kiln when temperatures are approaching the temperature limit at each baghouse to prevent temperature exceedances. Kiln operators receive annual training as required. The source has installed a new sorbent trap based continuous emissions monitoring system for monitoring mercury.

The source reported on July 21, 2017, for ~49 minutes during normal operation: The production operator failed to start injecting carbon and lime at 300 degrees F on baghouse inlet temperature. The DAS started alarming at 295 degrees, as programmed. Temperatures are calculated on a five-minute rolling average. Lime and carbon injection systems were immediately turned on at ~350 degrees F. Emissions limits for mercury and HCl/SO₂ were not exceeded. Interlocks were put in place so that the system will now alarm and not allow the kiln to exceed 290 degrees F without turning on the LIS and ACI. A revision to the O&M Plan was submitted to the division, requesting removal of the temperature condition but is unlikely to satisfy the requirements of the regulation.

The source reported the Six-minute Method 22 observations were not performed on P005 - Raw Mill Dust Collector 325-1 (Stack #SO10); Raw Mill Auxiliary Dust Collector 325-2 (Stack# S011); PO11 - Finish Mill Dust Collector 725-2 (Stack# S036), Finish Mill Auxiliary Dust Collector 725-3 (Stack# S037); and PO1 2 Finish Mill Separator Dust Collectors 725- 10 & 725-11 (Stack # S065).

Explanation of Period of Deviation	Duration/Date (s)
Missed Method 22 on 325-1 DC	11/21/2017 ;
Missed Method 22 on 325-2 DC	11/21/2017; 11/22/2017
Missed Method 22 on 725-2 DC	11/22/2017; 11/24/2017
Missed Method 22 on 725-3 DC	11/22/2017; 11/24/2017
Missed Method 22 on 725-10, 11	11/22/2017; 11/24/2017

The source reported on Jan. 23, 2018, 10 p.m.-11:59 p.m.: the six-minute Method 22 observation was not performed on the finish mill dust collector 725-2 and finish mill auxiliary dust collector 725-3 when the finish mill operated at approximately 10 p.m.

The source failed to turn on the sorbent and activated carbon systems that control hazardous air pollutants while operating at the time the gas stream at the inlet to the baghouse or ESP reached 300 degrees Fahrenheit. The source failed to monitor opacity by conducting daily visible emissions observations of the mill sweep and air separator PM control devices (PMCD) in accordance with the procedures of Method 22. (Not In Compliance)

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/PM₁₀ 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	
S016 – Precalciner Kiln	Condition 10.5 - 133 tons/year PM/PM ₁₀ (Kiln) Condition 10.16 - 4.4 tons/year Pb (Kiln)

Source	Condition/Limit
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**Error! Reference source not found.** 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 or 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).

The following CAM events were reported.

On Jan. 6, 2017, and Jan. 27, 2017, the east loading spout dust collector registered differential pressure reading above 7 inches water. This was due to the cold weather freezing air lines. The differential pressure would lower to below 7 inches water as ambient temperature increased above the freezing level. Follow-up inspection by maintenance crew indicated that tubing lines were broken, and the magnehelic was defective. Maintenance conducted an inspection to assess the root cause of the problem. Tubing lines and the DP monitor were replaced.

On Feb. 24, 2017, the bulk loader reported that differential pressure reading for A5 dust collector was at 7 inches water. Maintenance conducted an inspection to assess the root cause of the problem. Tubing links were replaced and cleaned out, and the air pressure was adjusted.

On Feb. 9, 2017, the differential pressure reading at 825-1 dust collector for A13 cement silo was at 10 inches water at about 8:50 a.m. Maintenance conducted an inspection to assess the root cause of the problem but found none with DP returned to within operating level. Weekly preventative maintenance inspections continued, as required by the O&M plan.

March 13, 2017, the differential pressure reading at the Raw Mill Feeder (325-3) Dust Collector was missed when the equipment came back on after 13:50 on March 13, 2017. Production department personnel tasked to perform daily Title V compliance monitoring were retrained on changes in permit requirements that took effect on March 1, 2017. The SOP was updated, requiring the night shift supervisor to check whether or not relevant pieces of equipment that were reported as not operating during the day shift remained down during the night shift.

Aug. 20, 2017, visible emissions were observed from the fan stack of Dust Collector 525-17 during the routine daily inspection. Production personnel took 525-17 down as an initial corrective action until maintenance could assess and fix the problem.

Missed DP reading at 825-2 DC	11/13/2017
Missed DP reading at 225-11	11/21/2017
Missed DP reading at 525-28	11/21/2017
Missed DP reading at 825-1 DC	11/22/2017
Missed DP reading at 325-3 DC	11/22/2017

Pressure Differential Reading on the day a 6-minute visible emissions observation could not be made when source did not operate for more than four hours. Shift supervisors were reminded to review the 6-minute visible emissions observation forms in order to ensure that CAM sources that did not operate during the earlier shift are monitored for DP readings when such sources are turned back on.

Cemex is following the CAM procedures identified above. Cemex performs daily visible emission observations and pressure differential readings on the CAM listed sources and records the results in a daily log. For the kiln and clinker cooler, daily COM reports with 6-minute averages are printed and added to the daily records. To date, the Division has not requested Cemex develop and implement a Quality Improvement Plan (QIP) based upon the corrective action response and information available for each excursion. The Division will continue to monitor excursions from the CAM rule and may require a QIP be developed in the future. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
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
		Certain Operating Conditions -Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Method 9	If Required (See Conditions 16.1.1.2 and 20.5.1)
				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.	

Compliance Status: P050 – Cement Rail Car Unloading System

Parameter	Limitations	Reported Data
Process Rates	50,000 tons/yr	0 tons
PM	0.6 ton/yr	0.0 tons
PM ₁₀	0.4 ton/yr	0.0 tons

Cemex provided the reported data above for the rolling 12-month period July 2018. No railcar unloading has occurred since 2007.

- 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 PM₁₀ 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 PM₁₀ emission limitation). Compliance with the PM and PM₁₀ 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)

Cemex is calculating monthly and rolling 12-month totals of particulate emissions from the rail car unloading system using the above emission factors and control efficiencies. No railcar unloading has occurred since 2007 and therefore was not observed during the inspection. However, the system is equipped with a pulse jet fabric filter baghouse, as required, and has a pressure gauge to monitor negative pressure during railcar unloading. The O&M Plan states that Cemex will perform monthly Method 22 emission observations, as well as operational maintenance (i.e. check for leaks, evaluate equipment operation, check differential pressure, and check for dust in control equipment exhaust). In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 21. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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))

No railcar unloading has occurred since 2007. The source was not operating at the time of this inspection and no visible emissions issues were noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

No railcar unloading has occurred since 2007. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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		

Parameter	Permit Condition Number	Limitations*	Compliance Emission Factor	Monitoring	
				Method	Interval
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.

The source did not provide any operation, processing or emissions data for points 054 or 055. (Not In Compliance)

25.1 Particulate Matter (PM, PM₁₀ 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:

$$\text{Tons/month} = \frac{\text{EF (lbs/hr)} \times \text{monthly throughput (tons/month)}}{2000 \text{ lbs/ton}}$$

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 or 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.

The source did not provide any operation, processing or emissions data for points 054 or 055. (Not In Compliance)

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 <i>ZZZZ</i> Requirements	26.1	Change Oil and Filter Inspect Air Cleaner Inspect all Hoses and Belts		See Condition 26.1

Parameter	Permit Condition Number	Limitation	Compliance Emission Factor	Monitoring	
				Method	Interval
SO₂ – 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		See Condition 26.5	

Parameter	Permit Condition Number	Limitation	Compliance Emission Factor	Monitoring	
				Method	Interval
		For Startup – Not to Exceed 30%, for a Period or Periods Aggregating More than Six (6) Minutes in any 60 Consecutive Minutes			
NSPS Subpart III	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 III		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.

The source did not provide any operating, consumption or emission data for these engines. The source reported that there are no existing maintenance records on the A-Pit Pump - Diesel fuel-fired engine, rated at 90 hp or the Flood Engine - Diesel fuel-fired engine, rated at 99 hp (Emergency Engine) for 2017, and are therefore it is assumed to have had no maintenance performed on them. (Not In Compliance)

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.

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. Compliance with applicable requirements is not addressed in this report.

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).

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. Compliance with applicable requirements is not addressed in this report.

26.2 Sulfur Dioxide (SO₂) 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 SO₂ emission limitation shall be presumed since only diesel fuel is permitted to be used as fuel in these engines.

Without evidence to the contrary, compliance is presumed since diesel fuel is the only permitted fuel for these engines. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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:

$$\text{Emissions (tons/yr)} = \frac{\text{EF (lb-hp-hr)} \times \text{annual hours of operation (hr/yr)} \times \text{max hp}}{2000 \text{ lb/ton}}$$

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.

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) and 2,615 hrs/yr (99 hp engine). The source did not provide any operating, consumption or emission data for these engines. (Not In Compliance)

- 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 the 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.

The source did not provide any operating, consumption or emission data for these engines. The sources were not operating at the time of this inspection and no visible emissions issues were noted. The source conducted Method 9 readings on these engines in 2018; no exceedances were noted. (Not In Compliance)

26.6 The **flood response engine** is subject to the requirements in 40 CFR Part 60 Subpart III, "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 III as of the latest revisions to 40 CFR Part 60 Subpart III 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 III.

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 III 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).

The source did not provide any operating, consumption or emission data for these engines. The source reported that there are no existing maintenance records on the A-Pit Pump - Diesel fuel-fired engine, rated at 90 hp or the Flood Engine - Diesel fuel-fired engine, rated at 99 hp (Emergency Engine) for 2017, and are therefore it is assumed to have had no maintenance performed on them. (Not In Compliance)

- 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))

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. Compliance with applicable requirements is not addressed in this report.

SECTION III - Permit Shield

In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

SECTION IV - General Permit Conditions

5/22/12 version

Based on statements made by the source, observations made at the time of the inspection, a review of source records and with no evidence to the contrary, the source is presumed to operate in compliance with the General Permit Conditions. (In Compliance)

CONCLUSION

This compliance assessment is based on observations made during the inspection, information provided by the source, Division resources available and a review of Division records. Based on this information, CEMEX Construction Materials South, LLC is not in compliance with the following requirements:

1. Pursuant to Permit Number 95OPBO082 condition 5.13.3 the source was required to complete performance tests within the previous 6 months of within 60 days of the compliance deadline of July 1, 2017. The most recent testing of NOX & SO2 from the materials dryer was completed 6/14/2016. The source failed to complete testing of NOX & SO2 from the materials dryer between 1/1/2017 and 8/30/2017 violating Permit Number 95OPBO082 condition 5.13.3. Enforcement discretion is recommended for this issue because the source was taking action based on the Final Determination response letter from the Division's SIP Development Supervisor and because the testing was completed only about 6.5 months early.
2. Pursuant to Permit Number 95OPBO082 condition 10.9.1 the source is required to not allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity. On 9/13/2017 a six-minute average opacity of 23 percent registered at the opacity monitor for the kiln stack violating Permit Number 95OPBO082 condition 10.9.1.
3. Pursuant to Permit Number 95OPBO082 condition 10.22.1.3 the source is required to not allow or cause the emission into the atmosphere of any air pollutant which is in excess of 20% opacity. On 9/13/2017 a six-minute average opacity of 23 percent registered at the opacity monitor for the kiln stack violating Permit Number 95OPBO082 condition 10.22.1.3.
4. Pursuant to Permit Number 95OPBO082 condition 11.4.1 the baghouses are required to be operated and maintained in accordance with the requirements in Condition 19. During the inspection it was observed that the baghouse controlling the P010 area (BH 525-17) had a differential pressure (DP) that was out of the acceptable range. Baghouses are not operated and maintained in accordance with the requirements in Condition 19 violating Permit Number 95OPBO082 condition 11.4.1
5. Pursuant to Permit Number 95OPBO082 conditions 11.6.1.2 and 11.6.1.10 the source is required to operate the plant based water truck on full-time basis, 12 hours a day, 7 days a week and operate a powered sweeper during day shift for 12 hours a day, 7 days a week. On 3/15/2017 from 8am to 10am the source failed to operate a powered sweeper during day shift for 12 hours and on 1/7/2018 from 11:23am to 6pm, 1/8/2018 from 6:40am to 6pm & 1/9/2018 from 6am to 12pm the source failed to operate the plant based water truck 12 hours a day violating Permit Number 95OPBO082 conditions 11.6.1.2 and 11.6.1.10.

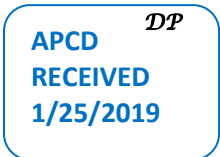
6. Pursuant to Permit Number 95OPBO082 condition 14.4.1.2a the source is required to operate the plant based water truck on full-time basis, 12 hours a day, 7 days a week. On 1/7/2018 from 11:23am to 6pm, 1/8/2018 from 6:40am to 6pm & 1/9/2018 from 6am to 12pm the source failed to operate the plant based water truck 12 hours a day violating Permit Number 95OPBO082 condition 14.4.1.2a.
7. Pursuant to Permit Number 95OPBO082 condition 19 the source is required to conduct routine maintenance and operational procedures performed on the baghouses in accordance with manufacturer's specifications and/or good engineering practices. During the inspection it was observed that the baghouse controlling the P010 area (BH 525-17) had a differential pressure (DP) that was out of the acceptable range violating Permit Number 95OPBO082 condition 19.
8. Pursuant to Permit Number 95OPBO082 condition 20.3 the baghouses are required to be operated and maintained in accordance with the requirements in Condition 19. During the inspection it was observed that the baghouse controlling the P010 area (BH 525-17) had a differential pressure (DP) that was out of the acceptable range. Baghouses are not operated and maintained in accordance with the requirements in Condition 19 violating Permit Number 95OPBO082 condition 20.3.
9. Pursuant to Permit Number 95OPBO082 condition 22.9.3 the source is required to turn on and operate all dry sorbent and activated carbon systems that control hazardous air pollutants at the time the gas stream at the inlet to the baghouse or ESP reaches 300 degrees Fahrenheit. On 7/21/2017 for approximately 49 minutes the source failed to start injecting carbon and lime at 300 degrees F on baghouse inlet temperature violating Permit Number 95OPBO082 condition 22.9.3.
10. Pursuant to Permit Number 95OPBO082 condition 22.33.2 the source must monitor opacity by conducting daily visible emissions observations of the raw and finish mills' PM control devices (PMCD) in accordance with the procedures of Method 22. The source failed to monitor opacity by conducting daily visible emissions observations of Raw Mill Dust Collector 325-1 on 11/21/2017, Raw Mill Auxiliary Dust Collector 325-2 on 11/21&22/2017, Finish Mill Dust Collector 725-2 on 11/22&24/2017 and 1/23/2018, Finish Mill Auxiliary Dust Collector 725-3 on 11/22&24/2017 and 1/23/2018, and Finish Mill Separator Dust Collectors 725- 10 & 725-11 on 11/22&24/2017 violating Permit Number 95OPBO082 condition 22.33.2.
11. Pursuant to Permit Number 95OPBO082 condition 25 the source is required to keep records and calculate emissions from the Lime Storage Silo (point 55) and the Lime Weigh Hopper (point 54). The source did not provide any operation, processing or emissions data for points 054 or 055 violating Permit Number 95OPBO082 condition 25.
12. Pursuant to Permit Number 95OPBO082 condition 26 the source is required to perform maintenance and keep records for the Stationary Internal Combustion Engines (point 053). The source did not provide any operating, consumption or emission data for these engines. Additionally the source reported that there are no existing maintenance records on the A-Pit Pump Diesel fuel-fired engine or the Flood Engine Diesel fuel-fired engine (Emergency Engine) for 2017 violating Permit Number 95OPBO082 condition 26.

Recommendation: Enforcement is recommended at this time.



Air Pollution Control Division

Field Inspection Report



COUNTY NUMBER: **013**

SOURCE NUMBER: **0003**

DATE OF INSPECTION: **December 12, 2018**

DATE REPORT SUBMITTED: **January 25, 2019**

COUNTY: **Boulder**

INSPECTOR: **Grant McKercher**

COMPANY: **CEMEX Construction Materials South, LLC**

SITE LOCATION: **5134 Ute Highway, Lyons, CO 80540**

MAILING ADDRESS: **Same**

CONTACT PERSON: **Scott Harcus**
(Environmental Manager)

TIME: **10:30 AM**

TELEPHONE NO.: **303-823-2124**

EMAIL: **scotta.harcus@cemex.com**

PERMIT NO.: **95OPBO082**

SOURCE CLASS: Major SM-80 Syn Minor Minor

INSPECTION TYPE: Full Compliance Evaluation Onsite Evaluation
Partial Compliance Evaluation Offsite Evaluation

Additional Inspection Records in File? Yes No

HOURS: Travel & Prep: **3.0** Inspection: **1.0** Report: **2.0** Total: **6.0**

COMPLIANCE STATUS: IN COMPLIANCE OUT OF COMPLIANCE

INTRODUCTION

On December 12, 2018, significant fugitive dust emissions were observed associated with clinker cooling and transfer activities at the CEMEX Construction Materials South, LLC’s cement production facility located at 5134 Ute Highway, Lyons, Boulder County, Colorado (“CEMEX”). On December 12, 2018, Mr. Grant McKercher, Inspector with the Colorado Department of Public Health and Environment – Air Pollution Control Division (“Division”) was on site to provide test oversight for a VOC emissions compliance test at the main stack (addressed in a separate report, see 0130003-STK-2019). During the test oversight and at about 11:30 AM, Mr. McKercher observed significant dust emissions from clinker transport elevators and an external clinker drop hood at the main clinker production building. Mr. McKercher met with Mr. Scott Harcus, CEMEX Environmental Manager, for a discussion and investigation regarding the cause of the emissions.

Mr. Harcus and maintenance personnel explained that the emissions were associated with a baghouse used to control emissions associated with the clinker cooler area. Mr. McKercher observed the Magnehelic gauge of a clinker cooler area baghouse, which displayed a differential pressure of about zero. The source explained that the baghouse likely was not pulling the required draft to control the clinker dust emissions associated with the elevators, clinker drop hood, and nearby transfer points. The source explained that in days prior to the event, a work order had been placed for replacement motor parts at a different baghouse in the A-frame building. When

asked about addressing the observed emissions, Mr. Harcus suggested using the A-frame baghouse for backup control, but until the component arrived and the other baghouse was repaired, the source would not achieve emissions control with either baghouse. The inspector did not observe any CEMEX personnel conducting visible emissions observations or any logs of the event. Once Mr. Harcus observed the emissions, no corrective actions were immediately taken. Mr. Harcus explained that plant operations would likely not be stopped or changed in order to address the uncontrolled emissions. The inspector requested baghouse maintenance records during the event, but as of the date of this report, no baghouse maintenance logs have been provided. CEMEX clinker processes continued to operate throughout the duration of the inspector's visit through the inspector's departure near 1:00 PM. Neither Mr. McKercher nor the source performed an EPA Method 9 opacity observation while the inspector was on site.

CEMEX called the event into the Division malfunction hotline on 12/12/2018. After guidance was provided, the source also provided a follow-up report of the event via email on 12/17/2018 (see attached). The report lists that the baghouse was identified as Baghouse Duct Collector #525-5 and that a damper was adjusted on 12/13/2018 to resolve the issue.

POINT AIRS ID/PERMIT NUMBERS

CEMEX operates under Operating Permit No. 95OPBO082. The following table includes the emissions points that are relevant to this report, as listed in the permit.

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
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.		
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		

SOURCE COMPLIANCE HISTORY

A full compliance history is listed in the 2018 full compliance evaluation report.

The 2018 inspection, conducted on 9/11/2018, found violations of Operating Permit No. 95OPBO082, Section II, Conditions 19 and 20.3 for failing to maintain the P010 area (BH 525-17) baghouse differential pressure within the acceptable range.

NSPS/NESHAP/MACT APPLICABILITY

A full list of applicability is listed in the 2018 full compliance evaluation report.

No NSPS/NESHAP/MACT rules apply to the issue addressed in this report.

REPORTS

Reporting is not applicable for this report.

MALFUNCTION REPORT REVIEW

The event was not a malfunction. No malfunctions reports were submitted to the Division.

COMPLIANCE ASSISTANCE/SOURCE ACTIONS

No compliance assistance was provided.

PERMIT CONDITIONS AND COMPLIANCE STATUS

Operating Permit No. 95OPBO082:

The format of the most recent issuance is followed in this section. Only the conditions that apply are listed. Each condition is from Section II of the permit. Text marked in **bold font** indicates inspector comments for each condition.

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.

Observations on 12/12/2018 indicated that a baghouse associated with clinker cooling and transfer activities had a differential pressure (DP) that was out of the acceptable range. Heavy fugitive dust emissions were associated with equipment's failure to capture emissions. This event was an indicator of a failure to

perform maintenance of and operational procedures in accordance with manufacturer's specifications and/or good engineering practices.

The source is out of compliance with this condition.

20. Colorado Regulation No. 1 Opacity Requirements

- 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.

Observations on 12/12/2018 indicated that a baghouse associated with clinker cooling and transfer activities had a differential pressure (DP) that was out of the acceptable range. This is a violation of Condition 19 and is thus also a violation of this condition.

The source is out of compliance with this condition.

CONCLUSION

This partial compliance evaluation, based on observations made on 12/12/2018, information provided by the source, and Division records, finds that CEMEX (AIRS ID 013-0003) is out of compliance with the terms and conditions of Permit Number 95OPBO082 due to the following violations. Recommendations related to enforcement action are in **bold font**.

- A. Pursuant to Operating Permit Number No. 95OPBO082, Condition 19, CEMEX is required to conduct routine maintenance and operational procedures performed on the baghouses in accordance with manufacturer's specifications and/or good engineering practices. On 12/12/2018, heavy fugitive dust emissions were observed associated with a baghouse's failure to capture emissions, indicating a failure to perform maintenance of and operational procedures in accordance with manufacturer's specifications and/or good engineering practices, violating Operating Permit Number No. 95OPBO082, Condition 19.
- B. Pursuant to Operating Permit Number No. 95OPBO082, Condition 20.3, the baghouses are required to be operated and maintained in accordance with the requirements in Condition 19. On 12/12/2018, heavy fugitive dust emissions were observed associated with a baghouse's failure to capture emissions, indicating a failure to perform maintenance of and operational procedures in accordance with manufacturer's specifications and/or good engineering practices, violating Operating Permit Number No. 95OPBO082, Condition 20.3.

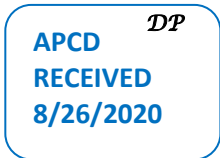
CEMEX was out of compliance on 12/12/2018.

Formal enforcement is recommended to address these violations.



Air Pollution Control Division

Field Inspection Report



COUNTY NUMBER: **013**

SOURCE NUMBER: **0003**

DATE OF INSPECTION: **8/4/2020**

DATE REPORT SUBMITTED: **8/26/2020**

COUNTY: **Boulder**

INSPECTOR: **Dave Huber**

COMPANY: **CEMEX Construction Materials South, LLC.**

SITE LOCATION: **Lyons Cement Plant - 5134 Ute Highway, Lyons (I-25 to CO-66 (exit 243) west ~14 miles)**

MAILING ADDRESS: **P.O. Box 529, Lyons, CO, 80540**

CONTACT PERSON: **Scott A Harcus**

TIME: **9 am**

TELEPHONE NO.: **1(303)823-2124; Mobile: 1(614)306-8838**

EMAIL: **scotta.harcus@cemex.com**

PERMIT NO.: **95OPBO082**

SOURCE CLASS: Major SM-8(Syn Minor Minor

INSPECTION TYPE: Full Compliance Evaluation Onsite Evaluation
Partial Compliance Evaluation Offsite Evaluation

Additional Inspection
Records in File?

