Colorado Department of Public Health and Environment

OPERATING PERMIT

CEMEX Construction Materials South, LLC – Lyons Cement Plant

First Issued: February 1, 2000
Renewed: March 1, 2008
Last Revised: April 1, 2013

AIR POLLUTION CONTROL DIVISION
COLORADO OPERATING PERMIT

FACILITY NAME:	CEMEX Construction Materials South, LLC - Lyons Cement Plant	OPERATING PERMIT NUMBER
FACILITY ID:	0130003	**95OPBO082**
RENEWED:	March 1, 2008	
EXPIRATION DATE:	March 1, 2013	
MODIFICATIONS:	See Appendix F of Permit	

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

ISSUED TO:

CEMEX, Inc.
840 Gessner Suite 1400
Houston, Texas 77002

PLANT SITE LOCATION:

5134 Ute Highway
Lyons Colorado 80540
Boulder County

INFORMATION RELIED UPON

Operating Permit Renewal Application Received: February 2, 2004

And Additional Information Received: March 17, 2005, June 1, September 17 and October 31, 2007

Nature of Business: Cement Production

Primary SIC: 3241

RESPONSIBLE OFFICIAL

Name: Bradley Shane Wilson
Title: Plant Manager

Phone: (303) 823-2101

FACILITY CONTACT PERSON

Name: Denise T. Arthur, PhD
Title: Environmental Manager

Phone: (303) 823-2115

SUBMITTAL DEADLINES

First Semi-Annual Monitoring Period:	March 1 – June 30
Subsequent Semi-Annual Monitoring Periods:	July 1 – December 31, January 1– June 30
Semi-Annual Monitoring Reports:	Due August 1, 2008 & February 1, 2009 & subsequent years
First Annual Compliance Period:	March 1 - December 31
Subsequent Annual Compliance Periods:	January 1 – December 31
Annual Compliance Certification:	Due February 1, 2009 and subsequent years

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

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SECTION I - General Activities and Summary

1. Permitted Activities

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

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

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

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

1.3 This Operating Permit incorporates the applicable requirements contained in the underlying construction permits, and does not affect those applicable requirements, except as modified during review of the application or as modified subsequent to permit issuance using the modification procedures found in Regulation No. 3, Part C. These Part C procedures meet the applicable substantive New Source Review requirements of Part B. Any revisions made using the provisions of Regulation No. 3, Part C shall become new applicable requirements for purposes of this operating permit and shall survive reissuance. Any requirements that were designated in the compliance order on consent signed February 19, 2004 (No. 2002-124) 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.

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

2.1 This facility is categorized as a NANSR major stationary source (Potential to Emit of VOC and $NO_X \geq 100$ tons/year). Future modifications at this facility resulting in a significant net emissions increase (see Regulation No. 3, Part D, Sections II.A.26 and 42) for VOC or NO_X or a modification which is major by itself (Potential to Emit $\geq$ 100 tons/year or either VOC or NO_X) may result in the application of the NANSR review requirements.

2.2 This source is categorized as a PSD major stationary source (Potential to Emit $\geq$ 100 tons/year) for PM, PM_{10}, SO_2, NO_X and CO. Future modifications at this facility resulting in a significant net emissions increase (see Regulation No. 3, Part D, Sections II.A.26 and 42) or a modification that is major by itself (Potential to Emit $\geq$ 100 tons/yr) for any pollutant listed in Regulation No. 3, Part D, Section II.A.42 for which the area is in attainment or attainment/maintenance may result in the application of the PSD review requirements.