Yes No

HOURS: Travel & Prep: **28** Inspection: **4** Report: **105** Total: **137**

This compliance assessment is based on observations made during the inspection, information provided by the source, Division resources available and a review of Division records. Based on this information, this source is:

COMPLIANCE STATUS: IN COMPLIANCE OUT OF COMPLIANCE

INTRODUCTION

An announced inspection of the Cemex Lyons Cement Plant (CEMEX) was conducted. CEMEX operates a portland cement manufacturing facility in Lyons Colorado, under Operating Permit No. 95OPBO082, AIRS ID 013-0003. Scott Harcus, and Uwe Lubjuhn with CEMEX, granted access to the facility, answered questions, provided a tour and supplied records to determine compliance. Cemex is permitted to emit air pollution into the atmosphere in accordance with Operating Permit 95OPBO082, which was first issued February 1, 2000 and last revised November 1, 2017. This inspection report assesses compliance for the time period of 8/1/2019 to 4/30/2020. The facility is located near Lyons, 12 miles north of Boulder on Highway 66. The area in which the facility is located is classified as attainment/maintenance for particulate matter less than 10 microns (PM₁₀). Under that classification, all SIP-approved requirements for PM₁₀ 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.

This facility manufactures portland cement. Limestone, shale, and other raw materials extracted from the 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 onto the clinker cooler. The clinker is cooled by large amounts of air that is forced upwards through the clinker bed by undergrate fans. A large percentage of the cooling 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 and ground to a fine material, passed through coolers and stored in the 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.

POINT AIRS ID/PERMIT NUMBERS

Operating Permit Number: 95OPBO082

013-0003

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
		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
	P001	001	S002 - Primary Crushing (Plant)	Baghouses	P-10,225*

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
Primary Crusher (Plant) (Section II.4)			S004 - Surge Silo		P-10,535*
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 Belt Transfer		
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		Grandfathered
			S011 –Raw Mill Auxiliary Dust Collector		
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	P008	008	S017 – Clinker Drag Chains (1 baghouse)	Baghouse	12BO444-2

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
Transfer to Storage for Finish Mill (Section II.10)			S018 - Clinker Cooler (2 baghouses, 1 stack)	(5 total)	
			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.		
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

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
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	Baghouse	C-10,316*, 10BO718*
			S019 – Material Unloading Hopper (Railcar)		
			S025 – Material Unloading Hopper and Spout (Trucks)		
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

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
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

¹APEN 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).

SOURCE COMPLIANCE HISTORY

1. A 2000 stack test identified the source failed to operate the raw material dryer in compliance with the PM limit in the Operating Permit. Resolved with the issuance of a Compliance Advisory and an Order on Consent dated 10/02/00, civil penalty of \$1,400.00 and a SEP of \$8,400.00 to install video camera for control room staff to monitor plant conditions.



2. Violations identified during 2001 inspection include: failure to properly calculate and report emissions from a gasoline storage tank, failure to conduct Method 9 opacity observation as required, Failure to notify the Division of excessive opacity from an upset as required, and failure to submit annual compliance certifications which include statements of violations of conditions 1.3, 1.4, 3.2, 3.5, 3.5.7, 11.3, 11.6, 13.2, and 13.5. Resolved with a Compliance Order on Consent dated 07/25/02, SEP \$6,000.00.

3. Several violations were identified during 2003 inspections which were resolved with a Compliance Order on Consent dated 02/20/04, a civil penalty of \$37,460.00, pay at least \$149,840.00 towards a Supplemental Environmental Project, and pay \$94,839.00 for the economic benefit associated with not operating the control equipment required to control emissions from the A-Frame building.

4. Seven violations were identified during 2004 inspections and were resolved with a commitment to immediately implement procedures to control fugitive emissions, and install a new conditioning spray tower before the fall of 2005.

5. Numerous violations were identified during several 2005 and 2006 inspections and were addressed in Notice of Violations dated 9/23/05 and 6/8/06. Additional issues in 2006 were addressed in letters issued for Denial of Upset Reports dated 5/1/06 and 7/31/06 and a request for revision of Startup, Shutdown, and Malfunction Plan. All of these violations were resolved with a Compliance Order on Consent signed 12/22/06 and a penalty of \$1,500,000.00 to be paid as follows: \$300,000.00 cash penalty, \$50,000.00 non-compliance cash penalty, \$200,000.00 to operate a PM monitor for at least one year, \$450,000.00 donated to nonprofit organization for environmental projects, at least \$500,000.00 towards an Supplemental Environmental Project, and a moratorium on using tire-derived-fuels until at least January 1, 2008.

6. Violations identified in 2007 and 2008 inspections have been addressed in a Notice of Violation dated June 17, 2008. The case was resolved with a Compliance Order on Consent signed 2/11/09 with a total penalty assessed of \$528,325. Cemex agreed to pay a sum of \$105,665 in administrative penalties and perform Supplemental Environmental Projects (SEPs) totaling \$422,660. The SEPs included \$300,000 donated to the Boulder County Plug-In Hybrid and Vehicle to Grid Implementation Project and \$122,660 donated to the Governor's Energy Office (GEO) earmarked for energy efficiency and renewable energy projects for Lyons public schools.

7. A Warning Letter was issued for the 2011 inspection related to a stack test conducted on April 21, 2011 where Cemex exceeded the grain loading limit for Baghouse 625-14 (P009) found in the table in Condition 11.3. The test results indicated an emission rate of 0.038 gr/dscf in excess of the 0.03 gr/dscf limit found in the table. The baghouse was retested on May 25, 2011 indicating 0.01 gr/dscf emission rate and demonstrated compliance with the grain loading requirements.

8. Cemex was issued a Compliance Advisory (CA) dated August 23, 2013 for Case No. 2013-121. Compliance testing on April 17, 2013 on the Raw Materials Dryer (AIRS 002) demonstrated an emission rate of filterable PM of 22.8 lb/hr and 79.9 tpy, violating the limits of 6.5 lb/hr (Permit 12BO444-1, Condition 3) and 22.8 tpy (Permit 95OPBO082, Condition 5.4). Following the failed test on April 17, 2013, three bags were replaced in the baghouse controlling emissions from AIRS 002 and compliance testing was conducted again on May 24, 2013. The results of the May 24, 2013 tests were

below permitted emission limits for PM. A Compliance Order on Consent was signed April 15, 2014 and an administrative penalty of \$8,400 was paid. Compliance Requirements include requiring Cemex to perform quarterly standard calibration procedures of the dryer dust collector broken bag detector and maintain records for at least two years.

9. The 2017 inspection found the source not in compliance with conditions 10.5 (opacity exceedances from the kiln related to malfunctions were recorded by the COMS), 23.5 (Calibration of thermocouples for the Kiln and Hart baghouses were performed seven days later than that the third month due date) and Air Pollutant Emission Notices (APENs) were not submitted within the five year period violating the provisions of General Permit Condition (5/22/12 version) 22(e) (Regulation No. 3, Part A, § II.C.2) of Operating Permit 95OPBO082. Enforcement discretion was recommended.

10. The 2018 inspection found the source not in compliance. The source failed to complete testing of NOX & SO2 from the materials dryer between 1/1/2017 and 8/30/2017 violating Permit Number 95OPBO082 condition 5.13.3; enforcement discretion was recommended. On 9/13/2017 a six-minute average opacity of 23 percent registered at the opacity monitor for the kiln stack. Baghouses were not operated and maintained in accordance with the requirements. On 3/15/2017 from 8am to 10am the source failed to operate a powered sweeper during day shift for 12 hours and on 1/7/2018 from 11:23am to 6pm, 1/8/2018 from 6:40am to 6pm & 1/9/2018 from 6am to 12pm the source failed to operate the plant based water truck 12 hours a day. On 7/21/2017 for approximately 49 minutes the source failed to start injecting carbon and lime at 300 degrees F on baghouse inlet temperature. The source failed to monitor opacity by conducting daily visible emissions observations of Raw Mill Dust Collector 325-1 on 11/21/2017, Raw Mill Auxiliary Dust Collector 325-2 on 11/21&22/2017, Finish Mill Dust Collector 725-2 on 11/22&24/2017 and 1/23/2018, Finish Mill Auxiliary Dust Collector 725-3 on 11/22&24/2017 and 1/23/2018, and Finish Mill Separator Dust Collectors 725- 10 & 725-11 on 11/22&24/2017. The source did not provide any operation, processing or emissions data for points 054 or 055. The source did not provide any operating, consumption or emission data for point 053. Additionally the source reported that there are no existing maintenance records on the A-Pit Pump Diesel fuel-fired engine or the Flood Engine Diesel fuel-fired engine (Emergency Engine) for 2017. Case # 2019-021 was initiated for the alleged violations, a CA was held 4/24/2019 and case # 2019-021 was resolved 9/11/2019 with a COC and \$35,000 penalty. The compliance requirements of the COC were to provide startup and shutdown records for the pump engines and flood response engine, provide records of the annual opacity tests required by 95OPBO082 Section II Condition 26.5.4.2, and provide records required by 95OPBO082 Section II Condition 26.6 for the flood response engine. The source provided startup and shutdown records for the pump engines and flood response engine, the source provided records of the annual opacity tests required by 95OPBO082 Section II Condition 26.5.4.2, and the source provided records required by 95OPBO082 Section II Condition 26.6 for the flood response engine.

11. A 2019 PCE found the source not in compliance because the source did not use good control practices, did not maintain baghouse. Case # 2019-158 was initiated for the alleged violations, a CA was issued to the source on 9/11/2019 and a CA meeting occurred 10/9/2019. Case # 2019-158 was resolved 1/8/2020 with an ESA and \$7,000 penalty.

12. The source performed the required D/F compliance test within the timeframe (31 calendar months) required per Subpart LLL, however, the minimum sample volume as required by Subpart LLL §63.1349(b)(3)(i) was not achieved during each test run of the Aug. 22, 2019 performance test and the

testing was rejected. Case # 2019-197 was initiated for the alleged violations and a CA meeting occurred 12/27/2019. Case # 2019-197 was resolved 2/27/2020 with an ESA and \$5,250 penalty.

13. The 2019 inspection found the source not in compliance. The source failed to conduct VOC testing for Point 002 as required from December 14, 2018 to June 5, 2019. The source failed to operate a powered sweeper for AIRS Point 015 during the day shift on April 7 & 8, 2019. The source failed to report the AIRS Point 002 THC CEMS in the Q2 2019 EER. The source failed to report AIRS Point 007 diluent CEMS downtime in EERs since mid-2015. The source failed to operate AIRS Point 007 in a manner consistent with safety and good air pollution control practices for minimizing emissions. The source failed to perform an O2/CO2 audit on the AIRS Point 007 CEMS during Q2 2019, therefore failed to accurately correct the AIRS Point 007 THC limit to 7 percent oxygen during Q2 2019, failed to use quality-assured data for AIRS Point 007 during Q2 2019 and failed to collect accurate data for AIRS Point 007 during Q2 2019. And the source failed to conduct a second opacity observation after operating the Dowe Flats 6” Pump engine for more than 250 hours during 2018. Case # 2020-036 was initiated for the alleged violations, a CA was held 3/27/2020 and case # 2020-036 was resolved 7/21/2020 with an ESA and a \$42,000 penalty.

NSPS/NESHAP/MACT APPLICABILITY

NSPS Applicability:

40 CFR part 60 Subpart OOO - Subpart OOO—Standards of Performance for Nonmetallic Mineral Processing Plants;

40 CFR part 60 Subpart F—Standards of Performance for Portland Cement Plants;

40 CFR part 60 Subpart A - General Provisions.

MACT Applicability:

40 CFR Part 63 Subpart LLL—National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry (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)

40 CFR Part 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Although not identified in the permit the inspector has determined the Gasoline Storage Tank is subject to 40 CFR Part 63 - Subpart CCCCCC - National Emission Standards for Hazardous Air Pollutants for Gasoline-Dispensing Facilities

REPORTS

In the absence of credible evidence and without indications to the contrary, the reports described below were submitted in accordance with the provisions of the Record Keeping and Reporting Requirements/Certification Requirements of the General Permit Conditions.

Title V Semi Annual Monitoring Reports (SAR)

Period	Due	Received
7/1/2019 – 12/31/2019	2/1/2020	2/3/2020*



The source failed to report that a second 6-minute Method 9 was not performed on the Dowe Flats 8" Pump EGEN-DF-2 (John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel) that was operated for more than 250 hours in 2019. Deviations were not reported promptly as described in the Prompt Deviation Reporting General Permit Condition. (Not In Compliance)

*2/1/2020 was a Saturday, the report was received the next business day. For the purposes of this inspection report this is considered to on time but deviations were not reported promptly.

2/3/2020 Report: Deviations reported

1.) Section II, Condition 22.15

Unit: P007

Start/stop: Oct. 22, 2019, 3:48 p.m.-4:22 p.m.

Noted as a malfunction

The Lyons Plant experienced a kiln process malfunction due to a thermal shock to the operations. Investigation showed that the Lyons Plant was transitioning kiln production to a different type of clinker (base-end product included in cement). When raw material feed (i.e., kiln feed) input chemistry changed, an unavoidable failure of the kiln-burning process occurred. An unexpected change in the kiln-feed chemistry caused a substantial thermal shock to the burning process, leading to an upset in normal operations - i.e., kiln push involving the flushing of the uncooked raw material feed through the kiln and into the clinker cooler. During the malfunction period, visible emissions that lasted approximately 34 minutes occurred from the kiln hood and clinker cooler areas. Stable kiln operations resumed after this malfunction period. Data from CEMS and COMS monitors did not indicate any exceedance in opacity and other parameters. Kiln operations were immediately adjusted by lowering cooler fan speeds to maintain negative system pressure and to reduce kiln feed input and kiln production. The Lyons operations teams also responded with housekeeping measures and deployment of sweeper and water trucks to areas affected. The chemical characteristics of the clinker are monitored closely and maintenance checks installed (i.e., measurement of kiln shell temps) to monitor the pyro process of the kiln. Routine inspections continue to be conducted as a part of the Lyons Plant O&M of the emissions control systems.

It should be noted this event occurred prior to the source's incorporation of a system pressure interlock (to automate shutdown of fuel and feed if positive pressures are registered) that was implemented following the previous inspection findings. The source reported that these events are not 100% avoidable and actions to minimize dusting from such events have been taken. They have installed interlocks and alarms on the inlet and outlet of the coal mill to monitor high/low temperatures and high/low pressures associated with changes in coal feed, installed interlocks and alarms on the Kiln Drive for low amperages, and installed process controls to automate and provide immediate reductions in kiln feed and fuel usage.

This is not considered to be a valid malfunction and is considered to be a violation of Section II, Condition 22.15.

2.) Section II, Condition 22.25

Unit: P007

Start/stop: Sept. 10, 2019-Oct.3, 2019

Noted during normal operation

The CEMEX Lyons Plant performed the required D/F compliance test within the timeframe (31 calendar months) required per Subpart LLL, however, the minimum sample volume as required by Subpart LLL §63.1349(b)(3)(i) was not achieved during the Aug. 22, 2019, Division-approved performance test. While the test was rejected by the Division, all samples achieved at least 89 percent capture of the minimum required volume and demonstrated analytical results non-detectable for D/F utilizing EPA Method 23 analysis. The oversight in achieving the minimum required sample volume per 40CFR63.1349(b)(3)(i) was due to a pre-test calculation error in isokinetic sampling where an incorrect barometric/atmospheric pressure, approximately equivalent to sea-level, was applied. Ultimately, this mistake resulted in a sample volume lower than the projected target - a minimum of 90 dscf. Upon discovery of the deviation, the Lyons Plant immediately notified the Division on Sept. 19, 2019.

This deviation was addressed with Case # 2019-197 and is not included in this report.

Title V Annual Compliance Certifications (ACC)

Period	Due	Received
1/1/2019 – 12/31/2019	2/1/2020	2/3/2020*

The source failed to report that a second 6-minute Method 9 was not performed on the Dowe Flats 8” Pump EGEN-DF-2 (John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel) that was operated for more than 250 hours in 2019. Deviations were not reported promptly as described in the Prompt Deviation Reporting General Permit Condition. (Not In Compliance)

*2/1/2020 was a Saturday, the report was received the next business day. For the purposes of this inspection report this is considered to be on time but deviations were not reported promptly.

2/3/2020 Report: Deviations noted during the previous and current reporting periods. See above

MACT/NSPS Reports

Subpart	Period	Due	Received
NSPS Subpart OOO	7/1/2019 – 12/31/2019	2/1/2020	1/14/2020*

***Delivery receipt provided**



Report no increases in capacity.

MACT LLL reports submitted through Central Data Exchange

<u>Facility</u>	<u>Report</u>	<u>Certification Date</u>	<u>Comments</u>
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1354(b)(9) Summary Report	2020-02-29 10:56:17	40 CFR 63.1354(b)(9), Subpart Subpart LLL Summary Report, Kiln DF Temp Data, CMS Performance Summary, Kiln CPMS Exceedance Descriptions & Corrective Actions
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1354(b)(11)(i)(C) Relative Accuracy Test Audit Data and Performance Test Data	2019-11-26 08:00:41	Relative Accuracy Test Audit Report & Testing Data
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1354(b)(11)(i)(C) Relative Accuracy Test Audit Data and Performance Test Data	2019-10-16 19:06:31	Relative Accuracy Test Audit Report & Testing Data
CEMEX CONSTRUCTION MATERIALS SOUTH LLC	63.1354(b)(9) Summary Report	2019-08-30 08:04:14	40 CFR 63.1354(b)(9), Subpart Subpart LLL Summary Report, Kiln DF Temp Data, CMS Performance Summary, Kiln CPMS Exceedance Descriptions & Corrective Actions

Excess Emissions and Monitoring System Summary Reports (“EER”)



007 Rotary Kiln				
Year	Period	Due	Received	Notes
2019	3	11/1/2019	10/30/2019	No excess emissions reported. Excessive CO monitor downtime reported (8.769%; 99 hours down of 1129 operating hours)
2019	4	2/1/2020	1/27/2020	No excess emissions or excessive monitor downtime reported
2020	1	5/1/2020	5/1/2020	No excess emissions or excessive monitor downtime reported

008 Clinker Cooler				
Year	Period	Due	Received	Notes
2019	3	11/1/2019	10/30/2019	No excess emissions or excessive monitor downtime reported
2019	4	2/1/2020	1/27/2020	No excess emissions or excessive monitor downtime reported
2020	1	5/1/2020	5/1/2020	No excess emissions or excessive monitor downtime reported

002 Raw Material Dryer				
Year	Period	Due	Received	Notes
2020	1	5/1/2020	5/1/2020	No excess emissions reported. Excessive THC monitor downtime reported (8.579%; 134 hours down of 1562 operating hours)

APENS

APEN Received dates are in the table below.

AIRS ID	APEN Received
001	3/30/2018
002	3/30/2018
003	3/30/2018
004	3/30/2018
005	3/30/2018
006	3/30/2018
007	3/30/2018
008	3/30/2018
009	3/30/2018
010	7/1/2020
011	7/1/2020
013	7/1/2020
014	4/28/2017



015	3/30/2018
017	8/25/2016
019	3/30/2018
024	3/30/2018
025	7/1/2020
026	7/1/2020
027	3/30/2018
028	7/1/2020
031	7/1/2020
049	3/30/2018
050	4/28/2017
052	3/30/2018
053	8/1/2018
054	7/1/2020
055	7/1/2020

In the absence of credible evidence and without indications to the contrary, APENs were submitted in accordance with the provisions of the Record Keeping and Reporting Requirements of the General Permit Conditions.

MALFUNCTION REPORT REVIEW

1.) 10/22/2019 15:48 – 16:22 (007 Rotary Kiln)

Call 10/23/2019 11:27; Report 2/3/2020

On Oct. 22, 2019 visible emissions that lasted approximately 34 minutes occurred from the kiln hood and clinker cooler areas. The CEMEX Lyons plant experienced and unintended upset condition due to a thermal shock to the operations. Investigation showed that the Lyons Plant was transitioning kiln production to a different type of clinker (base-end product included in cement). When raw material feed (i.e., kiln feed) input chemistry changed, an unavoidable failure of the kiln-burning process occurred. An unexpected change in the kiln-feed chemistry caused a substantial thermal shock to the burning process, leading to an upset in normal operations - i.e., kiln push involving the flushing of the uncooked raw material feed through the kiln and into the clinker cooler. Data from CEMS and COMS monitors did not indicate any exceedance in opacity and other parameters. Kiln operations were immediately adjusted by lowering cooler fan speeds to maintain negative system pressure and to reduce kiln feed input and kiln production. . The Lyons operations teams also responded with housekeeping measures and deployment of sweeper and water trucks to areas affected. During the event, visible dusting was experienced from the kiln hood and the clinker cooler, lasting 34 minutes from 3:48 p.m.-4:22 p.m. The kiln has now resumed stable operations.

This is not considered to be a valid malfunction and is considered to be a violation of Section II, Condition 22.15. It should be noted this event occurred prior to the source’s incorporation of a system pressure interlock (to automate shutdown of fuel and feed if positive pressures are registered) that was implemented following the previous inspection findings. The source reported that these events are not 100% avoidable and actions to minimize dusting from such events have been taken. They have installed interlocks and alarms on the inlet and outlet of the coal mill to monitor high/low



temperatures and high/low pressures associated with changes in coal feed, installed interlocks and alarms on the Kiln Drive for low amperages, and installed process controls to automate and provide immediate reductions in kiln feed and fuel usage.

2.) 4/30/2020 07:10 – 07:48 (007 Rotary Kiln)

Call 5/1/2020 15:37; Report due 8/1/2020

On April 30, 2020, CEMEX experienced an unpredictable condition at the preheater coal mill when the system experienced a plug and the temperatures increased; and an odor was apparent in the area. The event was immediately responded to by cutting the feed to the coal mill while allowing the coal mill to continue running to allow it to grind itself empty. The opacity levels were less than 5 percent, and there was no wind during this period. All odor remained on property, and no complaints were received.

This is not considered to be a violation of any permit condition.

COMPLIANCE ASSISTANCE/SOURCE ACTIONS

Considerable assistance was provided to the source whenever possible including informing the source that a method 9 reading done 6/26/2020 on A-pit Pump (053) EGEN-LYO-1 (John Deere 90 HP A-pit Pump Model JD-APP01 Diesel) only included 5 minutes of readings and required 6 minutes. The reported the original observation data was recorded for the required 6-minute duration by the Method Certified Observer, but the 6th minute of data was not reproduced from field notebook to the Method 9 form. It was pointed out to the source that the Dowe Flats 8" Pump EGEN-DF-2 (John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel) was operated for more than 250 hours in 2019 (590.9 hours) without a second opacity reading. The source was informed that records provided indicate the Flood Response Engine EGEN-LYO-3 (99 HP Flood Response Cummins Model No. 4BTAA3.3G7 Diesel) was not operated in calendar year 2019 but a method 9 was conducted 12/12/2019. The source reported the unit was operated to conduct a method 9 and the Lyons Plant Emissions Inventory was updated to reflect 0.5 hours in December 2019.

PERMIT CONDITIONS AND COMPLIANCE STATUS

95OPBO082

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 (PM₁₀). Under that classification, all SIP-approved requirements for PM₁₀ 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.

No compliance determination is necessary. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 $\text{NO}_x \geq 100$ 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 ≥ 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 ≥ 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 ≥ 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.

No compliance determination is necessary. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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).

No compliance determination is necessary. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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)	P017	026	S056 through S064 – Conveyor	Baghouse (8 total)	94BO593
		027	S055 - Primary Crusher (Quarry)	Baghouse	
General Fugitive Emissions Requirements	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

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
(Section II.14)		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* P-10,535*
			S004 - Surge Silo		
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 P-10,298*
			S003 - #4 Belt Transfer		
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 Grandfathered
			S013 - Iron/Silica Silo		
			S010 - Raw Material Grinding		
			S011 –Raw Mill Auxiliary Dust Collector		
Homogenizing & Blending (Section II.9)	P006	006	S014 - Homogenizing Silo	Baghouse (2 total)	Grandfathered Grandfathered
			S015 - Kiln Feed Silo		

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
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	Baghouse	C-10,316*, 10BO718*
			S019 – Material Unloading Hopper (Railcar)		
			S025 – Material Unloading Hopper and Spout (Trucks) 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 Beneficiation Dust	041 - Pug Mill/Truck Loading	Baghouses	
			042 - Haulage and Disposal of Pelletized CKD and Beneficiation 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			

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
	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

¹APEN 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).

No compliance determination is necessary. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

On the dryer the source complies with the total organic HAP requirements in 40 CFR Part 63 Subpart LLL with THC CEMS and has not exercised the alternative operating scenario on the dryer to comply with the THC requirements in 40 CFR Part 63 Subpart LLL with a submittal of the performance test notification to the Division with the intent to change from the total organic HAP to THC compliance option for the dryer. On the kiln the source complies with the THC requirements in 40 CFR Part 63 Subpart LLL with THC CEMS and has not exercised the alternative operating scenario on the kiln to comply with the THC requirements in 40 CFR Part 63 Subpart LLL with a submittal of the performance test notification to the Division with the intent to change from the THC to total organic HAP compliance option for the kiln. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

The source is 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. CAM requirements are set forth in Section II, Condition 23.

In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with all General Activities and Summary.

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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
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

Compliance Status:

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

Period Ending 4/30/2020			
Parameter	Limitations	Reported Data	
Dowe Flats Quarry	Process Rates	3,500,000 ton/yr	468,616 tons/yr
		25,000 ton/day	2,223 tons/day
	PM	134.2 ton/yr	31.18 tons/yr
	PM ₁₀	58.4 ton/yr	12.41 tons/yr
Lyons Quarry	PM	19 ton/yr	17.10 ton/yr
	PM ₁₀	9.4 ton/yr	8.55 ton/yr
ANFO	Consumption	1,182 tons/yr	84.01 ton/yr
	NOx	10.0 tons/yr	0.24 ton/yr
	CO	39.6 tons/yr	0.93 ton/yr

The source reported the data above. The Lyons Quarry has been inactive for many years; however, particulate emissions from ongoing reclamation activities have been calculated.

- 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.

Cemex is tracking material handling on a daily basis and compiling monthly and 12-month totals as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source tracks ANFO usage on a monthly and 12-month rolling total basis as required. The reported rolling 12 month total usage is in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 1.3 PM and PM₁₀ 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 x 10 ⁻⁴	8.0 x 10 ⁻⁵	3.2 x 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 x 10 ⁻⁴	1.36 x 10 ⁻⁴	lb/ton	
Truck Unloading – Limestone Rock	0.0019	8.98 x 10 ⁻⁴	1.36 x 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.

The source calculates PM and PM10 emissions from the Dowe Flats Quarry on a 12-month rolling total basis using the factors identified above. The reported rolling 12 month total emissions are in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 1.4 PM and PM₁₀ 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:

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

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.

The source calculates PM and PM10 emissions from disturbed areas at the Lyons Quarry on a 12-month rolling total basis using the factors identified above. The reported rolling 12 month total

emissions are in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source calculates NOX and CO emissions from blasting on a 12-month rolling total basis using the factors identified above. The reported rolling 12 month total emissions are in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source performs weekly inspections of the control measures to ensure the emission control measures are in place and effective. The source maintains records of the weekly inspections and results as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

No evidence of inadequate soil moisture to control emissions from topsoil and over burden was observed during the inspection. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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).

The source has stated that disturbed areas of topsoil and overburden at Dowe Flats are minimized and reclaimed areas are re-vegetated as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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)

No fugitive emissions from material handling were observed during the inspections. Cemex employs a sprinkler system to wet the active disposal area and a water truck to control dust from haul roads. Cemex employs crews of laborers for cleaning up accumulated piles of dust on and around equipment at the plant. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Cemex is using a wind speed monitor mounted at the top of the primary crusher building to continuously record wind speeds, the control room operators evaluate the wind speed and suspend equipment operation when the wind exceeds 30 mph on a 1 hour average. The data acquisition system continuously monitors wind velocity and automatically notifies the control room operator when the wind speed exceeds 30 mph. The control room’s computer monitors have been modified to include a visual alarm to notify operators of high wind. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Speed limit signs are posted on unpaved roads as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Haul roads at the facility are compacted and no visible emissions issues were observed from vehicle traffic. Chemical dust suppressant is applied at the quarry and water trucks are used to control fugitive dust. Records were reviewed during inspections and appear to be sufficient to control fugitive emissions. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

Drilling rigs have been observed during previous inspections and were equipped with bag collectors. Source is considered to be in compliance with this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

1.6.1.9 Sequential blasting shall be employed.

Sequential blasting techniques are being employed. Cemex has contracted blasting activities out to a separate company for blasts at the quarry. Blasting activities are still being videotaped by the source to provide further evidence of this requirement. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Reclamation following extraction is the operating procedure employed by Cemex. Cemex has employed extensive reclamation activities with native plants around the facility to revegetate disturbed areas. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

The Mining and Reclamation plans are available on-site for review. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.)

Cemex postpones the loading of explosives if the wind is forecasted to exceed 20 mph. Cemex also videotapes each quarry blast to document opacity and direction of plume travel. The source has a blasting record for each day a blast occurs with a forecast report indicating wind speed and direction printed from a local weather station. In addition, the control room operator's log also includes entries of Dowe Flats and raw material handling equipment downtime during high wind events that correspond to postponed blasts. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.)

Cemex is recording each blast with video and continues to record until the opacity is dissipated below 5%. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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 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))

No visible emission issues in excess of 20% opacity and no off-property transport were noted during the inspection. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. (In Compliance)

- 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))

No visible emissions issues and no off-property transport were noted during the inspection. A revised control plan has not been requested under the provisions of Condition 1.6.2. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. (In Compliance)

- 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.

No visible emissions issues and no off-property transport were noted during the inspection. A revised control plan has not been requested. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

The Lyons Quarry is no longer being mined. However, CKD disposal and reclamation activities still persist at the site. Particulate emissions calculated for the Lyons Quarry are associated with these activities. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source monitors the daily number of haul truck trips. No exceedances were noted in the records provided. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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

The source monitors the days of operation for the Dowe Flats Quarry activities. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source maintains records of the number of blasts and whether blasts are conducted on limestone or waste rock/overburden, the number of hours the bulldozer is operated and the number of vehicle miles traveled for all vehicles used for hauling, scraping, grading and watering. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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)

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
		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.

**Compliance Status: P017- Dowe Flats Quarry
S055 - S064, Primary Crusher, Belt Conveyor, Radial Stacker to Stockpiles**

Parameter	Limitations	Reported Data
Process Rate	1,050,000 tons/yr	298,103 tons
PM	0.16 ton/yr	0.04 tons
PM ₁₀	0.07 ton/yr	0.02 tons

Cemex provided the reported data above for the rolling 12-month period ending 4/30/2020.

- 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.

The source monitors processing and conveying of raw materials at the crusher and conveyor system on a rolling 12-month total basis. The reported process rate is in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex conducted a stack test on 5/22&23/2018 on the primary crusher and a representative conveyor baghouse. The results of the test indicate compliance with the lb/ton PM emission factors in the table above and the grain loading limits in NSPS Subpart OOO (0.05 gr/dscm). Another stack test on the primary crusher and a representative conveyor baghouse will be required May 2023. Reference Method 9 readings were done simultaneously with the test runs and showed opacity of 0. Reference Method 9 readings are conducted semi-annually for as required. Nothing was discovered that indicates the source is not operating and maintaining and equipment and associated control equipment to the extent practicable using good air pollution control

practices for minimizing emissions during periods of startup, periods of shutdown, periods of malfunction, and periods of normal operations. It appears that no article, machine, equipment, or process was used to conceal an emission that would otherwise constitute a violation of an applicable standard. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

2.3 PM and PM₁₀ 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:

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

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.

Cemex is calculating emissions from material throughput on a monthly and 12-month rolling total basis as required. No exceedances of the permit limits were noted in the records provided. The baghouses are operated and maintained in accordance with the requirements in Condition 19. Cemex conducted a stack test on 5/22&23/2018 on the primary crusher and a representative conveyor baghouse. The results of the test indicate compliance with the lb/ton PM emission factors in the table above and the grain loading limits in NSPS Subpart OOO (0.05 gr/dscm). In the absence

of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

The baghouses are operated and maintained in accordance with the requirements in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 2.5 Performance tests shall be conducted every five (5) years to measure the emission rates of filterable PM and PM₁₀ 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:

$$PM = \text{crusher test result (lb/hr)} \times 8,064 \text{ hrs/yr} + 8 \times \text{conveyor test result (lb/hr)} \times 8,064 \text{ hrs/yr}$$

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

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 PM₁₀ 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, PM₁₀ = 1.26×10^{-4} lb/ton, Conveyor (total for transfer points): PM = 1.74×10^{-5} lb/ton, PM₁₀ = 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.

The source conducted a stack test on 5/22&23/2018 on points 026 & 027; within 5 years of the previous test. The protocol was submitted and the Division testing group observed and accepted the test. The results of the performance test shows that the PM and/or PM10 emission rates/factors are not greater than the relevant ones set forth in the permit; the source does not need apply for a modification to this permit. Another stack test will be required May 2023. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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))

Nothing was discovered that indicates the source is not operating and maintaining and equipment and associated control equipment to the extent practicable using good air pollution control practices for minimizing emissions during periods of start up, periods of shutdown, periods of malfunction, and periods of normal operations. It appears that no article, machine, equipment, or process was used to conceal an emission that would otherwise constitute a violation of an applicable standard. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 Baghouse Operation and Maintenance	Daily If Required (See Conditions 16.1.1.2 and 20.5.1) See Condition 19
		Certain Operating Conditions - Shall not exceed 30%			
PM Emission Control Plan	3.5			Inspection	Weekly

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



Compliance Status: 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	Limitations	Reported Data
Process Rate Front End Loader	1,050,000 tons/yr	519,102 tons
	4,170 tons/day	1,846 tons/day
Process Rate Iron Containing Material	50,000 tons/year	0
PM	15.5 tons/yr	7.32 tons
PM ₁₀	7.0 tons/yr	3.30 tons
	53 lbs/day	23.44 lbs/day

Cemex provided the reported data above for the rolling 12-month period ending 4/30/2020. Magnetite has replaced iron slag as the iron source for the kiln; therefore, no iron slag has been stored or handled

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 PM₁₀ limit is ensured based on the PM₁₀ 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.

Records provided by Cemex indicate compliance with the process rates and emissions limits stated above. Cemex is maintaining daily, monthly and rolling 12-month total as required. No exceedances of the permit limits have been noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

3.2 PM and PM₁₀ 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:



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

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.

Cemex is maintaining and calculating daily, monthly and rolling 12-month total of particulate emissions as required. No exceedances of the permit limits have been noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex monitors days of operation for these activities to determine daily throughput and emissions. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

The baghouses are operated and maintained in accordance with the requirements in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source performs weekly inspections of the control measures to ensure the emission control measures are in place and effective. The source maintains records of the weekly inspections and results as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Cemex installed a new stacker in 2009 equipped with a baghouse and a second foam system application at the transfer point to the new stacker from the two mile conveyor from Dowe Flats. Foam is first applied to material on the belt at Dowe Flats. The stacker is equipped with a “tattle-tail” sensor that maintains the stacker’s height above the stock pile and has a water spray bar to control particulate emissions at the discharge. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

The transfer points are shrouded and a dust collector capture fugitive dust and periodically release the collected material back onto the conveyor belt before the water spray nozzles. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

No material handling was observed during the inspection. The material transported during previous inspections contained adequate moisture to control emissions. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

A line is marked on the back of the primary crusher indicating the maximum drop height into the crusher. The equipment operator has been observed loading material into the hopper during previous inspections and the drop distance was minimized. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

No visible emissions issues were observed from the operation of the loader. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

The vacuum sweeper vehicle was observed on site during the inspection and no visible emissions issues were observed from vehicle use on the paved areas. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

Wind monitoring data and daily equipment operation logbooks are maintained onsite and equipment is suspended during high wind events. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Cemex is using a wind speed monitor mounted at the top of the primary crusher building at Dowe Flats to continuously record wind speeds. The data acquisition system continuously monitors wind velocity and automatically notifies the control room operator when the wind speed exceeds 30 mph. The control room's computer monitors have been modified to include a visual alarm to notify operators of high wind. The anemometer was replaced in 2008 and routine calibrations are performed semiannually. Wind speed and equipment shut down records are maintained onsite; equipment and activities are shut down when the wind speed exceeded 30 mph. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

No visible emissions in excess of 20% opacity and no off-property transport were noted during the inspection. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 Baghouse Maintenance and Operation	Daily If Required (See Conditions 16.1.1.2 and 20.5.1) See Condition 19
		Certain Operating Conditions – Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes			

**Compliance Status: S002 - Primary Crusher at Plant Site
S004 - Surge Silo**

Parameter		Limitations	Actual Data
Primary Crusher (Plant Site) (12-month period ending 4/30//2020)	Material Throughput	No limit	519,102 tons/yr
	PM	No limit	0.27 tons
	PM ₁₀	No limit	0.27 tons



Cemex provided the reported data above. Source is in compliance with calculating and reporting of monthly and annual production throughput values.

- 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.

Cemex is recording monthly and annual raw material throughput as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is calculating emissions using the raw material throughputs and the emission factors in the table above, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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)
PM ₁₀		22.8 tons/year and 6.5 lbs/hour		Recordkeeping and Calculation	Monthly
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 Monthly
NO _x		13.9 tons/year			
CO		57.3 tons/year			
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)



Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
		Certain Operating Conditions - Shall not exceed 30%		Baghouse Maintenance and Operation	See Condition 19
RACT – VOC	5.9	Process Design		Certification	Annually
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

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

Compliance Status: P002 - Raw Materials Drying (S005)

Parameter	Limitations	Reported Data
Operating Hours	7000 hrs	4,195 hrs
Dryer Feed	1,050,000 tons/yr	519,102 tons
	160 tons/hr	115.85 tons/hr
Coal Fuel	1.4 tons/hr	0.0 tons/hr
Dryer Heat Input	210,000 mmBtu/yr	35,361 MMBtu
PM	22.8 tons/yr	4.93 tons
PM ₁₀	22.8 tons/yr	4.93 tons
	6.5 lbs/hr	2.35 lbs/hr
SO ₂	36.7 tons/yr	0.03 tons
NO _x	13.9 tons/yr	4.24 tons
VOC	144.8 tons/yr	26.51 tons
CO	57.3 tons/yr	0.14 tons

Lead	1.6 tons/yr (3200lbs)	0.0002 lbs
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Cemex provided the reported data above for the rolling 12-month period ending 4/30/2020. The source conducts VOC testing on the dryer and implements emission factors to determine annual VOC emissions. The source installed a THC CEMS that was certified 6/5/2019 to demonstrate compliance with the dryer O-Hap requirements.

- 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.

Cemex is recording operating hours, feed rates and fuel consumption as required. No exceedances of the permit limits were noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is recording operating hours, feed rates and fuel consumption as required. No exceedances of the permit limits were noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex reported that natural gas was the only fuel supply used for the dryer during the inspection period. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is tracking the heat input to the dryer monthly and rolling 12-month total, the heat content of the fuel is provided quarterly, and records reviewed indicate no exceedances of the permit limits. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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 be used to determine the heat content and weight percent sulfur provided that the sampling and analysis was performed using the appropriate ASTM methods.

Cemex is tracking the heat input to the dryer monthly and rolling 12-month total, the heat content of the fuel is provided quarterly, and records reviewed indicate no exceedances of the permit limits. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

5.6 PM and PM₁₀ 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 PM₁₀)). 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 PM₁₀ emission limit shall be assessed by comparing the lb/hr PM₁₀ 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	

¹The 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.

²These 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 PM₁₀ 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.

Cemex is calculating emissions on a monthly and a rolling 12-month total basis as required. No exceedances were noted in the records provided. The source conducted PM and PM10 testing on 2/23/2018 that resulted in new emission factors of 2.35 lbs/hr for PM and 1.11 lbs/hr for PM10. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 5.7 SO₂, 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 SO₂, 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	

¹The 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.

²These 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 SO₂ emission limitations in Conditions 5.13.1.1 and 5.13.1.2 (Regional Haze NO_x and SO₂ limits), compliance with the NO_x and SO₂ 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 SO₂ monitoring) indicates compliance with the PM emission limitations in Conditions 5.13.1.1 and 5.13.1.2 (Regional Haze NO_x and SO₂ limits).

Cemex is calculating emissions on a monthly and a rolling 12-month total basis as required. No exceedances were noted in the records provided during the inspection. Cemex performed the previous stack test for lead, sulfur dioxide, nitrogen oxides, carbon monoxide, and volatile organic compounds on 6/14/2016. Testing for lead, sulfur dioxide, nitrogen oxides and carbon monoxide testing will be required by 6/14/2021, 5 years after the previous test. The source installed a new THC CEMS on the dryer that was certified 6/5/2019 to demonstrate compliance with the O-Hap

emissions. The source tests VOC every 30 months and implements emission factors to calculate annual VOC emissions. It should be noted that the source reported excessive THC monitor downtime from the dryer CEMS and it was determined by the inspector during the inspection records review that this amount of downtime is a violation of condition 5.12 & 22 (see below) and not this condition because the source uses emission factors to demonstrate compliance with the VOC emission limits as required by 5.7.2. (In Compliance)

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

The raw materials dryer is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

No modifications have been made to the dryer's operation or design. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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))

See Condition 22.

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

See Condition 23.

- 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.

The source installed a new THC CEMS, a surrogate for o-HAP, which was certified 6/5/2019. The source reported excessive THC monitor downtime (8.579%; 134 hours down of 1562 operating hours) from the dryer CEMS due to two primary causes, loss of compressed air and a sampling pump breakdown. It was determined by the inspector during the inspection records review that this amount of downtime is a violation. The source failed to demonstrate compliance with the o-HAP limits as required. See Condition 22. (Not In Compliance)

- 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 SO₂ 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. SO₂ – July 1, 2017
- c. PM - April 17, 2014 (note that the PM emission limit is included in Condition 5.6)

5.13.3 SO₂ 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 Number 3, 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 SO₂ 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 SO₂ 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)

The source maintains records of emissions on a 12-month rolling total basis. The source is using the emission factors identified in 5.7.2. The reported rolling 12 month total production is in the table above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)



6. P003 - Secondary Crushing

AIRS pt 003: Secondary Crushing and Screening (vents to S001) and S003 - #4 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) See Condition 19
		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	

**Compliance Status: P003 - Secondary Crushing
S001 - Crusher and Screen
S003 - #4 Belt Transfer**



Parameter		Limitations	Reported Data
Material Throughput		No limit	519,102 tons
P003 - Secondary Crushing	PM	No limit	0.09 tons
	PM ₁₀	No limit	0.09 tons

Cemex provided the reported data above for the rolling 12-month period ending 4/30/2020. The emissions calculations for PM and PM₁₀ are based on the emission factors stated in the permit and the actual material throughput.

- 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.

Cemex is tracking raw material throughput on a monthly and annual basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is using the correct emission factor to calculate PM and PM₁₀ emission from the Secondary Crusher activities on a monthly and annual basis as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

Wind speed and equipment shut down records are maintained onsite. This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 x 10 ⁻⁵ lb/ton (for each baghouse stack)	Recordkeeping and Calculation	Annually



Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
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) See Condition 19
		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	
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	

**Compliance Status: P004 - Raw Materials Storage
S006 through S008 - Raw Materials Storage Silos**

Parameter		Limitations	Reported Data
Material Throughput		No limit	519,102 tons
Raw Material Storage (S006, S007, S008)	PM	No limit	0.008 tons
	PM ₁₀	No limit	0.008 tons

Cemex provided the reported material throughput data above for the rolling 12-month period ending 4/30/2020. Particulate emissions are calculated on a monthly and annual basis as required.



The emissions calculations for PM and PM₁₀ are based on the emission factors stated in the permit and the actual material throughput.

- 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.

Cemex is tracking raw material throughput on a monthly and annual basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is using the correct emission factor to calculate PM and PM₁₀ emission from the Raw Material Storage areas on a monthly and annual basis as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

See Condition 22.

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	Recordkeeping and Calculation	Annually

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
			S012 - 0.019 lb/ton S013 - 0.0031 lb/ton		
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) See Condition 19
		Certain Operating Conditions – Shall not exceed 30%		Baghouse Maintenance and Operation	
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)			

Compliance Status: P005 - Raw Mill Grinding
S010 - Raw Mill
S011 - Raw Mill Auxiliary (Separator)
S012 - Raw Mill Weigh Feeder
S013 - Iron/Silica Silo

Parameter		Limit	Reported Data
Process Rate		No limit	516,098 tons
P005 - Raw Mill Grinding	PM	No limit	16.30 tons
	PM ₁₀	No limit	16.30 tons

Cemex provided the Reported Data above for the rolling 12-month period ending 4/30/2020. The emissions calculations for PM and PM₁₀ are based on the emission factors stated in the permit and the actual material throughput.

- 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.

Cemex is tracking raw material throughput on a monthly and annual basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is using the correct emission factor to calculate PM and PM₁₀ emission from the Raw Mill point sources S010, S011, S012, and S013 on a monthly and annual basis as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

See Condition 22.

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

See Condition 23.

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 x 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 Baghouse Maintenance and Operation	Daily If Required (See Conditions 16.1.1.2 and 20.5.1) See Condition 19
		Certain Operating Conditions - Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes			
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	

**Compliance Status: P006 - Homogenizing and Blending
 S014 - Homogenizing Silo
 S015 - Kiln Feed Silo**

Parameter		Limit	Reported Data
Process Rate		No limit	516,098 tons
P006 - Homogenizing and Blending	PM	No limit	0.01 tons
	PM ₁₀	No limit	0.01 tons

Cemex provided the Reported Data above for the rolling 12-month period ending 4/30/2020. The emissions calculations for PM and PM₁₀ are based on the emission factors stated in the permit and the actual material throughput.

- 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.

Cemex is tracking raw material throughput on a monthly and annual basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 9.2 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 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.

Cemex is using the correct emission factor to calculate PM and PM₁₀ emission from the Homogenizing and Blending silos on a monthly and annual basis as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

See Condition 22.

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	Annually Monthly

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
				Baghouse Operation and Maintenance	See Condition 19
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 Method 9	Continuously
		Certain Operating Conditions - Shall not exceed 30%			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



Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
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
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	

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Prohibition on Netting Credits or Offsets from Required Controls	10.21			See Condition 10.21	
Regional Haze Requirements	10.22	<p>Kiln: Opacity shall not exceed 20%. NO_x – 255.3 lbs/hr, on a 30-day rolling average and 901.0 tons/year SO₂ – 25.3 lbs/hr, on a 12-month rolling average and 95 tons/yr</p>		COMS, CEMS	Continuous

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

²40 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.