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

3. Accidental Release Program (112(r))

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

4. Summary of Emission Units

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

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
Dowe Flats and Lyons Quarry – Fugitive Emission Sources (Section II.1)	P017	017	Blasting (combustion byproduct emissions)		Grandfathered
		025	(Particulate Emissions Only) Drilling , Blasting, Truck Loading/Unloading, Haul Roads (Dowe Flats), Scraper Activities, Grading, Bulldozing, Wind erosion of stockpiles and exposed areas	PM Emission Control Plan	93BO1414F
Dowe Flats Quarry – Point Source Emissions (Section II.2)		026	S056 through S064 - Conveyor	Baghouse (8 total)	94BO593
		027	S055 - Primary Crusher (Quarry)	Baghouse	
General Fugitive Emissions Requirements (Section II.14)	P018	028	Process Fugitives (Lyons Cement Plant) Not Subject to Emission Limitations Includes wind erosion of stock piles and various transfers not vented through a stack (e.g. belt and screw conveyor transfers)		Grandfathered
		019	Haul Roads (Lyons Cement Plant/Quarry and Dowe Flats Quarry) Not Subject to Emission Limitations Hauling of purchased limestone, iron, gypsum and silica and operation of water truck		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)	Bagfilters	P-10,225*
			S004 - Surge Silo		P-10,535*
Raw Materials Drying (Section II.5)	P002	002	S005 - Raw Materials Dryer	Baghouse	12BO444-1

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
Secondary Crushing (Section II.6)	P003	003	Secondary Crushing and Screening (vents to S001 – Waste Dust Silo)	Baghouse (2 total)	Grandfathered
			S003 - #4&#6 Belt Transfer		P-10,298*
Raw Material Storage Silos (Section II.7)	P004	004	S006 to S008 - Raw Material Storage Silos	Baghouse (3 total)	P-10,284*
Raw Material Grinding (Section II.8)	P005	005	S012 - Raw Mill Feeders	Baghouse (4 total)	Grandfathered
			S013 - Iron/Silica Silo		
			S010 - Raw Material Grinding		
			S011 –Raw Material Separator		Grandfathered
Homogenizing & Blending (Section II.9)	P006	006	S014 - Homogenizing Silo	Baghouse (2 total)	Grandfathered
			S015 - Kiln Feed Silo		Grandfathered
Kiln Burning (Section II.10)	P007	007	S016 - Precalciner Kiln	Baghouses (3) – Main, Hart and Alkali Bypass	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		
			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		

Process (Permit Section)	Plant ID	AIRS ID	Description		Pollution Control Device	Construction Permit
Outdoor Clinker Storage and Handling (Section II.11)	P015	015	Outdoor Clinker Storage 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 – Masonry 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 S049 – Packer (South - Masonary) S050 – Packer (North - Portland Cement)		Baghouse (8 Total)	98BO0259
Material Handling System – Load-In & Load-Out (Section II.12)	P014	014	S020 - Coal Silo/Elevator S019 – Material Unloading Hopper (Railcar)			C-10,316*, 10BO718*
			S025 – Material Unloading Hopper and Spout (Trucks)		Baghouse	
			Outdoor Coal Storage			
Cold Cleaner Solvent Vats (Section II.18)		APEN Exempt	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) S001Waste Dust Silo S022 Kiln Return Dust Silo	Bagfilters	98BO0315
			041 - Pug Mill Mixing, Pelletization and Truck Loading of CKD and Benefication Dust	041 - Pug Mill/Truck Loading	Bagfilters	
			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	Gasoline Storage Tank (3,000 gallons, aboveground)		Submerged Filling and Vapor Recovery	Permit Exempt

Process (Permit Section)	Plant ID	AIRS ID	Description	Pollution Control Device	Construction Permit
Cement Rail Car Unloading System (Section II.25)	P050	050	Cement Rail Car Unloading and Handling System – Hopper, screw conveyor and pneumatic transfer system	Bagfilter BH-825-8	05BO0703

*Permit issued, but permit includes no applicable requirements

5. Alternate Operating Scenarios

5.1 The permittee shall be allowed to make the following changes to its method of operation without applying for a revision of this permit.

5.1.1 No separate operating scenarios have been specified.

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:

S005 – Raw Materials Dryer; S016 – Precalciner Kiln; S018 – Clinker Cooler; S032 – Bottom of A Frame Transfer; S024 - #2 Clinker Silo; S051 – Top of A Frame Transfer; S034- #6 Reclaim Feeder; S036 – Finish Mill; S037 – Finish Mill Auxillary Dust Collector; S065 – Finish Mill Separator; S043 – Masonry Storage Silos A10 and A13; S044 – Cement Storage Silo A7; S046 – Packhouse West (loading spout); S046 – Packhouse East (loading spout); S049 – Packer (South - Masonary); S050 – Packer (North - Portland Cement); S001 – Waste Dust Silo

CAM requirements are set forth in Section II, Condition 24 of this permit.