**Compliance Status: P007- Kiln, Calciner (S016)
P008 - Clinker Cooler (S018)**

Parameter		Limitations	Reported Data
Clinker Production		No limit	326,254 tons
Operating Hours		8,064 hrs/yr	5,991 hrs
Kiln Feed Rate		120 tons/hr	87.63 tons/hr
		967,680 tons/yr	517,217 tons
Fuel	Natural Gas	2,438 Mmscf/yr	307.42 Mmscf
	Coal	113,945 tons/yr	44,499 tons
PM from Kiln		133 tons/yr	2.75 tons
PM ₁₀ from Kiln		133 tons/yr	2.75 tons
NO _x		2649.0 tons/yr	219.62 tons
NO _x (Regional Haze)		901.0 tons/yr	



CO	396.0 tons/yr	131.89 tons
SO ₂	1340.0 tons/yr	10.16 tons (20,320 lb)
SO ₂ Facility Wide Limit	7.0 lbs/ton material	2.87 lbs/ton material (8/2019)
SO ₂ (Regional Haze)	95 tons/yr	10.16 tons
VOC	138.0 tons/yr	0.73 tons/yr
HCl	No limit	0.49 tons/yr
Lead	4.4 tons/yr	0.00076 tons/yr

Cemex provided the reported data above for the rolling 12-month period ending 4/30/2020. The emissions calculations are based on the continuous emission monitoring systems and emission factors derived from stack tests and stated in the permit. The source performs annual stack testing to determine annual VOC emissions. The source uses the results of the stack testing to calculate annual VOC emissions from the main kiln stack with emission factors. The source has installed, certified (9/8/2015) and maintains a THC CEMS to demonstrate compliance with the THC MACT Standards (THC – 24 ppmvd, corrected to 7% O₂) and the total organic HAP limit. The THC CEMS is not used annual tons/year limit (source performs annual stack testing to determine annual VOC emissions).

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

Cemex is recording the daily production rates, kiln feed rates, raw material consumption and clinker production rates. The daily production rates are compiled into monthly and annual records as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Cemex is tracking operating hours daily and maintaining monthly and annual records as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Cemex is tracking operating hours and the kiln feed rate as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex uses both coal and natural gas as fuel sources in the kiln and has incorporating used tires as an alternative fuel source. No TDF or pet coke has been burned in the kiln since before March 2008. Cemex tracks kiln fuel consumption and kiln feed rates on an hourly, daily, monthly and rolling 12-month total basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

No tire derived fuels (TDF) or petroleum coke/coal blends have been used during the inspection period. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

No tire derived fuels (TDF) or petroleum coke/coal blends have been used during the inspection period. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 10.5 Emissions of PM and PM₁₀ **from the kiln (P007)** shall not exceed the limits listed in the above summary table. (Construction Permit 12BO444-2). Compliance with the PM and PM₁₀ 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 = PM₁₀) 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

Cemex conducts annual performance tests on the kiln and uses the emission factors from the most recent performance test to calculate emissions as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 10.6 Annual emissions of PM and PM₁₀ **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 PM₁₀ emission factors (in lbs/ton clinker) from the most recent

performance test (assumes PM = PM₁₀) 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 PM₁₀ 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.

Cemex is calculating PM and PM₁₀ emissions from the clinker cooler using the appropriate emission factors as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The baghouses are operated and maintained in accordance with the requirements in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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”.

No tire derived fuels (TDF) have been used during the inspection period. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

During the inspection no visible emission issues were observed. No spray tower blasting with dynamite occurred during the inspection period. A straightening vane added to the spray tower has changed the airflow inside the tower reducing buildup and the need for blasting. All cleaning of the spray tower was conducted using carbox or spray cannons as reported in quarterly reports received by the Division. Cemex is monitoring opacity during startup, shutdown, process modifications and control equipment cleaning with the COMS, as required. Cemex submits quarterly COMS reports, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 (NO_x) 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.

The source monitors NO_x emissions from the kiln with a certified CEMS, as required. Cemex submits quarterly CEMS reports, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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
 $K = 7.267 \times 10^{-8}$ (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.

The source monitors CO emissions from the kiln with a certified CEMS, as required. The source reported excessive CO monitor downtime (8.769%; 99 hours down of 1129 operating hours) from the kiln CEMS due to a failed RATA from Friday 8/16/2019 – Tuesday 8/20/2019. It was determined by the inspector during the inspection records review that this amount of downtime is a violation. The source failed to monitor CO using the CO CEMS as required. (Not In Compliance)

10.12 Emissions of SO₂ **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 SO₂ annual emission limit shall be monitored using the SO₂ 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 SO₂ 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 SO₂ 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 = SO₂ concentration, dry basis, ppm
 Q_h = volumetric flow rate, wet basis, scfm
 $K = 1.660 \times 10^{-7}$ (lb/scf)/ppm
 B_{wo} = gas moisture, %

The resulting SO₂ lb/hr value is then multiplied by the unit operating time for that hour to produce a SO₂ lbs value. The hourly SO₂ lbs values shall be used as follows:

- 10.12.1.1 For use in assessing compliance with the facility wide SO₂ limit in Condition 10.13, hourly SO₂ mass emissions (lbs) shall be summed to determine daily SO₂ emissions.
- 10.12.1.2 For use in assessing compliance with the annual SO₂ emission limit in Condition 10.12, Hourly SO₂ mass emissions (lbs) shall be summed and divided by 2000 lbs/ton to determine monthly SO₂ 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 SO₂ emission limitation in Condition 10.22.1.2 (Regional Haze SO₂ limits), compliance with the SO₂ 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 SO₂ monitoring) indicates compliance with the SO₂ emission limitations in Condition 10.22.1.2 (Regional Haze SO₂ limits).

The source monitors SO₂ emissions from the kiln with a certified CEMS, as required. Cemex submits quarterly CEMS reports, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 SO₂ 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)

The source monitors SO₂ emissions from the kiln with a certified CEMS. The source provided a Facility Wide Limit Sulfur dioxide emissions pounds per ton of material (including fuel). The highest 24-hour period of daily NO_x pounds per ton of material (including fuel) processed emissions noted during the inspection period is in the table above. (In Compliance)

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.

The source performs annual stack testing to determine annual VOC emissions. The source uses the results of the stack testing to calculate annual VOC emissions from the main kiln stack with emission factors. No TDF have been used during the inspection period. The most recent stack tests was conducted on 8/16/2019. It should be noted that the source has installed, certified (9/8/2015) and maintains a THC CEMS to demonstrate compliance with the THC MACT Standards (THC – 24 ppmvd, corrected to 7% O₂) and the total organic HAP limit. The THC CEMS is not used annual tons/year limit (source performs annual stack testing to determine annual VOC emissions). See condition 22. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source most recently conducted a VOC stack test 8/16/2019 that was approved by the Division. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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, SO₂, NO_x (including diluent gas either CO₂ or O₂), 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 SO₂, 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.

The source maintains and operates continuous monitor systems to monitor and track emissions of NO_x, SO₂ (including diluent gas), CO, opacity and flow from the kiln and opacity from the clinker cooler exhaust stream. The CEMS and COMS meet the requirements in Condition 18. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

¹The 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.

The source reported the most recent stack test for lead from the kiln was conducted on 8/31/2016 and the emission factors from the most recent performance test are used in a rolling twelve month total. Another stack test for lead will be required August 2021. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source operates the kiln and clinker cooler as designed. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

See Condition 22.

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

See Condition 23.

- 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 is 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)

The source operates a non-selective catalytic reduction unit. The source reported the control devices is inspected, monitored, maintained / renewed, and operated as per the manufacturers' recommendations, or maintained in accordance with good air pollution control practices to ensure the satisfactory performance of the devices. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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)

This condition is informational only, it does not have any actionable items nor does it require the source to provide any records to demonstrate compliance. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 SO₂ 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. SO₂ – December 31, 2017
- c. PM – May 15, 2014

10.22.3 SO₂ 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 SO₂, NO_x and diluents, if diluent is required. The CEMS shall be used to determine compliance with the SO₂ 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 SO₂ 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 NO_x and SO₂ 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))

The source maintains and operates continuous monitor systems to monitor and track emissions of NO_x, SO₂, opacity and flow from the kiln. During the inspection no visible emissions issues were observed. Cemex is monitoring opacity during startup, shutdown, process modifications and control equipment cleaning with the COMS, as required. Cemex submits quarterly CEMS reports, as required. (In Compliance)

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.

The source maintains and operates COMS to monitor and track opacity from the kiln. The COMS meet the requirements in Condition 18. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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			



Parameter	Permit Condition Number	Limitations		Emission Factors	Monitoring	
					Method	Interval
		P011	Overall Fresh Feed to Mill: 631,600 tons/year 4,500 tons/day 15,000 tons/year limestone			
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			
			PM ₁₀ : 8.65 tons/year 48 lbs/day			
					Recordkeeping and Calculation	Monthly



Parameter	Permit Condition Number	Limitations		Emission Factors	Monitoring				
					Method	Interval			
		P012	PM: 21.9 tons/year		Performance Tests	Every Five (5) Years			
			PM ₁₀ : 10.95 tons/year 107 lbs/day						
		P013	PM: 12.3 tons/year						
			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 distance						
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			



Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
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	

Compliance Status: P009 - Clinker/Gypsum Silos and Weigh Feeders

P010 - Sheltered Clinker Storage Stockpile with Underground Reclamation

P015 - Outdoor Clinker Storage, and Handling of Clinker with Front End Loaders (formerly 10A)

P011 - Cement Finish Mill and Bucket Elevator/Auxiliaries

P012 - High Efficiency Separator (Classifier) and Baghouse Collector

P013 - Cement Storage Silos/Packhouse/Loadout

Parameter	Source	Limitations	Reported Data
Process Limits	P009	600,000 tons/yr	319,473 tons
		4,000 tons/day	1,119 tons/day
	P010	600,000 tons/yr	326,254 tons
		5,500 tons/day	1,119 tons/day
	P015	180,000 tons/yr	32,625 tons
		5,500 tons/day	111.91 ton/day
	P011	631,600 tons/yr	339,767 tons
		4,500 tons/day	1,196 tons/day
		15,000 tons/yr (limestone)	6,333 tons
	P012	631,600 tons/yr	249,747 tons
		4,500 ton/day	2,796 tons/day
		161,280 tons/yr (SEP baghouse)	147,360 tons
	P013	681,600 tons/yr	349,215 tons
		4,500 ton/day	1,435 tons/day
Operating Hours		8,064 hrs/yr	5,991 hrs



Parameter	Source	Limitations	Reported Data
PM	P009	9.3 tons/yr	4.12 tons
	P010	21.96 tons/yr	12.30 tons
	P011	17.05 tons/yr	9.03 tons
	P012	21.9 tons/yr	11.71 tons
	P013	12.3 tons/yr	2.00 tons
	P015	2.05 tons/yr	1.24 tons
PM ₁₀	P009	4.65 tons/yr	2.07 tons
		52 lbs/day	14.44 lbs/day
	P010	10.98 tons/yr	6.15 tons
		201 lbs/day	38.02 lbs/day
	P011	8.65 tons/yr	4.29 tons
		48 lbs/day	29.54 lbs/day
	P012	10.95 tons/yr	5.85 tons
		107 lbs/day	40.29 lbs/day
	P013	6.2 tons/yr	1.01 tons
		43 lbs/day	8.28 lbs/day
	P015	0.92 tons/yr	0.11 tons
		78 lbs/day	1.24 lbs/day

Cemex provided the Reported Data above for the rolling 12-month period ending 4/30/2020. The emissions are calculated based on daily, monthly and yearly material throughputs.

- 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.

Cemex is tracking the amount of clinker handled daily, monthly, and rolling 12-month total as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is tracking the hours of operation on a daily, monthly, and rolling 12-month total as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Days of operation are used to determine daily throughput and emissions. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 11.4 PM and PM₁₀ 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 PM₁₀ 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 PM₁₀ 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.

For all but BH 725-28 (S069/SEP baghouse): The PM and PM₁₀ 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 PM₁₀ 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 725-28 (S069/SEP baghouse): The PM and PM₁₀ 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 PM₁₀ 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 PM₁₀ emission limitations shall be monitored by dividing the monthly PM₁₀ 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 PM₁₀. 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 PM₁₀ 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 PM₁₀ 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.

Monthly PM and PM10 emissions are calculated using the appropriate emission factors. No exceedances of the permit limits have been noted. The source conducts performance tests to measure the emission rates of filterable PM and PM10 in accordance with the appropriate EPA Test Methods. The source tracks VMT for use in the emission calculations. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

See Condition 20.

- 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 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.

No opacity or off property transport was observed from the outdoor clinker area. The source performs weekly inspections of the control measures to ensure the emission control measures are in place and effective. The source maintains records of the weekly inspections and results as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)).

No opacities in excess of 10% have been documented from sources subject to this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

See Condition 23.

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.

See Condition 22.

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		Visible Emission Observation	Daily



		provided for below		Method 9	If Required (See Conditions 16.1.1.2 and 20.5.1) See Condition 19
		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	
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	

**Compliance Status: 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		Limitations	Reported Data
S019	Coal Feed	No limit	49,439,627 tons
	PM	No limit	0.0022 tons
	PM ₁₀	No limit	0.0022 tons

Cemex provided the Reported Data above for 2018 and the rolling 12-month period ending 4/30/2020. The emissions are calculated based on daily, monthly and yearly material throughputs.

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.



The source is tracking emissions on a monthly and annual basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 x 10 ⁻⁵ lb/ton	2.9 x 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 x 10 ⁻⁵ lb/ton	2.9 x 10 ⁻⁵ lb/ton		
Limestone	2.9 x 10 ⁻⁵ lb/ton	2.9 x 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.

The source is calculating emissions using the raw material throughputs and the emission factor below, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Compliance with the PM limit is presumed because baghouses are operated and maintained in accordance with the requirements specified in Condition 19. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 20. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

See Condition 22.

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



Parameter	Permit Condition Number	Limitations		Emission Factors	Monitoring	
					Method	Interval
		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
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				
	13.10				See 40 CFR Part 63 Subpart LLL (Condition 22)	



Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
MACT Requirements		O & M Plan Requirements		See Conditions 22.10 and 22.11	

Compliance Status: P007A - Handling and Processing of CKD And Raw Material Waste Dust
S001 - Waste Dust Silo
S066 - Cement Silo A5
S067 - CKD Loading Spout
041 - Pug Mill
042 - Truck Hauling to Lyons Quarry

Parameter		Limitations	Reported Data
Process Rate	S001, S066, S067	133,000 tons/yr	9,730 tons
		600 tons/day	34.67 tons/day
	041	133,000 tons/yr	9,730 tons
		600 tons/day	34.67 tons/day
	042	173,403 tons/yr	201.29 tons
		800 tons/day	20.83 tons/day
PM	S001, S022, S066, S067	19.95 tons/yr	8.31 tons
	041	2.66 tons/yr	0.09 tons
	042	5.50 tons/yr	0.00607 tons
PM ₁₀	S001, S066, S067	9.98 tons/yr	4.26 tons
		69.5 lbs/day	29.51 lbs/day
	041	2.66 tons/yr	0.09 tons
		24.00 lbs/day	0.67 lbs/day
	042	2.50 tons/yr	0.0028 tons
		23 lbs/day	0.02 lbs/day
Hours of Operation	S001	8064 hours/yr	5,991 hours

Cemex provided the Reported Data above for the rolling 12-month period ending 4/30/2020. The emissions are calculated based on daily, monthly and yearly material throughputs.

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.

Cemex is maintaining the number of operating days per month and the process rates on a daily, monthly, and rolling 12-month total basis, as required. No exceedances of the permit limits are noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

13.2 PM and PM₁₀ 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 PM₁₀ 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 PM₁₀ limitations shall be monitored by dividing the monthly PM₁₀ emissions by the number of days the unit was operated.

Control efficiencies of 95% for PM and 80% for PM₁₀ 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 PM₁₀ 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 PM₁₀ 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 PM₁₀ 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 PM₁₀ emission factor shall be the baghouse grain loading specified in the table below.

Monthly emissions of PM and PM₁₀ 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 PM₁₀ limitations shall be monitored by dividing the monthly PM₁₀ emissions by the number of days the unit was operated.

Cemex is using the above emission factor and control efficiencies to calculate PM and PM₁₀ emissions from the pug mill and pelletizing machines which appeared to be operated and maintained according to manufacturer's recommendations and good engineering practices. Cemex is using the maximum design flow rate of the control devices and emission rates determined from a stack test conducted on 4/21/2016 to calculate the emissions and demonstrate compliance with the permit limits of the silos and spout loading. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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 PM₁₀. 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 PM₁₀ 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.

A stack test was performed on BH 225-3 on 4/7/2011 demonstrating compliance with the PM grain loading (gr/dscf) limits. A stack test was performed on BH 525-28 on 4/21/2016 demonstrating compliance with the PM grain loading (gr/dscf) limits. Another stack test will be required April 2021. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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 PM₁₀ limitations shall be monitored by dividing the monthly PM₁₀ 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.

Cemex is calculating PM and PM10 emissions from truck hauling vehicle miles traveled using the appropriate emission factors and control efficiencies. Cemex is applying the control measures of 13.7.1 as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Differential pressures are recorded weekly to determine proper operation and ensure compliance with the emissions limit. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)



- 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.

Cemex is maintaining a rolling 12-month total of hours of operation from these sources. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

Cemex is maintaining the number of operating days per month and the process rates on a daily, monthly, and rolling 12-month total basis, as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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))

No opacities in excess of 10% have been documented from sources subject to this condition. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

See Condition 20.

- 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 hygroscopic materials to minimize fugitive emissions.
- b. Signage or berms shall be used to delineate the 3 acre active disposal area.

Cemex monitors wind speed continuously. Records of suspended operations during high wind events are maintained. Cemex operates an automated sprinkler system set to water for 10 minutes every two hours. The sprinklers appear to be effectively controlling emissions from the disposal site. No fugitive dust was observed during the inspection. Cemex operates a water truck at the plant following the above requirements. Water truck is operated each day except when there is precipitation or freezing or when repairs on the vehicles are required. Water trucks have been observed watering the active disposal site during inspections when sprinklers were not in use. Cemex has reduced the size of the active disposal to less than approximately one acre and the remaining area in the quarry was capped with material (waste shale) to control fugitive emissions. Cemex treats unpaved haul roads with calcium chloride several times per year. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

No visible emissions issues were noted from these sources and no off-property transport was observed during the inspection. The source has not been required to submit a written plan to the Division for the control of fugitive particulate emissions from a source that is a source of activity which is subject to Section III.D. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

Only C Pit is used for CKD and Beneficiation Dust disposal. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

See to Condition 23.

- 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.

See Condition 22.

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.

Records provided by Cemex show the source is tracking the amount of materials hauled, number of vehicle miles traveled per year for both empty and loaded trucks, and calculating the tons of particulate matter. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 14.2 For APEN reporting purposes, annual PM and PM₁₀ 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.

Cemex is calculating emissions on an annual basis as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.)

Cemex performs daily visible emission observations as part of their daily walk through and CAM requirements and maintains records of all documented observations. It should be noted that there have been numerous complaints received by the Division and Boulder County and Cemex maintains a record of complaints received as well as their response and corrective action. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 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.

Cemex treats unpaved haul roads with calcium chloride semiannually. Records reviewed during previous inspections indicate the dust suppressant solution has a calcium chloride concentration of 28-45% and treatments were applied twice per year. Watering at Dowe Flats is conducted daily with a dedicated water wagon at the mine to be used when the mine is in operation. There is no indication that fugitive dust from the unpaved haul roads at Dowe Flats was not adequately minimized. Cemex is operating a truck wash, as required, and trucks are channeled through the truck wash with barricades after loading with cement. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

Parameter	Permit Condition Number	Limitations	Compliance Emission Factor	Monitoring	
				Method	Interval
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.

**Compliance Status: T001 - Gasoline Storage Tank
3,000-Gallon Capacity**

Parameter	Limitations	Reported Data
VOC	No limit	0.15 tons

Cemex is recording fuel throughput and calculating emissions on a monthly and rolling 12-month total basis. Cemex provided the reported data in the table above for the rolling 12-month period ending 4/30/2020.

- 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.

Cemex's gasoline storage tank is equipped with a submerged fill pipe and a vapor return hose that is connected to the tanker truck to capture the vapors displaced by the tank filling procedure. Fuel delivery was not observed during the inspection, however, previous inspections reviewed the standard operating procedure for Cemex employees is to observe the fuel delivery and verify the use of the vapor return lines to minimize emissions. No evidence of gasoline intentionally spilled or allowed to evaporate was observed. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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))

Cemex maintains records of daily inspections for visible emissions from 5 observation points. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

The source reported the cold cleaners are operated and maintained according to the requirements above. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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, SO₂ and diluent (CO₂ or O₂) 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, SO₂ 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 SO₂ CEMS for 40 CFR Part 63 Subpart LLL HCl limit

18.5.1 The span value for the SO₂ CEMS monitor is the SO₂ 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 SO₂ 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 SO₂ CEMS, including quarterly accuracy determinations for monitors, and daily calibration drift tests.
(60.63(f)(5))

The CEMS are installed and maintained in accordance with the requirements in 40 CFR Part 60 as required. The source certified a THC CEMS 6/5/2019 that was installed on the Raw Material Dryer to demonstrate compliance with O-Hap requirements; stack tests are conducted to determine annual VOC emissions. Annual RATAs were performed as required. Calibrations are performed daily. COMS are installed and maintained in accordance with the requirements in 40 CFR Part 60. The source maintains a CEMS/COMS QA/QC plan. The COMS DAHS calculates opacity based on 6 minute block periods as required. 1-hour averages are computed as required. The source submitted EERs on-time. The source reported excessive THC monitor downtime (8.579%; 134 hours down of 1562 operating hours) from the dryer CEMS due to two primary causes, loss of

compressed air and a sampling pump breakdown. It was determined by the inspector during the inspection records review that this amount of downtime is a violation. The source failed to demonstrate compliance with the VOC/THC emissions as required by 22.13.5, 22.20, and 22.35.1. The source did not demonstrate total organic HAP compliance as required by 22.23.9 and 22.36. The source reported excessive CO monitor downtime (8.769%; 99 hours down of 1129 operating hours) from the kiln CEMS due to not meeting the Gas RATA requirements on CO ppmvd during the initial 8/16/2019 RATA. The monitor was brought back into control by re-certifying the instrument with a full RATA by end of day 8/20/2019. It was determined by the inspector during the inspection records review that this amount of downtime is a violation. The source failed to continuously operate the continuous monitoring systems to monitor VOC/THC from the dryer and CO from the kiln as required by condition 18.2. (Not In Compliance)

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.

The differential pressure change across the baghouses (kiln and clinker cooler) is monitored continually from the control room. Cemex conducts weekly inspections of the baghouses and all maintenance activities are tracked by work order requests. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

The sources, which are referred to this Condition throughout this permit, are below.

AIRs pt 027: S055, Primary Crusher (Quarry)

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

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

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

AIRs pt 002: S005 Raw Materials Dryer

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

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

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

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

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

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 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

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

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

AIRs pt 050: Cement Rail Car Unloading and Handling System – hopper, screw conveyor and pneumatic transfer system

Cemex maintains records of daily inspections for visible emissions as required. None of those sources, which are referred to this Condition throughout this permit, reported documented opacity emissions in exceedance of this condition. (In Compliance)

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.

The sources, which are referred to this Condition throughout this permit, are below.

AIRs pt 002: S005 Raw Materials Dryer

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 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

AIRs pt 049: S001 – Waste Dust Silo, S022 – Kiln Return Dust Silo, S066 – Cement Silo A5

The source has submitted testing protocols to the Division prior to the testing and stack tests have been conducted for each emission point as required. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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 effect 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 than 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 SO₂ CEMS to establish an SO₂ operating level during your initial and repeat HCl performance tests and monitor the SO₂ 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 SO₂ emissions using a CEMS in accordance with the requirements of §63.1350(l)(3) (Condition 22.38.1). You must establish an SO₂ 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 §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)(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 SO₂ Monitoring.* If you choose to monitor SO₂ 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 SO₂ 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 SO₂ emissions limit by operating an SO₂ 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 SO₂ concentration (as calculated from the average output) during the 3-hour test must be calculated. You must establish your SO₂ 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 SO₂ 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 SO₂ CEMS measurement scale must be capable of reading SO₂ 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 SO₂ CEMS signal to your HCl concentration corrected to 7 percent O₂ by using the SO₂ CEMS instrument zero, the average SO₂ 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 SO₂ operating limit, you must record the SO₂ CEMS output data for all periods when the process is operating and the SO₂ CEMS is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the SO₂ 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 SO₂ level exceeds by 10 percent or more your site-specific SO₂ 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 SO₂ 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 SO₂ 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) (Conditions 22.33.1.1 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 have 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, you 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). (63.1350(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 SO₂ 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 SO₂ emissions, monitor SO₂ emissions continuously according to the requirements of §60.63(e) and (f) of part 60 subpart F of this chapter. If SO₂ levels increase above the 30-day rolling average SO₂ 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 SO₂ value conduct an inspection and take corrective action to return the SO₂ 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 SO₂ 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 SO₂ 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). (63.1353(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)

The sources, which are referred to this Condition throughout this permit, are below.

- **P002 - Raw Materials Drying (AIRs pt 002: S005 Raw Materials Dryer)**
- **P004 - Raw Material Storage Silos (AIRs pt 004: S006 through S008 - Raw Materials Storage Silos)**
- **P005 - Raw Material Grinding (AIRs pt 005: S010 - Raw Material Grinding, S011 – Raw Material Separator, S012 – Raw Mill Feeders and S013 - Iron/Silica Silo)**
- **P006 - Homogenizing and Blending (AIR pt 006: S014 - Homogenizing Silo and S015 Kiln Feed Silo)**
- **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)**
- **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)**
- **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)**

- 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)
- P050 - Cement Rail Car Unloading System (AIRs pt 050: Cement Rail Car Unloading and Handling System – hopper, screw conveyor and pneumatic transfer system)

There is no evidence of circumvention. Cemex has conducted several stack tests to demonstrate compliance with the D/F emissions requirements at specific temperatures; testing is required every 30 months. The conducted D/F stack testing on the kiln 2/7/2017; the next test was required by 8/7/2019. The source conducted D/F stack testing on the kiln late on 8/21/2019 that was rejected because each test run failed to achieve the required sample volume (see Enforcement Case # 2019-197). The source conducted D/F stack testing on the kiln 10/3/2019 that was approved by the Division; the next D/F stack testing on the kiln will be required by 4/3/2022. Cemex is performing quarterly calibrations of each thermocouple as required. Cemex has programmed into the FLS control system an automatic shutdown of the kiln when temperatures are approaching the temperature limit at each baghouse to prevent temperature exceedances. Kiln operators receive annual training as required. The source has installed a new sorbent trap based continuous emissions monitoring system for monitoring mercury. Cemex has submitted the results of all performance tests, opacity readings, startup, shutdown and malfunctions. The source performs annual stack testing to determine annual VOC emissions. The source uses the results of the stack testing to calculate annual VOC emissions from the main kiln stack (see condition 10.14). The source has installed, certified (9/8/2015) and maintains a THC CEMS to demonstrate compliance with the THC MACT Standards (THC – 24 ppmvd, corrected to 7% O₂) and the total organic HAP limit. The source installed a new THC CEMS on the dryer that was certified 6/5/2019. The source reported excessive THC monitor downtime (8.579%; 134 hours down of 1562 operating hours) from the dryer CEMS due to two primary causes, loss of compressed air and a sampling pump breakdown. It was determined by the inspector during the inspection records review that this amount of downtime is a violation. The source failed to demonstrate compliance with the VOC/THC emissions as required by 22.13.5, 22.20, and 22.35.1. The source did not demonstrate total organic HAP compliance as required by 22.23.9 and 22.36. The source reported visible emissions that lasted approximately 34 minutes from the kiln hood and clinker cooler areas on 10/22/2019 due to a kiln push involving the flushing of the uncooked raw material feed through the kiln and into the clinker cooler demonstrating that control equipment and monitoring equipment is not operated and maintained in a manner consistent with good air pollution control practices for minimizing emissions. It should be noted this event occurred prior to the source's incorporation of a system pressure interlock (to automate shutdown of fuel and feed if positive pressures are registered) that was implemented following the previous inspection findings. The source reported that these events are not 100% avoidable and actions to minimize dusting from such events have been taken. They have installed interlocks and alarms on the inlet and outlet of the coal mill to monitor high/low temperatures and high/low pressures associated with changes in coal feed, installed interlocks and alarms on the Kiln Drive for low amperages, and installed process controls to automate and provide immediate reductions in kiln feed and fuel usage. The source failed to demonstrate that control equipment and monitoring equipment is operated and maintained in a manner consistent with good air pollution control practices for minimizing



emissions as required by 22.15. The source failed to demonstrate compliance with the VOC/THC emissions as required by 22.13.5, 22.20, and 22.35.1. The source did not demonstrate total organic HAP compliance as required by 22.23.9 and 22.36. (Not In Compliance)

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/PM₁₀ 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	
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



Source	Condition/Limit
S022 – Kiln Return Dust Silo	7.7 tpy, 69.5lbs/day PM ₁₀
S066 – Cement Silo A5	For S066 PM only

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 or 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 require 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).

The source did not report any CAM events during the reporting period. Cemex is following the CAM procedures identified above. Cemex performs daily visible emission observations and pressure differential readings on the CAM listed sources and records the results in a daily log. For the kiln and clinker cooler, daily COM reports with 6-minute averages are printed and added to the daily records. To date, the Division has not requested Cemex develop and implement a Quality Improvement Plan (QIP) based upon the corrective action response and information available for each excursion. The Division will continue to monitor excursions from the CAM rule and may require a QIP be developed in the future. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Opacity	24.4	Shall not exceed 20%, except as provided for below		Visible Emission Observation	Daily
		Certain Operating Conditions -Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Method 9	If Required (See Conditions 16.1.1.2 and 20.5.1)
				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.	

Compliance Status: P050 – Cement Rail Car Unloading System

Parameter	Limitations	Reported Data
Process Rates	50,000 tons/yr	0 tons
PM	0.6 ton/yr	0.0 tons
PM ₁₀	0.4 ton/yr	0.0 tons

Cemex provided the reported data above for the rolling 12-month period ending 4/30/2020. No railcar unloading has occurred since 2007.

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 PM₁₀ 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 PM₁₀ emission limitation). Compliance with the PM and PM₁₀ 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)

Cemex is calculating monthly and rolling 12-month totals of particulate emissions from the rail car unloading system using the above emission factors and control efficiencies. No railcar unloading has occurred since 2007 and therefore was not observed during the inspection. However, the system is equipped with a pulse jet fabric filter baghouse, as required, and has a pressure gauge to monitor negative pressure during railcar unloading. The O&M Plan states that Cemex will perform monthly Method 22 emission observations, as well as operational maintenance (i.e. check for leaks, evaluate equipment operation, check differential pressure, and check for dust in control equipment exhaust). In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

This point is meeting the opacity requirements outlined in Condition 21. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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))

No railcar unloading has occurred since 2007. The source was not operating at the time of this inspection and no visible emissions issues were noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

No railcar unloading has occurred since 2007. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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			



Parameter	Permit Condition Number	Limitations*	Compliance Emission Factor	Monitoring Method Interval	
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.

**Compliance Status: LIS-1: Lime Storage Silo
LIS-2: Lime Weigh Hopper**

Parameter	Limitations	Reported Data
LIS-1 PM/ PM₁₀/ PM_{2.5}	0.004 tons/yr	0.000000 tons/yr
LIS-2 PM/ PM₁₀/ PM_{2.5}	0.004 tons/yr	0.0000905 tons/yr
LIS-1 Lime Processed	12,096 tons/yr	296.88 tons/yr
LIS-2 Lime Processed	12,096 tons/yr	296.88 tons/yr

Cemex provided the Reported Data above for the rolling 12-month period ending 4/30/2020. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

25.1 Particulate Matter (PM, PM₁₀ 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:

$$\text{Tons/month} = \frac{\text{EF (lbs/hr)} \times \text{monthly throughput (tons/month)}}{2000 \text{ lbs/ton}}$$

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.

Cemex is using emission factors to calculate PM, PM₁₀ and PM_{2.5} emissions from the Kiln Control Device Support Equipment. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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.

Cemex is maintaining the quantity of lime processed through the lime silo (LIS-1) and the lime weigh hopper (LIS-2) on a monthly and rolling 12-month total basis, as required. No exceedances of the permit limits are noted. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

No visible emission issues or off-property transport were noted during the inspection. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. (In Compliance)

- 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.

Cemex is maintaining hours of operation. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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.

The source reported the baghouses are operated and maintained in accordance with the manufacturer's recommendations and good engineering practices. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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 or 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)).

The source has constructed and operates the lime silo (LIS-1) and the lime weigh hopper (LIS-2). . In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

- 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)

The Notice of Startup was received 7/13/2016 reporting a startup of 7/1/2016. The source provided notice to the Division within fifteen calendar days after the date on which commencement of operation took place. (In Compliance)

- 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.

Submittal of the first required semi-annual monitoring report after startup of these units serves as the self-certification for the newly installed lime silo and lime weigh hopper (In Compliance)

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 <i>ZZZZ</i> 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		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			
NSPS Subpart III	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 III		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.

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. Compliance with applicable requirements is not addressed in this report.

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).

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. Compliance with applicable requirements is not addressed in this report.

26.2 Sulfur Dioxide (SO₂) 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 SO₂ emission limitation shall be presumed since only diesel fuel is permitted to be used as fuel in these engines.

Without evidence to the contrary, compliance is presumed since diesel fuel is the only permitted fuel for these engines. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this Condition. (In Compliance)

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

Cemex provided records of each engines operating hours on a 12-month rolling basis. The reported hours for period ending 4/30/2020 are in the table below. The source provided records that reported no operation in 2019 from Flood Response Engine EGEN-LYO-3 (99 HP Flood Response Cummins Model No. 4BTAA3.3G7 Diesel) but also reported a method 9 was performed on the unit. The source was asked to explain how a method 9 was conducted on the unit that did not operate in 2019. The source reported “The Method 9 was performed on 12/12/2019 to fulfill calendar year Method 9

requirements, but EGEN-LYO-3 was not put into service during 2019. Accordingly, I have updated the Lyons Plant Emissions Inventory to reflect 0.5 hours in December 2019”; the updated inventory was not provided. It should be noted that condition 26.5.4.3 states “If an engine is not operated during the annual (calendar year) period, then no opacity observation is required”. It is unclear why the engine was operated solely for the purpose of conducting a method 9 and it is very concerning that operation is not being accurately monitoring, tracked, recorded &/or reported; see condition 26.5. Hours of operation for each engine are not accurately monitoring, tracked, recorded &/or reported. (Not In Compliance)

Unit	Plant ID (Permit)	Plant ID (Records)	SN	Limit (hours)	Reported 12-month rolling (hours)	Reported Cal Yr 2019	Reported 12-month rolling NOx (tons)
John Deere 90 HP A-pit Pump Model JD-APP01 Diesel	A-pit Pump (053)	EGEN-LYO-1	JD-APP01		95.00	55.90	0.13
John Deere 80 HP 6" Pump Model No. T0404045DF150 Diesel	Dowe Flats 6" Pump (XA)	EGEN-DF-1	T04045D703049	806	49.60	45.15	0.06
John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel	Dowe Flats 8" Pump (XA)	EGEN-DF-2	R121402/97109251	768	484.97	590.90	0.63
230 HP Donkey Aux Drive Motor Natural Gas [Maintenance + Non-Emergency Hours]	Kiln Donkey Engine (XA)	EGEN-LYO-2	None Available	100	0.00	17.75	0.53
230 HP Donkey Aux Drive Motor Natural Gas [Other Non-Emergency Hours]				50	0.00	17.75	



230 HP Donkey Aux Drive Motor Natural Gas Hours [hr/yr]				1,216	160.35	213.00	
99 HP Flood Response Cummins Model No. 4BTAA3.3G7 Diesel [Maintenance + Non- Emergency Hours]	Flood Response Engine (XA)	EGEN- LYO-3	75021552	100	0.00	0.00	0.00037 0
99 HP Flood Response Cummins Model No. 4BTAA3.3G7 Diesel [Other Non- Emergency Hours]				50	0.00	0.00	
99 HP Flood Response Cummins Model No. 4BTAA3.3G7 Diesel Hours [hr/yr]				2,615	1.08	0.00	
John Deere, Model No. T0404045DF15 084 HP 8" Pump Diesel Hours [hr/yr]	Dowe Flats 8" Pump (XA)	EGEN- DF-3	T04045T532755		59.60	86.86	0.08
Caterpillar, Model No. C7 225 HP 6" Pump Diesel Hours [hr/yr]	Catterpill ar C7 Diesel 225 hp 6" Pump	EGEN- DF-4	JTF14716		68.80	25.80	0.09
Honda GX340 10.7 HP 4" Trash Pump	4" Trash Pump	EGEN- DF-5	None Provided		0.00	0.00	0.00



(4x4) Engine Diesel Hours [hr/yr]							
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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:

$$\text{Emissions (tons/yr)} = \frac{\text{EF (lb-hp-hr)} \times \text{annual hours of operation (hr/yr)} \times \text{max hp}}{2000 \text{ lb/ton}}$$

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.

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). The reported emissions are in the table above. The 2018 inspection identified 8 engines on site and one had exceeded the APEN threshold; an APEN was received 5/30/2019. For the purposes of this inspection report the source is in compliance. (In Compliance)

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.

The sources were not operating at the time of this inspection and no visible emissions issues were noted. The source conducted one Method 9 reading on each engines that operated in 2019 with no exceedances noted. It was noted while reviewing the records provided by the source that a second 6-minute Method 9 was not performed on the Dowe Flats 8" Pump EGEN-DF-2 (John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel) that was operated for more than 250 hours in 2019. The source reported "On 11/18/2019, the unit went Out of Service and the second Method 9 to close out 2019 was unable to be performed". The source provided records that reported no operation in 2019 from the Flood Response Engine EGEN-LYO-3 (99 HP Flood Response Cummins Model No. 4BTAA3.3G7 Diesel) but also reported a method 9 was performed on the unit. The source was asked to explain how a method 9 was conducted on the unit that did not

operate in 2019. The source reported “The Method 9 was performed on 12/12/2019 to fulfill calendar year Method 9 requirements, but EGEN-LYO-3 was not put into service during 2019. Accordingly, I have updated the Lyons Plant Emissions Inventory to reflect 0.5 hours in December 2019”; the updated inventory was not provided. It should be noted that condition 26.5.4.3 states “If an engine is not operated during the annual (calendar year) period, then no opacity observation is required”. It is unclear why the engine was operated solely for the purpose of conducting a method 9 and it is very concerning that operation is not being accurately tracked, recorded &/or reported; see condition 26.3. A second 6-minute Method 9 was not performed on EGEN-DF-2 as required by 26.5.4.2. (Not In Compliance)

Unit	Plant ID (Permit)	Plant ID (Records)	SN	Reported Cal Yr 2019	M9 Reading Date(s)
John Deere 90 HP A-pit Pump Model JD-APP01 Diesel	A-pit Pump (053)	EGEN- LYO-1	JD-APP01	55.90	7/9/2019 6/26/2020
John Deere 80 HP 6" Pump Model No. T0404045DF150 Diesel	Dowe Flats 6" Pump (XA)	EGEN- DF-1	T04045D703049	45.15	3/30/2019 4/23/2020
John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel	Dowe Flats 8" Pump (XA)	EGEN- DF-2	R121402/97109251	590.90	6/25/2019
99 HP Flood Response Cummins Model No. 4BTAA3.3G7 Diesel [Maintenance + Non-Emergency Hours]	Flood Response Engine (XA)	EGEN- LYO-3	75021552	0.00	12/12/2019 (No operation reported in 2019) 6/26/2020
99 HP Flood Response Cummins Model No. 4BTAA3.3G7 Diesel [Other Non-Emergency Hours]				0.00	
99 HP Flood Response Cummins Model				0.00	



No. 4BTAA3.3G7 Diesel Hours [hr/yr]					
John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel Hours [hr/yr]	Dowe Flats 8" Pump (XA)	EGEN- DF-3	T04045T532755	86.86	3/30/2019
Caterpillar, Model No. C7 225 HP 6" Pump Diesel Hours [hr/yr]	Catterpillar C7 Diesel 225 hp 6" Pump	EGEN- DF-4	JTF14716	25.80	3/30/2019 4/23/2020
Honda GX340 10.7 HP 4" Trash Pump (4x4) Engine Diesel Hours [hr/yr]	4" Trash Pump	EGEN- DF-5	None Provided	0.00	NA (No operation reported)

26.6 The **flood response engine** is subject to the requirements in 40 CFR Part 60 Subpart III, “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 III as of the latest revisions to 40 CFR Part 60 Subpart III 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 III.

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 III 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).

The source provided manufacturer emissions conformity sheets at the time of permit drafting to demonstrate compliance with the emissions limits. Only diesel fuel meeting the requirements of the standard is burned. No evidence was observed during the inspection to indicate that they are not operating a manner consistent with good air pollution control practices for minimizing emissions. No evidence was observed during the inspection to indicate that the source was attempting to conceal emissions. The source tracks start up, shutdown and malfunction events. In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with this condition. (In Compliance)

- 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))

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. Compliance with applicable requirements is not addressed in this report.

SECTION III - Permit Shield

In the absence of credible evidence and without indications to the contrary, source is presumed in compliance with the Permit Shield. (In Compliance)

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.

The source failed to report that a second 6-minute Method 9 was not performed on the Dowe Flats 8” Pump EGEN-DF-2 (John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel) that was operated for more than 250 hours in 2019. (Not In Compliance)

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.

The source failed to report that a second 6-minute Method 9 was not performed on the Dowe Flats 8" Pump EGEN-DF-2 (John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel) that was operated for more than 250 hours in 2019. (Not In Compliance)

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.

Based on statements made by the source, observations made at the time of the inspection, a review of source records and with no evidence to the contrary, the source is presumed to operate in compliance with the General Permit Conditions except as noted above. (Not In Compliance)

CONCLUSION

This compliance assessment is based on observations made during the inspection, information provided by the source, Division resources available and a review of Division records. Based on this information, CEMEX Construction Materials South, LLC is not in compliance with the following requirements:

- 1. Pursuant to Permit Number 95OPBO082 Section II Condition 5.12 the source is subject to the requirements in 40 CFR Part 63 Subpart LLL as set forth in Condition 22; specifically the dryer is subject to the organic HAP requirements in §63.1243(b) (Condition 22.4). The source reported excessive THC monitor downtime (8.579%; 134 hours down of 1562**

- operating hours) from the dryer CEMS. The source failed to demonstrate compliance with the o-HAP limits violating Permit Number 95OPBO082 Section II Condition 5.12.
2. Pursuant to Permit Number 95OPBO082 Section II Condition 10.11 the source is required to monitor compliance with the CO annual emission limit using the CO CEMS. The source reported excessive CO monitor downtime (8.769%; 99 hours down of 1129 operating hours) from the kiln CEMS. The source failed to monitor CO using the CO CEMS violating Permit Number 95OPBO082 Section II Condition 10.11.
 3. Pursuant to Permit Number 95OPBO082 Section II Condition 18.2 the source is required to continuously monitor operation emissions. The source reported excessive THC monitor downtime (8.579%; 134 hours down of 1562 operating hours) from the dryer CEMS and failed to demonstrate compliance with the VOC/THC emissions and did not demonstrate total organic HAP compliance. Additionally the source reported excessive CO monitor downtime (8.769%; 99 hours down of 1129 operating hours) from the kiln CEMS and failed to continuously operate the continuous monitoring system to monitor CO from the kiln. The source failed to continuously operate the continuous monitoring systems to monitor VOC/THC from the dryer and CO from the kiln violating Permit Number 95OPBO082 Section II Condition 18.2.
 4. Pursuant to Permit Number 95OPBO082 Section II Condition 22 the source is required to demonstrate compliance with the emissions standards limits (22.13), the source is required to 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 (22.15), the source is required to operate a THC CEMS (22.20), The source is required to determine emissions of total organic HAP with a THC CEMS (22.23), the source is required to maintain a THC CEMS (22.35), and the source is required to continuously monitor THC to show compliance with the total organic HAP emissions limits (22.36). The source reported excessive THC monitor downtime (8.579%; 134 hours down of 1562 operating hours) from the dryer CEMS and failed to demonstrate compliance with the VOC/THC emissions violating Permit Number 95OPBO082 Section II Conditions 22.13.5, 22.20, and 22.35.1. The source failed to demonstrate total organic HAP compliance violating Permit Number 95OPBO082 Section II Condition 22.23.9 and 22.36. The source reported visible emissions that lasted approximately 34 minutes from the kiln hood and clinker cooler areas on 10/22/2019 due to a kiln push involving the flushing of the uncooked raw material feed through the kiln and into the clinker cooler demonstrating that control equipment and monitoring equipment is not operated and maintained in a manner consistent with good air pollution control practices for minimizing emissions. The source failed to demonstrate that control equipment and monitoring equipment is operated and maintained in a manner consistent with good air pollution control practices for minimizing emissions violating Permit Number 95OPBO082 Section II Condition 22.15.
 5. Pursuant to Permit Number 95OPBO082 Section II Condition 26 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 (26.3), and compliance with the opacity limitations shall be monitored by conducting opacity observations annually (calendar year period) on each engine and if an engine is operated more than 250 hours in any calendar year period, a second opacity observation shall be conducted (26.5.4.2). The source provided records that reported no operation in 2019 from Flood Response Engine EGEN-LYO-3 (99 HP Flood

Response Cummins Model No. 4BTAA3.3G7 Diesel) but also reported a method 9 was performed on the unit. When asked about the discrepancy the source stated the engine operated 0.5 hours in December 2019 in order to conduct the Method 9 to fulfill calendar year Method 9 requirements. It should be noted that an opacity observation is not required if the engine did not operate in the calendar year. The source failed to accurately monitor &/or report hours of operation for each engine violating condition 26.3. It was noted while reviewing the records provided by the source that a second 6-minute Method 9 was not performed on the Dowe Flats 8” Pump EGEN-DF-2 (John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel) that was operated for more than 250 hours in 2019. The source failed to conduct a second opacity observation on an engine that operated more than 250 hours in any calendar year period violating condition 26.5.4.2. The source failed to accurately monitor &/or report hours of operation for each engine violating Permit Number 95OPBO082 Section II Condition 26.3 and the source failed to conduct a second opacity observation on an engine that operated more than 250 hours in any calendar year period violating Permit Number 95OPBO082 Section II Condition 26.5.4.2.

6. Pursuant to Permit Number 95OPBO082 Section IV Conditions 21 & 22 the source shall promptly report any deviation from permit requirements & the source shall submit all reports of any required monitoring. The source failed to report that a second 6-minute Method 9 was not performed on the Dowe Flats 8” Pump EGEN-DF-2 (John Deere, Model No. T0404045DF15084 HP 8" Pump Diesel) that was operated for more than 250 hours in 2019 violating Permit Number 95OPBO082 Section IV Condition 21 & 22.

Recommendation: Enforcement is recommended to address the above alleged violations.



COLORADO

Department of Public Health & Environment

AIR POLLUTION CONTROL DIVISION

COMPLIANCE ORDER ON CONSENT

CASE NO. 2019-021
AIRS NO. 013-0003

IN THE MATTER OF CEMEX CONSTRUCTION MATERIALS SOUTH, LLC

The Colorado Department of Public Health and Environment (“CDPHE”), through the Air Pollution Control Division (“Division”), issues this Compliance Order on Consent (“Consent Order”), pursuant to the Division’s authority under § 25-7-115(3)(b), C.R.S. of the Colorado Air Pollution and Prevention and Control Act, §§ 25-7-101 to 1309, C.R.S. (“the Act”), and its implementing regulations, 5 C.C.R. § 1001, *et seq* (“the Regulations”) with the express consent of CEMEX Construction Materials South, LLC (“CEMEX”). The Division and CEMEX may be referred to collectively as “the Parties.”