SECTION II - Specific Permit Terms

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

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

AIRs pt 025: Fugitive PM emissions from quarry activities

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	1.1	3,200,000 tons/year 25,000 tons/day		Recordkeeping	Monthly
PM	1.2	Dowe Flats Quarry Operations - 134.2 tons/ year Disturbed Areas @ Lyons Quarry - 19.0 tons/year	See Condition 1.2	Recordkeeping and Calculation	Annually
PM_{10}		Dowe Flats Quarry Operations - 58.4 tons/year 916 lbs/day Disturbed Areas @ Lyons Quarry - 9.4 tons/year			
Fugitive Emission Control Plan	1.3			Inspection	Weekly
Restrictions on Lyons Quarry	1.4	Lyons - Mining Prohibited		Certification	Annually

1.1 Total material (includes: topsoil, overburden, limestone, and waste rock) handled shall not exceed the limitations listed in the table above (Construction Permit 93BO1414F). The quantity of total material handled shall be monitored and recorded monthly. 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.

The permittee shall maintain records of the number of days of operation during each month. Compliance with the daily limits shall be monitored by dividing the monthly handling rates by the number of days of operation for that month. Records of the number of days of operation, the daily, monthly and twelve month total handling rates and any other information used to determine the monthly quantities of materials handled shall be kept on site and made available for the Division upon request.

1.2 PM and PM_{10} emissions shall not exceed the limits listed in the table above (Construction Permit 93BO1414F). In the absence of credible evidence to the contrary, compliance with the emission

limitations is presumed provided the process limits set forth in Condition 1.1 are met and that the control measures set forth in Condition 1.3 have been followed.

For APEN reporting and fee purposes, the annual PM and PM_{10} emissions shall be estimated using the actual annual processing rates recorded under Condition 1.1, appropriate emission factors and equations, and control measure efficiencies. A record of the annual emission calculations shall be maintained and made available to the Division for inspection upon request.

1.3 Fugitive particulate matter emissions shall be controlled in accordance with the following (Construction Permit 93BO1414F, Colorado Regulation No. 1, III.D.1.b).

1.3.1 Mining Activities, including mined land reclamations - Visible emissions shall not exceed 20%, and no off-property transport of visible emissions. The 20% opacity and no off-property transport limitations are guidelines and not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 25-7-115.

1.3.2 Haul Roads - No off-property transport of visible emissions shall apply to on-site haul roads, and the nuisance guidelines shall apply to off-site haul roads. The no off property transport and nuisance emission limitations are guidelines and not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 25-7-115.

1.3.3 Haul Trucks - No off-property transport of visible emissions except that when operating off the property of the owner or operator, the applicable guidelines shall be no off-vehicle transport of visible emissions. The no off-property transport limitations are guidelines and not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 25-7-115.

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

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

1.3.6 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 sprinkler system shall be installed and operated to wet muck piles prior to loading, hauling and crushing. 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)

1.3.7 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. (Construction Permit 93BO1414F, Attachment A, as modified per Section I, Condition 1.3 of this permit)

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

1.3.9 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.

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

1.3.11 Sequential blasting shall be employed.

1.3.12 Reclamation work and sequential extraction of material shall be initiated to keep the total disturbed areas at any one time to a minimum.

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

1.3.14 The permittee will monitor and record local weather forecast information for the current day prior to loading explosives in any drill hole. The forecasts at a minimum shall include anticipated wind speed and direction. Records of the forecasts shall be kept on file at the plant and made available upon request. (Compliance Order on Consent 2002-124, paragraph 38.a)

1.3.15 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. (Compliance Order on Consent 2002-124, paragraph 38.b)

1.3.16 The permittee will record the actual blast with a video camera, which is to be positioned on the large overburden hill at the south end of the quarry. 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. (Compliance Order on Consent 2002-124, paragraph 38.c)

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

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.