I. STATEMENT OF PURPOSE

The mutual objectives of the Parties in entering into this Consent Order are:

1. To establish compliance requirements and criteria for the continued operation of the Lyons Plant, a portland cement manufacturing facility located at 5134 Ute Highway, Longmont, Boulder County, Colorado (“Facility”); and
2. To resolve the violations of the Act cited herein and in a Compliance Advisory issued to CEMEX by the Division on March 1, 2019.

II. DIVISION’S FINDINGS OF FACT AND DETERMINATION OF VIOLATIONS

Based upon the Division’s investigation into and review of the compliance issues identified herein, and in accordance with § 25-7-115(3), C.R.S., the Division has made the following determinations regarding violations of regulatory, statutory, and/or permit requirements associated with the Facility.

3. At all times relevant to the violations cited herein, CEMEX was an LLC in good standing and registered to conduct business in the State of Colorado.

4. CEMEX owns and operates the Facility.

5. The Facility is subject to the terms and conditions of the Colorado Operating Permit Number 95OPBO082, first issued to CEMEX on February 1, 2000, renewed March 1, 2017 and last revised November 17, 2017 (“Permit Number 95OPBO082”); 40 CFR Part 60– Standards of Performance for New Stationary Sources, Subpart IIII–Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (“Subpart IIII”); 40 CFR Part 63–National Emission Standards for Hazardous Air Pollutants for Source Categories (Continued), Subpart LLL–National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (“Subpart LLL”); Colorado Air Quality Control Statutes, and Colorado Air Quality Control Commission (“AQCC”) Regulations.

6. The following Facility equipment is relevant to this enforcement action:

Process (Permit Section)	AIRS Point	Description
Raw Material Grinding (Section II.8)	005	S012 - Raw Mill Feeders S013 - Iron/Silica Silo S010 - Raw Material Grinder S011 - Raw Mill Auxiliary Dust Collector
Kiln Burning (Section II.10)	007	S016 Precalciner Kiln
Sheltered (A-Frame) Clinker Storage and Reclaim (Section II.11)	010	S034 - #6 Reclaim Feeder and A-Frame Building S051 - Top of A Frame - Transfer from 529-29 belt to 529-30 belt
Cement Finish Mill and Auxiliaries (Section II.11)	011	S036 - Finish Mill S037 - Finish Mill Auxiliary Dust Collector Grinding and Limestone Handling
	012	S065 - Finish Mill Separator S069 - Clinker Dust to Finish Mill (SEP project) - vents inside mill room
Outdoor Clinker Piles and Handling (Section II.11)	015	Outdoor Hot Clinker Pile
Stationary Internal Combustion Engines (Section II.27)	053	A-Pit Pump: 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
	APEN exempt	Dowe Flats 6” Pump: 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).
	APEN exempt	Dowe Flats 8” Pump: 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).

	APEN exempt	Kiln Donkey Engine: 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.
	APEN exempt	Flood Response Engine: 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.
Kiln Control Device Support Equipment (Section II.26)	054	BCSA Inc, Silotop R03, Lime Weigh Hopper, S/N unknown
	055	BCSA Inc, Silotop R03, Lime Storage Silo, S/N unknown.

7. On September 11, 2018, Dave Huber, of the Division, conducted an inspection, pursuant to the Division's authority under § 25-7-111(2)(c), C.R.S., at the Facility for the purpose of determining compliance with Permit Number 95OPBO082, the Act and the Regulations. Based on Mr. Huber's inspection, and a review of records related to the Facility, the Division issued a Compliance Advisory to CEMEX on March 1, 2019.

8. On April 24, 2019, the Division and CEMEX met to discuss the issues identified in the Compliance Advisory. On May 3 and 17, 2019, CEMEX submitted additional information to the Division relating to the issues identified in the Compliance Advisory.

9. Based upon a review of information including Mr. Huber's inspection, records related to the Facility, and the information provided by CEMEX, the Division has determined the following:

- A. Pursuant to Permit Number 95OPBO082, Section II, Condition 10.9.1 and AQCC Regulation Number 1, § II.A.1, 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. On September 13, 2017, the opacity monitor for the kiln stack (AIRS Point 007) registered a six-minute average opacity of 23% following maintenance of a bag at Compartment No. 73. Upon inspection, CEMEX discovered that the bag maintenance dislodged a compartment port, allowing dust to bypass the bags. CEMEX immediately took Compartment No. 73 offline and properly secured the port, resolving the excess opacity. CEMEX allowed the emission into the atmosphere of air pollutants in excess of 20% opacity at AIRS Point 007 on September 13, 2017, violating Permit Number 95OPBO082, Section II, Condition 10.9.1 and AQCC Regulation Number 1, § II.A.1.

CEMEX verbally reported the opacity event to the Division on September 14, 2017 and included it as a permit deviation in its Semi-Annual Report, Second Half 2017, as required. The opacity event did not qualify as a valid malfunction because the opacity exceedance was caused by an operator improperly securing the port. CEMEX reported that it reviewed proper baghouse operations and work checks with Maintenance, Production and Environmental Departments.

- B. Pursuant to Permit Number 95OPBO082, Section II, Condition 10.22.1.3 and AQCC Regulation Number 3, Part F, § VI.A.2, the kiln opacity shall not exceed 20%. On September 13, 2017, the opacity monitor for the kiln stack (AIRS Point 007) registered a six-minute average opacity of 23% following maintenance of a bag at Compartment No. 73. Upon inspection, CEMEX discovered that the bag maintenance dislodged a compartment port, allowing dust to bypass the bags. CEMEX immediately took Compartment No. 73 offline and properly secured the port, resolving the excess opacity. CEMEX allowed the emission into the atmosphere of particulate in excess of 20% opacity at AIRS Point 007 on September 13, 2017, violating Permit Number 95OPBO082, Section II, Condition 10.22.1.3 and AQCC Regulation Number 3, Part F, § VI.A.2.

CEMEX verbally reported the opacity event to the Division on September 14, 2017 and included it as a permit deviation in its Semi-Annual Report, Second Half 2017, as required. The opacity event did not qualify as a valid malfunction because the opacity exceedance was caused by an operator improperly securing the port. CEMEX reported that it reviewed proper baghouse operations and work checks with Maintenance, Production and Environmental Departments.

- C. Pursuant to Permit Number 95OPBO082, Section II, Condition 11.4.1 and Condition 20.3, the baghouses shall be operated and maintained in accordance with the requirements in Condition 19. Pursuant to Permit Number 95OPBO082, Section II, Condition 19, routine maintenance of and operational procedures performed on the baghouses shall be conducted in accordance with manufacturer's specifications and/or good engineering practices. During the September 11, 2018 inspection, Mr. Huber observed that the door at the top of the A-Frame Building (AIRS Point 010) was open, and the photohelic gauge for the baghouse controlling the area (BH 525-17) showed a differential pressure out of the acceptable range. CEMEX failed to operate and maintain the baghouse at AIRS Point 010 in accordance with manufacturer's specifications and/or good

engineering practices, violating Permit Number 95OPB0082, Section II, Condition 11.4.1, 19 and 20.3.

CEMEX repaired and sealed the door, operated the rotary motor of the baghouse hopper and re-established proper operation immediately after the issue was discovered. CEMEX has now placed signage on the door and ensures the door jambs are cleaned appropriately. CEMEX reported the event in its Semi-Annual Report, Second Half 2018, as required.

- D. Pursuant to Permit Number 95OPB0082, Section II, Conditions 11.6.1.2 and 14.4.1.2(a), during the day shift, the permittee shall operate the plant based water truck on a full-time basis, 12 hours a day, 7 days a week. CEMEX did not operate the plant based water truck January 7, 2018 from 11:23 a.m. to 6:00 p.m. and January 8, 2018 from 6:40 a.m. to 6:00 p.m. On these dates, the kiln was in shutdown but the crusher/dryer system was in operation. CEMEX failed to operate the plant based water truck for AIRS Point 015 during the day shift on a full-time basis on January 7 and 8, 2018, violating Permit Number 95OPB0082, Section II, Conditions 11.6.1.2 and 14.4.1.2(a).

CEMEX reported the event in its Semi-Annual Report, First Half 2018, as required. CEMEX reported providing refresher training on permit requirements for plant based water truck operators.

- E. Pursuant to Permit Number 95OPB0082, Section II, Condition 11.6.1.10, 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. CEMEX did not operate the powered sweeper March 15, 2017 from 8:00 a.m. to 10:00 a.m. due to an unexpected shift change. CEMEX failed to operate the powered sweeper for AIRS Point 015 for 2 hours during the day shift on March 15, 2017, violating Permit Number 95OPB0082, Section II, Condition 11.6.1.10.

CEMEX reported the event in its Semi-Annual Report, First Half 2017, as required. CEMEX reported providing refresher training on permit requirements for sweeper operators.

- F. Pursuant to Permit Number 95OPB0082, Section II, Condition 22.9.3 and Subpart LLL § 63.1346(g)(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. The precalciner kiln (AIRS Point 007) at the Facility is

controlled by baghouses with activated carbon and lime injection systems. On July 21, 2017, CEMEX did not start injecting the carbon and lime at AIRS Point 007 until the baghouse inlet temperature reached approximately 350 degrees Fahrenheit. CEMEX failed to ensure that all dry sorbent and activated carbon systems were turned on and operating at the time the gas stream at the inlet to the baghouse controlling AIRS Point 007 reached 300 degrees Fahrenheit on July 21, 2017, violating Permit Number 95OPBO082, Section II, Condition 22.9.3 and Subpart LLL § 63.1346(g)(3).

CEMEX reported the event in its Semi-Annual Report, Second Half 2017, as required. CEMEX reported establishing an automated environmental interlock to prevent baghouse temperatures from exceeding 290°F until the carbon and lime injection systems activate.

- G. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.33.2.1 and Subpart LLL § 63.1350(f)(2)(i), for a raw mill or finish mill, CEMEX 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. CEMEX failed to perform Method 22 readings on the AIRS Point 005 raw mill dust collectors and the AIRS Points 011 and 012 finish mill dust collectors as detailed in the table below, violating Permit Number 95OPBO082, Section II, Condition 22.33.2.1 and Subpart LLL § 63.1350(f)(2)(i).

AIRS Point	Dust Collector Unit Description	Dates Missed
005	Raw Mill 325-1 (Stack #S010)	11/21/2017; 11/22/2017
	Raw Mill Auxiliary 325-2 (Stack# S011)	11/21/2017; 11/22/2017
011	Finish Mill 725-2 (Stack# S036)	11/22/2017; 11/24/2017; 1/23/2018
	Finish Mill Auxiliary 725-3 (Stack# S037)	11/22/2017; 11/24/2017; 1/23/2018
012	Finish Mill Separator 725-10 & 725-11 (Stack # S065)	11/22/2017; 11/24/2017

CEMEX reported these events in its Semi-Annual Reports for Second Half 2017 and First Half 2018, as required. CEMEX reported providing training to plant personnel, and reported that the Environmental Department maintains records of the revised Method 22 Observation Forms that instruct personnel to perform readings during second shift.

- H. Pursuant to Permit Number 95OPBO082, Section II, Condition 25, for the kiln control device support equipment (the lime storage silo

(“AIRS Point 055”) and the lime weigh hopper (“AIRS Point 054”)), CEMEX is subject to certain requirements including those listed below.

- i. Pursuant to Permit Number 95OPB0082, Section II, Condition 25.1, particulate Matter (PM, PM10 and PM2.5) emissions from AIRS Point 055 and AIRS Point 054 shall not exceed the permitted limitations. Monthly emissions for each unit shall be calculated by the end of the subsequent month, and compliance with the monthly limits shall be monitored by comparing the monthly emissions from each unit with the monthly limitations. CEMEX did not provide any emissions information at the time of the inspection for AIRS Points 054 and 055, as requested by the Division to determine compliance. CEMEX failed to demonstrate compliance with the particulate matter emission limits and monitoring requirements for AIRS Points 054 and 055, violating Permit Number 95OPB0082, Section II, Condition 25.1.

CEMEX provided the requested emissions information to the Division on May 3, 2019, demonstrating compliance with the permit requirements.

- ii. Pursuant to Permit Number 95OPB0082, Section II, Condition 25.2, the quantity of lime processed through AIRS Point 055 and AIRS Point 054 shall not exceed the permitted limitations. The quantity of lime handled through the lime silo and the lime weigh hopper shall be monitored and recorded monthly and used in the emission calculations in Condition 25.1. CEMEX did not provide any processing information at the time of the inspection related to AIRS Point 054 or 055, as requested by the Division to determine compliance. CEMEX failed to demonstrate compliance with the processing limits and the monitoring and recordkeeping requirements for AIRS Points 054 and 055, violating Permit Number 95OPB0082, Section II, Condition 25.2.

CEMEX provided the requested processing information to the Division on May 3, 2019, demonstrating compliance with the permit requirements.

- iii. Pursuant to Permit Number 95OPB0082, Section II, Condition 25.4, hours of operation shall be monitored and recorded monthly. CEMEX did not provide records at the time of the inspection of the hours of operation for AIRS Point 054 or 055, as requested by the Division to determine compliance. CEMEX failed to demonstrate compliance with the hours of operation

monitoring and recordkeeping requirements for AIRS Points 054 and 055, violating Permit Number 95OPBO082, Section II, Condition 25.4.

CEMEX provided operating hours records for AIRS Points 054 and 055 to the Division on March 22, 2019, demonstrating compliance with the permit requirements.

- iv. Pursuant to Permit Number 95OPBO082, Section II, Condition 25.5, the baghouses at AIRS Point 055 and AIRS Point 054 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. CEMEX did not provide any operating and maintenance information at the time of the inspection related to the baghouses at AIRS Point 054 or 055, as requested by the Division to determine compliance. CEMEX failed to provide records demonstrating compliance with the operating and maintenance requirements for AIRS Points 054 and 055, violating Permit Number 95OPBO082, Section II, Condition 25.5.

CEMEX provided operating and maintenance information for AIRS Point 054 and 055 to the Division on May 17, 2019, demonstrating compliance with the permit requirements.

- I. Pursuant to Permit Number 95OPBO082, Section II, Condition 26, for the Stationary Internal Combustion Engines ("Engines"), CEMEX is subject to certain requirements including those listed below.
 - i. Pursuant to Permit Number 95OPBO082, Section II, Condition 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. CEMEX failed to provide a log of hours of operation as requested by the Division at the time of the inspection to determine compliance, and failed to demonstrate that annual hours of operation were below the

APEN reporting threshold, violating Permit Number 95OPBO082, Section II, Condition 26.3.

CEMEX provided information including hours of operation for the engines to the Division on May 3, 2019, and submitted an APEN for the Dowe Flats 6” Pump Engine to the Division on May 30, 2019.

- ii. Pursuant to Permit Number 95OPBO082, Section II, Condition 26.5.3, for the kiln donkey engine, the permittee shall maintain records that verify that only natural gas is used as fuel in this engine. Pursuant to Permit Number 95OPBO082, Section II, Condition 26.5.4.1, for the pump engines and flood response engine, a record shall be kept of the date and time the engine started and when it was shutdown. Pursuant to Permit Number 95OPBO082, Section II, Condition 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. If an engine is operated more than 250 hours in any calendar year period, a second opacity observation shall be conducted. CEMEX did not provide records verifying that only natural gas is used as fuel for the kiln donkey engine, and did not provide records of startup, shutdown, and annual operating hours for the pump engines and flood response engine as requested by the Division at the time of the inspection to determine compliance. CEMEX failed to demonstrate compliance with recordkeeping and operating requirements for the Engines, violating Permit Number 95OPBO082, Section II, Conditions 26.5.3 and 26.5.4.

On March 22, 2019, CEMEX provided records verifying that only natural gas is used as fuel for the kiln donkey engine, and provided records of monthly operating hours for the pump engine and flood response engine.

- iii. Pursuant to Permit Number 95OPBO082, Section II, Condition 26.6, the flood response engine is subject to Subpart III, including but not limited to emission standards; requirements related to fuel, monitoring, operating and maintenance, and reporting and recordkeeping; and other requirements listed in this condition. CEMEX did not provide any records for the flood response engine at the time of the inspection, as requested by the Division to determine compliance, and reported that there are no existing 2017 maintenance records for the flood response engine. CEMEX failed to demonstrate compliance with

Subpart IIII requirements for the flood response engine, violating Permit Number 95OPBO082, Section II, Condition 26.6 and Subpart IIII.

CEMEX reported the lack of maintenance records in its Semi-Annual Report, Second Half 2017, as required. CEMEX reported scheduling proper maintenance and establishing a reporting protocol.

10. The Division and CEMEX entered into settlement discussions for the violations as determined by the Division. The Parties reached a settlement that is detailed in this Consent Order.

III. ORDER and AGREEMENT

Based on the foregoing factual and legal determinations, pursuant to its authority under § 25-7-115, C.R.S., and as a result of the violations cited herein, the Division orders CEMEX to comply with all provisions of this Consent Order, including all requirements set forth below.

11. CEMEX agrees to the terms and conditions of this Consent Order. CEMEX agrees that this Consent Order constitutes an order issued pursuant to § 25-7-115, C.R.S., and is an enforceable requirement of Part 1 of the Act. CEMEX also agrees not to challenge directly or collaterally, in any judicial or administrative proceeding brought by the Division to enforce this Consent Order or by CEMEX against the Division:

- a. the issuance of this Consent Order;
- b. the factual and legal determinations made by the Division herein; and
- c. the Division's authority to bring, or the court's jurisdiction to hear, any action to enforce the terms of this Consent Order under the Act.

12. Notwithstanding the above, CEMEX does not admit to any of the factual or legal determinations made by the Division herein, and any action undertaken by CEMEX pursuant to this Consent Order shall not constitute an admission of liability by CEMEX with respect to the condition of the Facility.

Compliance Requirements

13. Effective immediately, and without limitation, CEMEX shall comply with Permit Number 95OPBO082, the Act and the Regulations in the regulation and control

of air pollutants.

14. Within 30 days of the effective date of this Consent Order, CEMEX shall provide to the Division records, for the previous five years, of the date and time of startup and shutdown for the pump engines and flood response engine. If CEMEX is not currently maintaining such records, CEMEX shall immediately start keeping records of the date and time of startup and shutdown for the pump engines and flood response engine, and shall maintain the records for a period of five years. CEMEX shall provide the records to the Division upon request.

15. Within 30 days of the effective date of this Consent Order, CEMEX shall provide to the Division records, for the previous five years, of the annual opacity tests required by Permit Number 95OPBO082, Section II, Condition 26.5.4.2. If CEMEX has not conducted the opacity tests, CEMEX shall conduct the required opacity tests within 30 days of the effective date of this Consent Order.

16. Within 30 days of the effective date of this Consent Order, CEMEX shall provide to the Division records for the flood response engine as required by Permit Number 95OPBO082, Section II, Condition 26.6 to determine compliance with Subpart IIII. If CEMEX is not currently maintaining such records, CEMEX shall immediately start keeping the records necessary to determine compliance with Subpart IIII, and shall maintain the records for a period of five years. CEMEX shall provide the records to the Division upon request.

17. All documents submitted under this Consent Order shall use the same titles as stated in this Consent Order, and shall reference both the case number and the number of the paragraph pursuant to which the document is required. Unless otherwise specifically provided herein, no document submitted for Division approval under this Consent Order may be implemented unless and until written approval is received from the Division. Any approval by the Division of a document submitted under this Consent Order is effective upon receipt by CEMEX. All approved documents, including all procedures and schedules contained in the documents, are hereby incorporated into this Consent Order, and shall constitute enforceable requirements under the Act.

Administrative Penalty Requirements

18. Based upon the factors set forth in § 25-7-122, C.R.S., the Division has determined an administrative penalty in the amount of **Thirty-Five Thousand Dollars (\$35,000.00)** against CEMEX is appropriate and consistent with the Division's policies for violations of the Act and the Regulations cited in Section II of this Consent Order. CEMEX agrees to pay the sum of **\$35,000.00** in administrative penalties. Payment is due within thirty (30) calendar days of the effective date of this Consent Order by certified, corporate or cashier's check drawn to the order of "Colorado Department of Public Health and Environment" and delivered to the attention of the Enforcement

Unit Supervisor, Air Pollution Control Division, 4300 Cherry Creek Drive South, APCD-SS-B1, Denver, Colorado 80246-1530.

IV. SCOPE AND EFFECT OF CONSENT ORDER

19. The Parties agree and acknowledge that this Consent Order constitutes a full and final settlement of the violations cited herein. This Consent Order is final agency action. CEMEX agrees not to challenge the terms and conditions of this Consent Order in any proceeding before any administrative body or any judicial forum, whether by way of direct judicial review or collateral challenge.

20. This Consent Order shall be enforceable by either party in the same manner as if the Division had entered this Consent Order without agreement by CEMEX. The Parties agree that any violation of the provisions of this Consent Order by CEMEX concerning the Act, or the Regulations, shall be a violation of a final order of the Division for the purposes of §§ 25-7-115, 121, and 122, C.R.S., and may result in the assessment of civil penalties of up to Fifteen Thousand Dollars (\$15,000.00) per day for each day of such violation.

21. The Parties' obligations under this Consent Order are limited to the matters expressly stated herein or in approved submissions required hereunder. All submissions made pursuant to this Consent Order are incorporated into this Consent Order and become enforceable under the terms of this Consent Order as of the date of approval by the Division.

22. The Division's approval of any submission, standard, or action under this Consent Order shall not constitute a defense to, or an excuse for, any prior violation of any requirement under the Act, the Regulations, or any subsequent violation of any requirement of this Consent Order, the Act, or the Regulations.

23. Entering into this settlement shall not constitute an admission of violation of the air quality laws by CEMEX, nor shall the Division or any third party infer it to be such an admission by CEMEX in any administrative or judicial proceeding. Notwithstanding the foregoing or anything in this Consent Order to the contrary, the described violation will constitute part of CEMEX's compliance history for any purpose for which such history is relevant, including considering the violation described above in assessing a penalty for any subsequent violations, in accordance with the provisions of § 25-7-122, C.R.S., against CEMEX.

24. CEMEX shall comply with all applicable Federal, State, and/or local laws and regulations and shall obtain all necessary approvals or permits to conduct the investigation and remedial activities required by this Consent Order and perform its obligations required hereunder. The Division makes no representation with respect to approval and permits required by Federal, State, or local laws or regulations other than those specifically referred to herein.

25. Nothing herein shall be construed as prohibiting, altering, or in any way limiting the ability of the Division to seek any other remedies or sanctions available by virtue of CEMEX's violation of this Consent Order or of the statutes and regulations upon which this Consent Order is based, or for CEMEX's violation of any applicable provision of law.

V. LIMITATION RELEASES AND RESERVATION OF RIGHTS AND LIABILITY

26. Upon the effective date of this Consent Order, and during its term, this Consent Order shall stand in lieu of any other enforcement action by the Division with respect to the violations cited herein. This Consent Order does not grant any release of liability for any violations, regardless of when they occurred, that are not cited in this Consent Order. The Division reserves the right to bring any action it deems necessary to enforce this Consent Order, including actions for penalties and/or injunctive relief.

27. Nothing in this Consent Order shall preclude the Division from imposing additional requirements necessary to protect human health or the environment and to effectuate the purposes of this Consent Order. Nor shall anything in this Consent Order preclude the Division from imposing additional requirements in the event that additional information is discovered that indicates such requirements are necessary to protect human health or the environment.

28. CEMEX reserves its rights and defenses regarding liability in any proceedings regarding the Facility other than proceedings to enforce this Consent Order.

29. Upon the effective date of this Consent Order, CEMEX releases and covenants not to sue the State of Colorado as to all common law or statutory claims or counterclaims arising from, or relating to, the violations of the Act or the Regulations specifically addressed herein.

30. CEMEX shall not seek to hold the State of Colorado or its employees, agents or representatives liable for any injuries or damages to persons or property resulting from acts or omissions of CEMEX, or those acting for or on behalf of CEMEX, including its officers, employees, agents, successors, representatives, contractors or consultants in carrying out activities pursuant to this Consent Order. CEMEX shall not hold out the State of Colorado or its employees, agents or representatives as a party to any contract entered into by CEMEX in carrying out activities pursuant to this Consent Order. Nothing in this Consent Order shall constitute an express or implied waiver of immunity otherwise applicable to the State of Colorado, its employees, agents, or representatives.

31. The Division reserves the right to bring any action or to seek civil or

administrative penalties for any past, present, or future violations of the Act and the Regulations, not specifically addressed herein. Further, the Division has the right to bring any action to enforce this Consent Order and to seek authorized penalties for any violation of this Consent Order.

VI. FORCE MAJEURE

32. CEMEX shall perform the requirements of this Consent Order within the schedules and time limits set forth herein and in any approved plan unless the performance is prevented or delayed by events that constitute a force majeure. A force majeure is defined as any event arising from causes which are not reasonably foreseeable, which are beyond the control of CEMEX, and which cannot be overcome by due diligence.

33. Unless otherwise provided in the Act or the Regulations, within seventy-two (72) hours of the time that CEMEX knows or has reason to know of the occurrence of any event which CEMEX has reason to believe may prevent CEMEX from timely compliance with any requirement under this Consent Order, CEMEX shall provide verbal notification to the Division. Within seven (7) calendar days of the time that CEMEX knows or has reason to know of the occurrence of such event, CEMEX shall submit to the Division a written description of the event causing the delay, the reasons for and the expected duration of the delay, and actions which will be taken to mitigate the duration of the delay.

34. The burden of proving that any delay was caused by a force majeure shall at all times rest with CEMEX. If the Division agrees that a force majeure has occurred, the Division will so notify CEMEX. The Division will also approve or disapprove of CEMEX's proposed actions for mitigating the delay. If the Division does not agree that a force majeure has occurred, or if the Division disapproves of CEMEX's proposed actions for mitigating the delay, it shall provide a written explanation of its determination to CEMEX.

35. Delay in the achievement of one requirement shall not necessarily justify or excuse delay in the achievement of subsequent requirements. In the event any performance under this Consent Order is found to have been delayed by a force majeure, CEMEX shall perform the requirements of this Consent Order that were delayed by the force majeure with all due diligence.

VII. DISPUTE RESOLUTION

36. If the Division determines that additional requirements are necessary, that a violation of this Consent Order has occurred, that a force majeure has not occurred, or that the actions taken by CEMEX to mitigate the delay caused by a force majeure are inadequate, the Division shall provide a written explanation of its determination to CEMEX. Within fifteen (15) calendar days of receipt of the Division's

determination, CEMEX shall:

- a. Submit a notice of acceptance of the determination; or
- b. Submit a notice of dispute of the determination.

If CEMEX fails to submit either of the above notices within the specified time, it will be deemed to have accepted the Division's determination.

37. If CEMEX files any notice of dispute, the notice shall specify the particular matters in the Division's determination that CEMEX seeks to dispute, and the basis for the dispute. Matters not identified in the notice of dispute shall be deemed accepted by CEMEX. The Division and CEMEX shall have thirty (30) calendar days from the receipt by the Division of the notification of dispute to reach an agreement. If agreement cannot be reached on all issues within this thirty (30) day period, the Division shall confirm or modify its decision within an additional fourteen (14) days, and the confirmed or modified decision shall be deemed effective and subject to appeal in accordance with the Act and the Colorado Administrative Procedure Act, Article 4, Title 24, Colorado Revised Statutes.

VIII. NOTICES

38. Unless otherwise specified, any report, notice or other communication required under the Consent Order shall be sent to:

For the Division: Enforcement Unit Supervisor
Colorado Department of Public Health and Environment
APCD-SS-B1-1400
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

For CEMEX: Scott Harcus
CEMEX Construction Materials South, LLC
PO Box 529
Lyons, CO 80540

IX. OBLIGATIONS UNAFFECTED BY BANKRUPTCY

39. The obligations set forth herein are based on the Division's police and regulatory authority. These obligations require specific performance by CEMEX of corrective actions carefully designed to prevent on-going or future harm to public health or the environment, or both. Enforcement of these obligations is not stayed by a petition in bankruptcy. CEMEX agrees that the penalties set forth in this Consent Order are not in compensation of actual pecuniary loss. Further, the obligations imposed by this Consent Order are necessary for CEMEX and the Facility to achieve

and maintain compliance with State law.

X. MODIFICATIONS

40. This Consent Order may be modified only upon mutual written agreement of the Parties.


XI. BINDING EFFECT, AUTHORIZATION TO SIGN AND EFFECTIVE DATE

41. This Consent Order is binding upon the Parties to this Consent Order and their corporate subsidiaries or parents, their officers, directors, agents, attorneys, employees, contractors, successors in interest, affiliates and assigns. The undersigned warrant that they are authorized to bind legally their respective principals to this Consent Order, and that the Parties have the authority to enter into this Consent Order. This Consent Order shall be effective upon the date signed by the last party. In the event that a party does not sign this Consent Order within thirty (30) calendar days of the other party's signature, this Consent Order becomes null and void. This Consent Order may be executed in multiple counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same Consent Order.

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT

By:  Date: 9/3/19
Shannon McMillan
Compliance and Enforcement Program Manager
Air Pollution Control Division

CEMEX CONSTRUCTION MATERIALS SOUTH, LLC

By:  Date: 08/29/2015
NAME: Dave Huber
TITLE: Plant Manager

- cc: Shannon McMillan, APCD Dave Huber, APCD
Paul Carr, APCD Beth Pilson, APCD
Tom Roan, Office of Attorney General Heather Wuollet, APCD
Michael Stovern, US EPA Tom Lovell, APCD
File



November 23, 2021

SENT VIA CERTIFIED MAIL NO. 7017 0660 0000 0139 2321
 Return Receipt Requested

Scott Marcus
 CEMEX Construction Materials South, LLC
 P.O. Box 529
 Lyons, CO 80540

Re: Proposed Early Settlement Agreement in the Matter of CEMEX Construction Materials South, LLC
 AIRS No.: 013-0003
 Case No.: 2021-077

Dear Scott Marcus:

CEMEX Construction Materials South, LLC (“CEMEX”) owns and operates the Lyons Plant, a portland cement manufacturing facility located at 5134 Ute Highway, Longmont, Boulder County, Colorado (“Facility”). The Facility is subject to the terms and conditions of the following:

- Colorado Operating Permit Number 95OPBO082, first issued to CEMEX on February 1, 2000 and last renewed on November 17, 2017 (“Permit Number 95OPBO082”);
- 40 CFR Part 63–National Emission Standards for Hazardous Air Pollutants For Source Categories, Subpart LLL–National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry (“Subpart LLL”);
- Colorado Air Quality Control Statutes; and
- Colorado Air Quality Control Commission (“AQCC”) Regulations.

The following Facility equipment is relevant to this enforcement action:

AIRS Point/Facility ID	Description
002/P002	S005 - Raw Materials Dryer
007/P007	S016 - Precalciner Kiln
008/P008	Clinker cooling and transfer to storage for finish mill.
APEN Exempt/ Dowe Flats 6” Pump	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).



APEN Exempt/ Dowe Flats 8" Pump	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).
APEN Exempt/ Flood Response Engine	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.

On August 4, 2020, Dave Huber, of the Colorado Air Pollution Control Division ("Division"), inspected the Facility. Based on the inspection, and a review of records related to the Facility, the Division issued a Compliance Advisory to CEMEX on June 29, 2021. On August 5, 2021, the Division and CEMEX met to discuss the issues identified in the Compliance Advisory.

Based upon a review of the inspection, records related to the Facility, and the information provided by CEMEX, the Division has determined the following:

- A. Pursuant to Permit Number 95OPBO082, Section II, Condition 5.12, the Facility is subject to the requirements of Subpart LLL as set forth in Condition 22 of this permit. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.4 and Subpart LLL § 63.1343(b), total organic HAP emissions from AIRS Point 002 are limited to 12 ppmvd. CEMEX utilizes a THC CEMS as a surrogate for organic HAP monitoring for AIRS Point 002. CEMEX reported downtime of 8.579%, (134 out of 1562 operating hours) for the AIRS Point 002 THC CEMS in the first quarter of 2020. CEMEX failed to monitor the THC emissions as a surrogate for organic HAP from AIRS Point 002 using the THC CEMS as required, therefore, CEMEX failed to demonstrate compliance with the total organic HAP emission limit for AIRS Point 002, violating Permit Number 95OPBO082, Section II, Condition 5.12 and Subpart LLL § 63.1343(b).
- B. Pursuant to Permit Number 95OPBO082, Section II, Condition 10.11, for AIRS Point 007, compliance with the CO annual emission limit shall be monitored using the CO CEMS. CEMEX reported CO CEMS downtime of 8.769% (99 hours down out of 1129 operating hours) in the third quarter of 2019 due to a failed RATA from August 16-20, 2019. CEMEX failed to monitor CO emissions from AIRS Point 007 using the CO CEMS as required, violating Permit Number 95OPBO082, Section II, Condition 10.11.
- C. Pursuant to Permit Number 95OPBO082, Section II, Condition 18.2, all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements. CEMEX reported downtime for the AIRS Point 002 THC CEMS of 8.579% (see Paragraph A) and downtime for the AIRS Point 007 CO CEMS of 8.579% (see Paragraph B), which the Division has determined is a violation of Permit Number 95OPBO082, Section II, Condition 18.2.
- D. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.13 and Subpart LLL § 63.1348(b), CEMEX 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. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.20 and Subpart LLL § 63.1349(b)(4)(i), CEMEX must operate a CEMS in accordance with the requirements in § 63.1350(i) (Condition 22.35). Pursuant to Permit Number 95OPBO082, Section II, Condition 22.35.1 and Subpart LLL § 63.1350(i)(1), CEMEX must install, operate, and maintain a THC continuous emission monitoring system. CEMEX reported downtime in the first quarter of 2020 for the AIRS Point 002 THC CEMS (see Paragraph A), violating Permit Number 95OPBO082, Section II, Conditions 22.13, 22.20, and 22.35.1 and Subpart LLL §§ 63.1348(b), 63.1349(b)(4)(i), and 63.1350(i)(1).



- E. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.15 and Subpart LLL § 63.1348(d), 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. On October 22, 2019, a kiln push flushed uncooked raw material through the kiln (AIRS Point 007) and into the clinker cooler (AIRS Point 008), causing visible emissions from the kiln hood and clinker cooler which lasted approximately 34 minutes. On October 22, 2019, CEMEX failed to operate and maintain the air pollution control equipment for AIRS Points 007 and 008 in a manner consistent with safety and good air pollution control practices for minimizing emissions, violating Permit Number 95OPBO082, Section II, Condition 22.15 and Subpart LLL § 63.1348(d).
- F. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.23.9 and Subpart LLL § 63.1349(b)(7)(xi), 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. Permit Number 95OPBO082, Section II, Condition 22.36 and Subpart LLL § 63.1350(j), 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). CEMEX reported downtime for the AIRS Point 002 THC CEMS in the first quarter of 2020 (see Paragraph A), violating Permit Number 95OPBO082, Section II, Conditions 22.23.9 and 22.36 and Subpart LLL §§ 63.1349(b)(7)(xi) and 63.1350(j).
- G. Pursuant to Permit Number 95OPBO082, Section II, Condition 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. CEMEX operated the Flood Response Engine for .5 hours in December 2019 to perform a Method 9 test and failed to record the operation in a log, violating Permit Number 95OPBO082, Section II, Condition 26.3.
- H. Pursuant to Permit Number 95OPBO082, Section II, Condition 26.5.4.2, if an engine is operated more than 250 hours in any calendar year period, a second opacity observation shall be conducted. CEMEX operated the Dowe Flats 8" Pump engine for more than 250 hours and failed to conduct a second opacity observation, violating Permit Number 95OPBO082, Section II, Condition 26.5.4.2.
- I. Pursuant to Permit Number 95OPBO082, Section II, Condition 21, 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. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.d, the permittee shall submit to the Air Pollution Control Division all reports of any required monitoring at least every six (6) months. All instances of deviations from any permit requirements must be clearly identified in such reports. CEMEX did not perform a required opacity observation for the Dowe Flats 8" Pump engine (see Paragraph H) and failed to report the deviation, violating Permit Number 95OPBO082, Section II, Conditions 21 and 22.

The Colorado Air Pollution Prevention and Control Act, at § 25-7-122(1)(b), C.R.S., specifies the penalty for such violations. The monetary amount of the Division's settlement offer specified below



takes into account, among other factors, the magnitude and severity of the violation, cooperation of the company, as well as the prior history of violations of air quality requirements associated with any of the company's facilities/operations in the State of Colorado (including a company's parent or subsidiary relations, if applicable). Settlement offers are based on the evaluation of the same factors and criteria in all cases. Based upon CEMEX's cooperation, and its efforts to bring its operations into compliance with the regulations and permit conditions identified above, the Division acknowledges that CEMEX has appropriately and adequately addressed all compliance issues identified above. In the interest of settling the matters cited herein, the Division therefore offers the following settlement in accordance with the Division's settlement policy.

1. Payment of a reduced penalty in the sum of **Forty Thousand Two Hundred Fifty Dollars (\$40,250.00)**. Payment of the penalty precludes further enforcement by the Division for the above-described violation against CEMEX. The Division retains its authority to take enforcement actions based on any and all violations not specifically described above.
2. Entering into this settlement shall not constitute an admission of violation of the air quality laws, or the alleged facts relating thereto, nor shall any third party infer it to be such an admission in any administrative or judicial proceeding. However, CEMEX agrees not to challenge the factual or legal determinations herein, the Division's authority to bring, or the court's jurisdiction to hear, any action, insofar as it pertains to the matters contained herein, to enforce the terms of this settlement agreement. The described violation will constitute part of CEMEX's compliance history for any purpose for which such history is relevant.

This letter constitutes an offer of settlement and is not a demand for payment. Please contact me if you wish to discuss this offer of settlement. We remain willing to consider any information you wish to submit related to the violation. Please be advised, however, that the offer of settlement contained in this letter is predicated on resolving this matter within fifteen (15) days of the date of this settlement proposal letter. If you elect to continue the negotiation of this matter beyond that date, this offer shall be deemed withdrawn, and any penalty mitigation built into this settlement proposal may be revoked. If you require additional time to evaluate this settlement proposal or discuss remaining issues with the Division, however, please contact me regarding your request for an extension of the offer. Any extension of the offer, if agreed to by the Division, must be confirmed, in writing, by the Division.

If the above terms are acceptable to you, please have the appropriate person sign and return this letter and send a check in the sum of **\$40,250.00**, made payable to the Colorado Department of Public Health and Environment, to

**Air Pollution Control Division
Attn: Heather Wuollet
4300 Cherry Creek Drive South
APCD-SS-B1
Denver, Colorado 80246-1530**

This offer of settlement, upon being fully endorsed by both the Division and CEMEX, shall constitute full and final resolution of the noncompliance issues identified herein and in the Compliance Advisory issued to CEMEX.

You may write or call to request a settlement conference if you wish to discuss the matter with representatives of the Division's compliance staff. If we do not receive a response from you within fifteen (15) days of the date of this letter, we will assume that you are not interested in resolving this matter as outlined above. Please call me, at 303-692-3259, or Heather Wuollet, at 303-692-3198, if you have any further questions regarding this matter.

Sincerely,



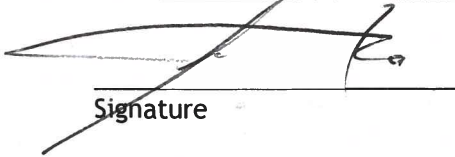


Shannon McMillan
Compliance and Enforcement Program Manager

I certify that I am authorized by CEMEX to execute this settlement agreement and bind CEMEX, and any affiliated entities, to the terms and conditions of this agreement. I have read the above settlement and agree to the terms and conditions of this offer.

Name: ERIK ESTRADA

Title: PLANT MGR.


Signature

303.823.2101
Telephone Number

1/07/22
Date

cc: Shannon McMillan, APCD
Paul Carr, APCD
Heather Wuollet, APCD
Ben Cappa, APCD
Tom Roan, Attorney General's Office

Dave Huber, APCD
Beth Pilson, APCD
Tom Lovell, APCD
Michael Stovern, EPA (Region VIII)
File





COLORADO

Department of Public
Health & Environment

June 30, 2020

SENT VIA CERTIFIED MAIL NO. 7017 0660 0000 0139 4929
Return Receipt Requested

Scott Harcus
CEMEX Construction Materials South, LLC
PO Box 529
Lyons, CO 80540

Re: Proposed Early Settlement Agreement in the Matter of CEMEX Construction Materials South, LLC
AIRS No.: 013-0003
Case No.: 2020-036

Dear Scott Harcus:

CEMEX Construction Material South, LLC (“CEMEX”) owns and operates the Lyons, a portland cement manufacturing facility located at 5134 Ute Highway, Longmont, Boulder County, Colorado (“Facility”). The Facility is subject to the terms and conditions of the following:

- Colorado Operating Permit Number 95OPBO082, first issued to CEMEX on February 1, 2000 and last renewed on November 17, 2017 (“Permit Number 95OPBO082”);
- 40 CFR Part 60—Standards of Performance for New Stationary Sources, Subpart A—General Provisions (“Subpart A”);
- 40 CFR Part 60—Standards of Performance for New Stationary Sources, Appendix F to Part 60—Quality Assurance Procedures (“Appendix F”);
- 40 CFR Part 63—National Emission Standards for Hazardous Air Pollutants For Source Categories, Subpart LLL—National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry (“Subpart LLL”);
- Colorado Air Quality Control Statutes; and
- Colorado Air Quality Control Commission (“AQCC”) Regulations.

The following Facility equipment is relevant to this enforcement action:

AIRS Point/Facility ID	Description
002/P002	S005 - Raw Materials Dryer
007/P007	S016 - Precalciner Kiln



008/P008	Clinker cooling and transfer to storage for finish mill.
015/P015	Outdoor clinker piles and handling
049/P007A	Handling and processing of CKD and raw material waste dust, including haulage and disposal of pelletized CKD and benefaction dust.
APEN Exempt/ Dowe Flats 6" Pump	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).

On August 27, 2019, Dave Huber, of the Colorado Air Pollution Control Division ("Division"), inspected the Facility. Based on the inspection, and a review of records related to the Facility, the Division issued a Compliance Advisory to CEMEX on March 27, 2020. On April 29, 2020, the Division and CEMEX met to discuss the issues identified in the Compliance Advisory.

Based upon a review of the inspection, records related to the Facility, and the information provided by CEMEX, the Division has determined the following:

- A. Pursuant to Permit Number 95OPBO082, Section II, Condition 5.7.1, for AIRS Point 002 (raw materials dryer), frequency of testing shall be every thirty (30) months for volatile organic compounds ("VOC"). CEMEX performed the most recent VOC stack test for AIRS Point 002 on June 14, 2016, therefore the next VOC testing was required to be completed by December 14, 2018. CEMEX has not conducted another stack test, but installed and certified a total hydrocarbon ("THC") continuous emissions monitoring system ("CEMS") to monitor VOC on June 5, 2019. CEMEX failed to conduct VOC testing for Point 002 as required from December 14, 2018 to June 5, 2019, violating Permit Number 95OPBO082, Section II, Condition 5.7.1.

- B. Pursuant to Permit Number 95OPBO082, Section II, Conditions 11.6.1.10 and 13.7.1.6, for AIRS Point 015 (outdoor clinker piles and handling) and AIRS Point 049 (haulage and disposal), 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. CEMEX failed to operate a powered sweeper for AIRS Point 015 during the day shift on April 7 & 8, 2019, violating Permit Number 95OPBO082, Section II, Conditions 11.6.1.10 and 13.7.1.6.

CEMEX retrained Facility supervisors on Title V requirements and created a roster of trained sweeper employees.

- C. Pursuant to Permit Number 95OPBO082, Section II, Condition 18.1.1, the CEMS for AIRS Points 002 (raw materials dryer) and 007 (kiln) are subject to the quality assurance/quality control requirements of Appendix F to Part 60 including those listed below.
 - i. Pursuant to Appendix F § 5.1, each CEMS must be audited at least once each calendar quarter. CEMEX failed to perform an audit on the AIRS Point 007 diluent (CO₂/O₂) CEMS during the second quarter of 2019 ("Q2 2019"), violating Permit Number 95OPBO082, Section II, Condition 18.1.1 and Appendix F § 5.1.

 - ii. Pursuant to Appendix F § 7, the source must include one copy of the Data Assessment Report ("DAR") for each quarterly audit with the report of emissions required under the applicable subparts of this part; the DAR must include the identification and location of monitors in the CEMS, the manufacturer and model number of each monitor in the CEMS, an assessment of CEMS data accuracy and date of assessment, and results from



EPA performance audit samples described in Appendix F § 5. On June 5, 2019, CEMEX certified a THC CEMS for AIRS Point 002. CEMEX failed to report the AIRS Point 002 THC CEMS in the Q2, Q3, and Q4 2019 DAR, violating Permit Number 95OPBO082, Section II, Condition 18.1.1 and Appendix F § 7.

On May 15, 2020, CEMEX submitted corrected DARs for Q2, Q3, and Q4 2019.

- D. Pursuant to Permit Number 95OPBO082, Section II, Condition 18.4.1 and Subpart A § 60.7(c), each owner or operator required to install a continuous monitoring device (CEMS) shall submit excess emissions and monitoring systems performance reports (“EER”) to the Division semiannually, which shall include the date and time identifying each period during which the CEMS was inoperative except for zero and span checks and the nature of the system repairs or adjustments. CEMEX uses a certified diluent (O₂, CO₂) CEMS for AIRS Point 007 (kiln) for compliance demonstration and reporting. CEMEX has failed to report AIRS Point 007 diluent CEMS downtime in EERs since mid-2015, violating Permit Number 95OPBO082, Section II, Condition 18.4.1 and Subpart A § 60.7(c).

On May 15, 2020, CEMEX submitted corrected EERS spanning 2019 to present.

- E. Pursuant to Permit Number 95OPBO082, Section II, Condition 22, those sources throughout Section II of this permit that are referred to this condition are subject to the requirements of Subpart LLL. The Permit Number 95OPBO082, Section II, Condition 10 MACT Standards for AIRS Points 007 and 008 refer to Subpart LLL and Condition 22. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.15 and Subpart LLL § 63.1348(d), at all times CEMEX 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. On December 6, 2018, CEMEX reported a dust plume was released on December 5, 2018 between 2:20 and 3:10 p.m. from the pre-heater tower, kiln gasket seal, firing hood, and cooler at AIRS Points 007 (kiln) and 008 (clinker cooling and transfer). On December 5, 2018, CEMEX failed to operate AIRS Point 007 in a manner consistent with safety and good air pollution control practices for minimizing emissions, violating Permit Number 95OPBO082, Section II, Condition 22.15 and Subpart LLL § 63.1348(d).

On May 15, 2020, CEMEX provided additional information to the Division indicating the dust incident occurred due to variable coal moisture, and resultant rapid kiln temperature reduction and pressure increase. To prevent future incidents, CEMEX added automated high/low temperature interlocks and high/low pressure alarms at the inlets and outlets to notify operators of changing fuel flow conditions caused by moisture content of the coal source; low-level kiln drive motor amperage alarms to indicate dropping kiln process temperatures; and a system pressure interlock to automate shutdown of fuel and feed if positive pressures are registered.