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

1.4 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)

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
PM	2.2	Crusher and Conveyor – 0.05 gram per dry standard cubic meter		Stack Test Baghouse Operation and Maintenance	Every Five (5) Years
	2.3	0.16 ton/year	Crusher: 0.020 lb/ton* Conveyor: 0.00124 lb/ton* (total for all transfer points)	Recordkeeping and Calculation	Monthly
PM_{10}	2.3	0.07 ton/year	Crusher: 0.009 lb/ton* Conveyor: 0.00059 lb/ton* (total for all transfer points)		
Opacity – Crusher and Conveyor Transfer Points	2.2	Shall not exceed 7%		Inspection Method 9 Baghouse O&M	Daily Semiannually
Opacity	2.4	Shall not exceed 20%, except as provided for below			
		Certain Operating Conditions - Shall not exceed 30%			

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

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

Records of the monthly and twelve month material processing rates and any information used to determine the monthly quantities of materials handled shall be kept on-site and made available for Division review upon request.

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 set forth in Condition 20 of this permit.

2.3 PM and PM_{10} emissions shall not exceed the limits listed in the above 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 by calculating monthly emissions using the above emission factors in the following equation:

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

Note that if the baghouses are operated and maintained in accordance with the requirements in Condition 21 a control efficiency of 98.6 % may be used in the above calculation for the enclosed conveyor and baghouses and the crusher baghouse.

Monthly emissions shall be calculated by the end of the subsequent month. Monthly emissions from the crusher and conveyor shall be summed together and 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. Records of emission calculations shall be maintained and made available to the Division upon request.

2.4 These sources are subject to the opacity limits set forth in Condition 21 of this permit.

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 4,365 tons/day* Iron Slag: 50,000 tons/year		Recordkeeping	Monthly
PM	3.2	15.5 tons/year	Front End Loader: .0282 lb PM/ton .0127 lb PM_{10}/ton	Recordkeeping and Calculation	Monthly
PM_{10}		7.0 tons/year 53.00 lbs/day			
Opacity	3.3	Shall not exceed 20%, except as provided for below		Inspection Method 9	Daily Semiannually and As Needed
		Certain Operating Conditions - Shall not exceed 30%			
PM Emission Control Plan	3.4			Inspection	Weekly

*daily limit addresses all materials, including slag.

3.1 Process rates shall not exceed the rates listed in the table above (Construction Permit 98BO0292). The quantity of materials processed shall be monitored and recorded monthly. 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.

The permittee shall maintain records of the number of days of operation during each month. Compliance with the daily limits shall be monitored by dividing the monthly limits by the number of days of operation for that month. Records of the number of days of operation, the daily, monthly and twelve month total processing rates and any other information used to determine the monthly quantities of materials processed shall be maintained and made available to the Division upon request.

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

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

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

3.3 These sources, except for Front End Loader Activity, are subject to the opacity limits set forth in Condition 21 of this permit.

3.4 The following particulate emission control measures shall be applied to the particulate emission producing sources (Construction Permit 98BO0292, Colorado Regulation No. 1, III.D.1.b).

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

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

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

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

3.4.5 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. The operation of front-end loaders and hauling activities in this area will be suspended whenever 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)

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

3.4.7 Front end loader and hauling activities shall be suspended when the wind speed reaches or exceeds 30 m.p.h., averaged over a 60-minute period. Activities may

continue when the average wind speed drops below 30 m.p.h. (Construction Permit 98BO0292, as modified per Section 1, Condition 1.3 of this permit)

The permittee shall install, calibrate, and operate a wind speed instrument which will be used to alert personnel when wind speeds reach or exceed 30 m.p.h. The permittee shall maintain records of those dates and times when wind speed reaches or exceeds 30 m.p.h, averaged over a sixty minute period. The Annual Certification shall include a statement that the activities identified in Condition 3.4.7 were suspended when average wind speeds reached or exceeded 30 m.p.h. threshold.