- F. Pursuant to Permit Number 95OPBO082, Section II, Condition 22, those sources throughout Section II of this permit that are referred to this condition are subject to the requirements of Subpart LLL. The Permit Number 95OPBO082, Section II, Condition 10 MACT Standards for AIRS Point 007 refers to Subpart LLL and Condition 22, including the requirements listed below.

- i. Pursuant to Condition 22.3 and Subpart LLL § 63.1343(a), the THC limits for kilns are corrected to 7 percent oxygen. CEMEX failed to perform an



O2/CO2 audit on the AIRS Point 007 CEMS during Q2 2019, therefore failed to accurately correct the AIRS Point 007 THC limit to 7 percent oxygen during Q2 2019, violating Permit Number 95OPBO082, Section II, Condition 22.3 and Subpart LLL § 63.1343(a).

- ii. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.13.1.2 and Subpart LLL § 63.1348(b)(1)(ii), 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), CEMEX must operate the monitoring system and collect data at all required intervals at all times the affected source is operating. CEMEX failed to perform an O2/CO2 audit on the AIRS Point 007 CEMS during Q2 2019, therefore failed to collect accurate data for AIRS Point 007 during Q2 2019, violating Permit Number 95OPBO082, Section II, Condition 22.13.1.2 and Subpart LLL § 63.1348(b)(1)(ii).
- iii. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.13.5 and Subpart LLL § 63.1348(b)(6)(i), for AIRS Point 007, CEMEX must demonstrate compliance using the monitoring methods and procedures in Conditions 22.35 and 22.36 and § 63.1350(i) and (j). Pursuant to Condition 22.36 and Subpart LLL § 63.1350(i)(1), CEMEX must operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of Appendix F in part 60 of this chapter. Pursuant to Appendix F § 5.1, each CEMS must be audited at least once each calendar quarter. CEMEX failed to perform an O2/CO2 audit on the AIRS Point 007 CEMS during Q2 2019, violating Permit Number 95OPBO082, Section II, Conditions 22.13.5, and 22.36 and Subpart LLL §§ 63.1348(b)(6)(i) and 63.1350(i)(1).
- iv. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.23.9 and Subpart LLL § 63.1349(b)(7)(xi), CEMEX must demonstrate continuous compliance by using all quality-assured hourly average data collected by the THC CEMS for all operating hours. CEMEX failed to perform an O2/CO2 audit on the AIRS Point 007 CEMS during Q2 2019, therefore failed to use quality-assured data for AIRS Point 007 during Q2 2019, violating Permit Number 95OPBO082, Section II, Condition 22.23.9 and Subpart LLL § 63.1349(b)(7)(xi).

- G. Pursuant to Permit Number 95OPBO082, Section II, Condition 26.5.4.2, if an engine is operated more than 250 hours in any calendar year period, a second opacity observation shall be conducted. In a Semi-Annual Monitoring Report dated February 1, 2019, CEMEX reported a second opacity observation was not conducted on the Dowe Flats 6" Pump engine at AIRS Point 053 after 250 hours of operation during 2018. CEMEX failed to conduct a second opacity observation after operating the Dowe Flats 6" Pump engine for more than 250 hours during 2018, violating Permit Number 95OPBO082, Section II, Condition 26.5.4.2.

CEMEX has implemented a new standard operating procedure for the Dowe Flats 6" Pump engine.

The Colorado Air Pollution Prevention and Control Act, at § 25-7-122(1)(b), C.R.S., specifies that the penalty for such violations may be up to Fifteen Thousand Dollars (\$15,000.00) per day for each violation. The monetary amount of the Division's settlement offer specified below is derived from a pre-established schedule of penalties, which takes into account, among other factors, the magnitude and severity of the violation, cooperation of the company, as well as the prior history of



violations of air quality requirements associated with any of the company's facilities/operations in the State of Colorado (including a company's parent or subsidiary relations, if applicable). Settlement offers are based on the evaluation of the same factors and criteria in all cases. Based upon CEMEX's cooperation, and its efforts to bring its operations into compliance with the regulations and permit conditions identified above, the Division acknowledges that CEMEX has appropriately and adequately addressed all compliance issues identified above. In the interest of settling the matters cited herein, the Division therefore offers the following settlement in accordance with the Division's settlement policy.

1. Payment of a reduced penalty in the sum of **Forty-Two Thousand Dollars (\$42,000.00)**. Payment of the penalty precludes further enforcement by the Division for the above-described violation against CEMEX. The Division retains its authority to take enforcement actions based on any and all violations not specifically described above.
2. Entering into this settlement shall not constitute an admission of violation of the air quality laws, or the alleged facts relating thereto, nor shall any third party infer it to be such an admission in any administrative or judicial proceeding. However, CEMEX agrees not to challenge the factual or legal determinations herein, the Division's authority to bring, or the court's jurisdiction to hear, any action, insofar as it pertains to the matters contained herein, to enforce the terms of this settlement agreement. The described violation will constitute part of CEMEX's compliance history for any purpose for which such history is relevant.

This letter constitutes an offer of settlement and is not a demand for payment. Please contact me if you wish to discuss this offer of settlement. We remain willing to consider any information you wish to submit related to the violation. Please be advised, however, that the offer of settlement contained in this letter is predicated on resolving this matter within fifteen (15) days of the date of this settlement proposal letter. If you elect to continue the negotiation of this matter beyond that date, this offer shall be deemed withdrawn, and any penalty mitigation built into this settlement proposal may be revoked. If you require additional time to evaluate this settlement proposal or discuss remaining issues with the Division, however, please contact me regarding your request for an extension of the offer. Any extension of the offer, if agreed to by the Division, must be confirmed, in writing, by the Division.

If the above terms are acceptable to you, please have the appropriate person sign and return this letter and send a check in the sum of **\$42,000.00**, made payable to the Colorado Department of Public Health and Environment, to

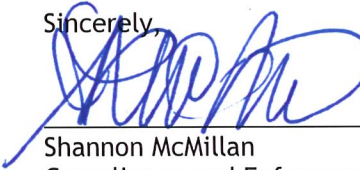
**Air Pollution Control Division
Attn: Heather Wuollet
4300 Cherry Creek Drive South
APCD-SS-B1
Denver, Colorado 80246-1530**

This offer of settlement, upon being fully endorsed by both the Division and CEMEX, shall constitute full and final resolution of the noncompliance issues identified herein and in the Compliance Advisory issued to CEMEX.

You may write or call to request a settlement conference if you wish to discuss the matter with representatives of the Division's compliance staff. If we do not receive a response from you within fifteen (15) days of the date of this letter, we will assume that you are not interested in resolving this matter as outlined above. Please call me, at 303-692-3259, or Heather Wuollet, at 303-692-3198, if you have any further questions regarding this matter.



Sincerely,

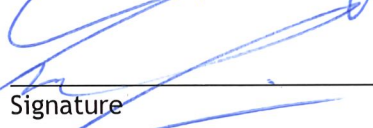


Shannon McMillan
Compliance and Enforcement Program Manager

I certify that I am authorized by CEMEX to execute this settlement agreement and bind CEMEX, and any affiliated entities, to the terms and conditions of this agreement. I have read the above settlement and agree to the terms and conditions of this offer.

Name: Uwe Lubjuhn

Title: Plant Manager


Signature

720 347 3519
Telephone Number

07/21/2020
Date

- cc: Shannon McMillan, APCD
- Paul Carr, APCD
- Heather Wuollet, APCD
- Ben Cappa, APCD
- Tom Roan, Attorney General's Office
- Dave Huber, APCD
- Beth Pilson, APCD
- Tom Lovell, APCD
- Michael Stovern, EPA (Region VIII)
- File





RECEIVED

FEB 27 2020

APCD
Stationary
Sources

February 11, 2020

SENT VIA CERTIFIED MAIL NO. 7017 0660 0000 0139 1003
Return Receipt Requested

Scott Marcus
CEMEX Construction Materials South, LLC
PO Box 529
Lyons, CO 80540

Re: Proposed Early Settlement Agreement in the Matter of CEMEX Construction Materials South, LLC
AIRS No.: 013-0003
Case No.: 2019-197

Dear Scott Marcus:

CEMEX Construction Materials South, LLC ("CEMEX") owns and operates the Lyons Cement Plant located at 5134 Ute Highway, Longmont, Boulder County, Colorado ("Facility"). The Facility is subject to the terms and conditions of Colorado Operating Permit Number 95OPBO082, first issuance issued to CEMEX on February 1, 2000, renewed March 1, 2017, last revised November 17, 2017 ("Permit Number 95OPBO082"); 40 CFR Part 63, Subpart LLL—National Emissions Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry ("Subpart LLL"); Colorado Air Quality Control Statutes; and Colorado Air Quality Control Commission ("AQCC") Regulations.

On October 2 and 3, 2019, CEMEX conducted scheduled compliance testing on the exhaust stack of the kiln (AIRS Point 007) at the Facility ("stack test"). Based on the stack test reports received on September 20 and November 1, 2019, and a review of records related to the Facility, the Air Pollution Control Division ("Division") issued a Compliance Advisory to CEMEX on December 27, 2019. On January 22, 2020, the Division and CEMEX met to discuss the issues identified in the Compliance Advisory.

Based upon a review of the stack test reports, records related to the Facility, and the information provided by CEMEX, the Division has determined the following:

- A. Pursuant to Permit Number 95OPBO082, Section II, Condition 22.25 and Subpart LLL § 63.1349(c), CEMEX must conduct performance tests for dioxin/furan at regular intervals. Performance tests are required every 30 months and must be completed no more than 31 calendar months after the previous performance test. CEMEX conducted dioxin/furan testing on February 9, 2017 and the next performance test was required to be completed by September 9, 2019. CEMEX failed to complete required dioxin/furan testing until October 3, 2019, violating Permit Number 95OPBO082, Section II, Condition 22.25 and Subpart LLL § 63.1349(c).

The stack test report received on September 20, 2019 was for dioxin/furan testing



completed in August 2019. All three runs of the August test failed to collect the minimum sample volume of 90 dscf, as required by Subpart LLL § 63.1349(b)(3)(i), therefore the test was not a valid demonstration of compliance. Testing conducted on October 2 and 3, 2019 successfully demonstrated compliance with dioxin/furan limits, as determined from the stack test report received on November 1, 2019.

The Colorado Air Pollution Prevention and Control Act, at § 25-7-122(1)(b), C.R.S., specifies that the penalty for such violations may be up to Fifteen Thousand Dollars (\$15,000.00) per day for each violation. The monetary amount of the Division's settlement offer specified below is derived from a pre-established schedule of penalties, which takes into account, among other factors, the magnitude and severity of the violation, cooperation of the company, as well as the prior history of violations of air quality requirements associated with any of the company's facilities/operations in the State of Colorado (including a company's parent or subsidiary relations, if applicable). Settlement offers are based on the evaluation of the same factors and criteria in all cases. Based upon CEMEX's cooperation, and its efforts to bring its operations into compliance with the regulations and permit conditions identified above, the Division acknowledges that CEMEX has appropriately and adequately addressed all compliance issues identified above. In the interest of settling the matters cited herein, the Division therefore offers the following settlement in accordance with the Division's settlement policy.

1. Payment of a reduced penalty in the sum of **Five Thousand Two Hundred Fifty Dollars (\$5,250.00)**. Payment of the penalty precludes further enforcement by the Division for the above-described violation against CEMEX. The Division retains its authority to take enforcement actions based on any and all violations not specifically described above.
2. Entering into this settlement shall not constitute an admission of violation of the air quality laws, or the alleged facts relating thereto, nor shall any third party infer it to be such an admission in any administrative or judicial proceeding. However, CEMEX agrees not to challenge the factual or legal determinations herein, the Division's authority to bring, or the court's jurisdiction to hear, any action, insofar as it pertains to the matters contained herein, to enforce the terms of this settlement agreement. The described violation will constitute part of CEMEX's compliance history for any purpose for which such history is relevant.

This letter constitutes an offer of settlement and is not a demand for payment. Please contact me if you wish to discuss this offer of settlement. We remain willing to consider any information you wish to submit related to the violation. Please be advised, however, that the offer of settlement contained in this letter is predicated on resolving this matter within fifteen (15) days of the date of this settlement proposal letter. If you elect to continue the negotiation of this matter beyond that date, this offer shall be deemed withdrawn, and any penalty mitigation built into this settlement proposal may be revoked. If you require additional time to evaluate this settlement proposal or discuss remaining issues with the Division, however, please contact me regarding your request for an extension of the offer. Any extension of the offer, if agreed to by the Division, must be confirmed, in writing, by the Division.

If the above terms are acceptable to you, please have the appropriate person sign and return this letter and send a check in the sum of **\$5,250.00**, made payable to the Colorado Department of Public Health and Environment, to

**Air Pollution Control Division
Attn: Heather Wuollet
4300 Cherry Creek Drive South
APCD-SS-B1
Denver, Colorado 80246-1530**



This offer of settlement, upon being fully endorsed by both the Division and CEMEX, shall constitute full and final resolution of the noncompliance issues identified herein and in the Compliance Advisory issued to CEMEX.

You may write or call to request a settlement conference if you wish to discuss the matter with representatives of the Division's compliance staff. If we do not receive a response from you within fifteen (15) days of the date of this letter, we will assume that you are not interested in resolving this matter as outlined above. Please call Heather Wuollet, at 303-692-3198, if you have any further questions regarding this matter.

Sincerely,

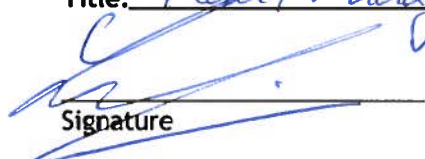


Shannon McMillan
Compliance and Enforcement Program Manager

I certify that I am authorized by CEMEX Construction Materials South, LLC to execute this settlement agreement and bind CEMEX Construction Materials South, LLC, and any affiliated entities, to the terms and conditions of this agreement. I have read the above settlement and agree to the terms and conditions of this offer.

Name: Uwe Lubjunker

Title: Plant Manager



Signature

720 347 3579
Telephone Number

02/26/2020
Date

- cc: Shannon McMillan, APCD
Beth Pilson, APCD
Tom Lovell, APCD
Jeffrey Bishop, APCD
Tom Roan, Attorney General's Office
- Paul Carr, APCD
Heather Wuollet, APCD
Ben Cappa, APCD
Michael Stovern, EPA (Region VIII)
File



November 25, 2019

SENT VIA CERTIFIED MAIL NO. 7017 0660 0000 0139 2888
Return Receipt Requested

Scott Harcus
CEMEX Construction Materials South, LLC
PO Box 529
Lyons, CO 80540

Re: Proposed Early Settlement Agreement in the Matter of CEMEX Construction Materials South, LLC
AIRS No.: 013-0003
Case No.: 2019-158

Dear Scott Harcus:

CEMEX Construction Materials South, LLC (“CEMEX”) owns and operates the Lyons Plant, a portland cement manufacturing facility located at 5134 Ute Highway, Longmont, Boulder County, Colorado (“Facility”). The Facility is subject to the terms and conditions of the Colorado Operating Permit Number 95OPBO082, first issued to CEMEX on February 1, 2000 and last renewed on November 17, 2017 (“Permit Number 95OPBO082”), Air Quality Control Statutes, and Colorado Air Quality Control Commission (“AQCC”) Regulations.

The following equipment is relevant to this enforcement action:

AIRS Point	Process	Description	Control
008	Clinker Cooling and Transfer to Storage for Finish Mill	S017 - Clinker Drag Chains	DC 525-5 - 1 Baghouse

On December 12, 2018, Grant McKercher, of the Colorado Air Pollution Control Division (“Division”), conducted a partial compliance evaluation of the Facility. Based on the partial compliance evaluation, and a review of records related to the Facility, the Division issued a Compliance Advisory to CEMEX on September 11, 2019. On October 9, 2019, the Division and CEMEX met to discuss the issues identified in the Compliance Advisory.

Based upon a review of the partial compliance evaluation, records related to the Facility, and the information provided by CEMEX, the Division has determined the following:

- A. Pursuant to Permit Number 95OPBO082, Section II, Condition 19, routine maintenance of and operational procedures performed on the baghouses shall be conducted in accordance with manufacturer’s specifications and/or 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. On December 12, 2018 at or around 11:30 am, Mr. McKercher observed significant fugitive dust emissions from the clinker transport elevators and drag chains at AIRS Point 008 (S017, DC 525-5). Mr. McKercher then observed that the Magnehelic gauge of the clinker cooler area baghouse at AIRS Point 008 (S017, DC 525-5) displayed a differential pressure reading of approximately zero due to a closed-off air handling damper, resulting in the uncontrolled emissions observed. In a report submitted to the Division, CEMEX identified the baghouse as Baghouse Dust Collector #525-5, and stated the issue was resolved at 7:35 am on December 13, 2018 by adjusting the air handling damper on the baghouse. CEMEX failed to operate the baghouses at AIRS Point 008 in accordance with good engineering practices on December 12 and 13, 2018, violating Permit Number 95OPBO082, Section II, Condition 19.

- B. Pursuant to Permit Number 95OPBO082, Section II, Condition 20.3, baghouses shall be operated and maintained in accordance with the requirements in Condition 19 in order to monitor compliance with the opacity limits set out in Permit Number 95OPBO082, Section II, Condition 20 and AQCC Regulation Number 1. As described in Paragraph A, CEMEX failed to operate a baghouse at AIRS Point 008 (S017, DC 525-5) in accordance with the requirements in Condition 19, violating Permit Number 95OPBO082, Section II, Condition 20.3.

The Colorado Air Pollution Prevention and Control Act, at § 25-7-122(1)(b), C.R.S., specifies that the penalty for such violations may be up to Fifteen Thousand Dollars (\$15,000.00) per day for each violation. The monetary amount of the Division's settlement offer specified below is derived from a pre-established schedule of penalties, which takes into account, among other factors, the magnitude and severity of the violation, cooperation of the company, as well as the prior history of violations of air quality requirements associated with any of the company's facilities/operations in the State of Colorado (including a company's parent or subsidiary relations, if applicable). Settlement offers are based on the evaluation of the same factors and criteria in all cases. Based upon CEMEX's cooperation, and its efforts to bring its operations into compliance with the regulations and permit conditions identified above, the Division acknowledges that CEMEX has appropriately and adequately addressed all compliance issues identified above. In the interest of settling the matters cited herein, the Division therefore offers the following settlement in accordance with the Division's settlement policy.

1. Payment of a reduced penalty in the sum of **Seven Thousand Dollars (\$7,000.00)**. Payment of the penalty precludes further enforcement by the Division for the above-described violation against CEMEX. The Division retains its authority to take enforcement actions based on any and all violations not specifically described above.
2. Entering into this settlement shall not constitute an admission of violation of the air quality laws, or the alleged facts relating thereto, nor shall any third party infer it to be such an admission in any administrative or judicial proceeding. However, CEMEX agrees not to challenge the factual or legal determinations herein, the Division's authority to bring, or the court's jurisdiction to hear, any action, insofar as it pertains to the matters contained herein, to enforce the terms of this settlement agreement. The described violation will constitute part of CEMEX's compliance history for any purpose for which such history is relevant.

This letter constitutes an offer of settlement and is not a demand for payment. Please contact me if you wish to discuss this offer of settlement. We remain willing to consider any information you wish to submit related to the violation. Please be advised, however, that the offer of settlement contained in this letter is predicated on resolving this matter within fifteen (15) days of the date of



this settlement proposal letter. If you elect to continue the negotiation of this matter beyond that date, this offer shall be deemed withdrawn, and any penalty mitigation built into this settlement proposal may be revoked. If you require additional time to evaluate this settlement proposal or discuss remaining issues with the Division, however, please contact me regarding your request for an extension of the offer. Any extension of the offer, if agreed to by the Division, must be confirmed, in writing, by the Division.

If the above terms are acceptable to you, please have the appropriate person sign and return this letter and send a check in the sum of \$7,000.00, made payable to the Colorado Department of Public Health and Environment, to

**Air Pollution Control Division
Attn: Heather Wuollet
4300 Cherry Creek Drive South
APCD-SS-B1
Denver, Colorado 80246-1530**

This offer of settlement, upon being fully endorsed by both the Division and CEMEX, shall constitute full and final resolution of the noncompliance issues identified herein and in the Compliance Advisory issued to CEMEX.

You may write or call to request a settlement conference if you wish to discuss the matter with representatives of the Division's compliance staff. If we do not receive a response from you within fifteen (15) days of the date of this letter, we will assume that you are not interested in resolving this matter as outlined above. Please call me, at 303-692-3259, or Heather Wuollet, at 303-692-3198, if you have any further questions regarding this matter.

Sincerely,

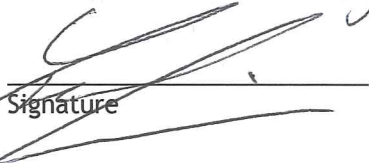


Shannon McMillan
Compliance and Enforcement Program Manager

I certify that I am authorized by CEMEX to execute this settlement agreement and bind CEMEX, and any affiliated entities, to the terms and conditions of this agreement. I have read the above settlement and agree to the terms and conditions of this offer.

Name: Uwe Lubjuba

Title: Plant Manager



Signature

720 347 3519
Telephone Number

12/5/2019
Date

cc: Shannon McMillan, APCD
Paul Carr, APCD
Heather Wuollet, APCD
Tom Roan, Attorney General's Office
Tom Lovell, APCD
Beth Pilson, APCD
Michael Stovern, EPA (Region VIII)
File



Cemex (AIRS Plant ID 013-0003): Enforcement History

APCD provides regular compliance oversight of the Cemex Lyons Plant, including annual inspections, oversight of any required stack tests, and other compliance related issues. Delegated representatives at Boulder County Health Department typically take the lead responding to complaints related to the facility.

Cemex has been the subject of 12 formal enforcement actions by APCD since 2000, 5 of these in the last 5 years (see details below). In addition, there is an additional formal enforcement action by APCD which is still pending.

- Case No. 2021-077
 - Early Settlement Agreement (ESA)
 - FY20 inspection
 - Continuous Emissions Monitoring Systems (CEMS) downtime
 - Opacity violation (kiln & clinker cooler)
 - Monitoring, Recordkeeping & Reporting issues
 - \$40,250 penalty
- Case No. 2020-036
 - ESA
 - FY19 inspection
 - Failed to conduct timely VOC testing
 - Failed to operate power sweeper on two days
 - Failed to complete required QA/QC actions for THC CEMS
 - Dust plume observed (from points associated with kiln/clinker cooler), violating requirement to operate in a manner with good air pollution control practices
 - Monitoring & Reporting issues
 - \$42,000 penalty
- Case No. 2019-197
 - ESA
 - September & October 2019 stack testing
 - Failed to conduct timely dioxin/furan testing on the kiln
 - \$5,250 penalty
- Case No. 2019-158
 - ESA
 - 12/2018 Partial Compliance Evaluation (PCE)
 - Significant dust emissions from the clinker transport elevator and drag chains from a process, violating requirement to operate the process' baghouses in accordance with good air engineering practices
 - \$7,000 penalty
- Case 2019-021
 - Compliance Order on Consent (COC)
 - FY18 inspection
 - Opacity from the kiln

- Failure to operate and maintain a baghouse in accordance with manufacturer's specifications and/or good engineering practices
- Failure to operate the plant water truck on two dates in Jan 2018
- Failure to operate the power sweeper for 2 hours on one date in March 2017
- Failure to ensure carbon & lime injection system was operating when temperatures reached trigger point on one date in July 2017
- Monitoring, Recordkeeping & Reporting issues
 - \$35, 000 penalty

Historically, there have been regular complaints about Cemex from nearby residents. Most of these complaints are related to fugitive dust from the plant and/or associated quarry. Some years APCD/Boulder County receive more complaints than others. For example, 2022: 4 complaints (to date); 2021: 16 complaints; 2020: 4 complaints; and 2019: 16 complaints.