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.

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
Material Throughput	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		Control Equipment Maintenance	Annual Certification
Opacity	4.4	Shall not exceed 20%, except as provided for below Certain Operating Conditions – Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Inspection Method 9 Baghouse Maintenance and Operation	Daily As Needed

4.1 Records of the annual amounts of raw materials throughput shall be maintained and made available to the Division for inspection upon request.

4.2 For APEN reporting and fee purposes, annual emissions shall be estimated using the actual annual raw material throughputs recorded under Condition 4.1, and the emission factor listed in the table above (AP-42, Section 11.6, January, 1995). These emission factors account for bagfilter control. Records of the calculations shall be maintained and made available for inspection upon request.

4.3 During any consecutive sixty (60) minute period, PM emissions shall not exceed the following limitation (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 particulate matter limit is presumed provided the baghouse operating and maintenance requirements specified in Condition 21 are met.

4.4 These sources are subject to the opacity limits set forth in Condition 21 of this permit.

5. P002 - Raw Materials Drying

AIRs pt 002: S005 Raw Materials Dryer

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Operating Hours	5.1	7,000 hours/year		Recordkeeping	Monthly
Dryer Feed		1,050,000 tons/year 160 tons/hour			
Coal	5.2	1.4 tons/hour			
Dryer Heat Input	5.3	210,000 million Btu/year		Fuel Sampling Recordkeeping	Semi-Annually Monthly
PM	5.4	22.8 tons/year	See Conditions 5.4 and 5.5.	Stack Test	From Annually to Every Five (5) Years (See Condition 5.4)
PM_{10}		22.8 tons/year and 6.5 lbs/hour		Baghouse Maintenance and Operation Recordkeeping and Calculation	Monthly
SO_2	5.5	36.7 tons/year		Stack Test Recordkeeping and Calculation	Every Five (5) years Monthly
NO_x		13.9 tons/year			
VOC		144.8 tons/year			
CO		57.3 tons/year			
Lead	5.5	1.6 tons/year			
Opacity	5.6	Shall not exceed 20%, except as provided for below		Inspection Method 9 Baghouse Maintenance and Operation	Daily As Needed
		Certain Operating Conditions - Shall not exceed 30%			
RACT – VOC	5.7	Process Design		Compliance Certification	Annually
MACT Standard - Opacity	5.8	Shall not exceed 10%		Method 9 Method 22 O&M Plan	Every Five (5) years Monthly to Annually
CAM	5.9	See Condition 24			

5.1 Annual operating hours and annual and hourly feed rates shall not exceed the limits listed in the above table. (Construction Permit 12BO444-1, revised in accordance with Section I, Condition 3.1 of this permit). Operating hours and the quantity of feed material to the dryer shall be monitored and recorded monthly. Monthly hours of operation and feed material to the dryer

shall be used in twelve month rolling totals 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 dryer feed limit shall be monitored by dividing the monthly quantities of dryer feed by the hours the dryer operated for that month. Records of the monthly and twelve month totals of operating hours and feed rates shall be maintained and made available to the Division for inspection upon request.

5.2 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. The quantity of coal burned shall be included in monitoring compliance with the heat input limit as specified in Condition 5.3. 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. (Construction Permit 12BO444-1)

5.3 Dryer heat input shall not exceed 0.21×10^6 MMBtu per year (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 below. 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.

The heat content of the natural gas shall be determined semi-annually using ASTM Methods or other appropriate methods approved by the Division.

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

5.4 PM and PM_{10} emissions shall not exceed the limits listed in the table above (Construction Permit 12BO444-1). Compliance with the emission limits shall be monitored using the results of the stack tests and the baghouse maintenance and operating procedures required in this Condition 5.4.

Compliance with the annual emission limitations shall be monitored by calculating monthly emissions using the appropriate PM and PM_{10} emission factors specified in the table below and hours of operation.

Pollutant	Fuel	Emission Factor	Source
PM[1]	Natural Gas	3.09 lb/hr	June 2008 stack test (natural gas used as fuel)
PM_{10}[1]	Natural Gas	1.77 lb/hr	
PM[2]	Coal	2.64 lb/hr	1988 stack test (coal used as fuel)
PM_{10}[2]	Coal	2.64 lb/hr	

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

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

Compliance with the hourly emission limitation shall be monitored by dividing the monthly emissions by the number of hours the dryer operated for that month. Records of emission calculations shall be maintained and made available to the division upon request.

Stack Testing

Stack testing for PM shall be performed as set forth in Condition 22 of this permit within 180 days of renewal permit issuance [March 1, 2008]. Frequency of testing, thereafter shall be annual except that: (1) if the first test required by this renewal permit or any subsequent test results indicate emissions are less than or equal to 50% of the emission limit, another test is required within five years; (2) if the first test required by this renewal permit or any subsequent 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; (3) if the first test required by this renewal permit or any subsequent 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.

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 22 of this permit. This shall be a one-time test.

Bagfilter Operation and Maintenance

Routine maintenance of and operational procedures performed on the baghouse shall be conducted in accordance with manufacturer's specifications and/or good engineering practices. These procedures shall be in written format. Any maintenance work performed shall be documented and maintained to be made available to the Division upon request.

5.5 Emissions shall not exceed the limits listed in the table above (Construction Permit 12BO444-1). Compliance with the emission limits shall be monitored using the results of the stack test and calculating emissions as described below.

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	0.9 lb/hr	July 2011 stack test (natural gas used as fuel)
NO_X[1]	Natural Gas	1.6 lb/hr	
CO[1]	Natural Gas	7.7 lb/hr	
VOC[1]	Natural Gas	1.3 lb/hr	
Pb[1]	Natural Gas	2×10^{-4} 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	1.8×10^{-4} lb/hr	

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

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

Stack Testing

Performance testing for lead, sulfur dioxide, nitrogen oxides, carbon monoxide, and volatile organic compounds shall be performed within one year of issuance of the original permit [February 1, 2000] and every five years thereafter, in accordance with the requirements and procedures set forth in the following EPA Test Methods: Methods 12 or 29 (lead), Method 6-6C (SO_2), Method 10 (CO), Method 7E (NO_X) and Method 25A (VOC).

Tests shall be performed under natural gas conditions, however, tests shall be performed under coal burning conditions if a test as described under Condition 5.4 is required (a one-time coal test is required, if applicable).

Test Protocol, Notification and Report Submittal Requirements: A stack testing protocol shall be submitted for Division approval at least thirty (30) calendar days prior to performance of the test required under this condition. No stack test required herein shall be performed without prior written 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 tests 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 required number of copies of 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.

5.6 These sources are subject to the opacity limits set forth in Condition 21 of this permit.

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

5.8 On and after the MACT compliance date of June 10, 2002, these sources are subject to the MACT standard, as set forth in Conditions 23 of this permit.

5.9 This source is subject to the CAM requirements set forth in Condition 24 of this permit.

6. P003 - Secondary Crushing

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

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

6.1 Records of the annual amount of raw material throughput shall be maintained and made available to the Division for inspection upon request.

6.2 For APEN reporting and fee purposes, annual emissions shall be estimated using the actual annual raw material throughputs recorded under Condition 6.1, and the emission factor listed in the table above (AP-42, Section 11.6, January, 1995). These factors take the control equipment efficiency into account. Records of the calculations shall be maintained and made available for inspection upon request.

6.3 During any consecutive sixty (60) minute period, PM emissions shall not exceed the following limitation (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 credible evidence to the contrary, compliance with the particulate matter limit is presumed provided the baghouse operating and maintenance requirements specified in Condition 21 are met.

6.4 These sources are subject to the opacity limits set forth in Condition 21 of this permit.

7. P004 - Raw Material Storage Silos

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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	7.1			Recordkeeping	Annually
PM &PM_{10}	7.2		PM & PM_{10}: 2.9×10^{-5} lb/ton (for each baghouse stack)	Recordkeeping and Calculation	Annually
PM	7.3	See Condition 7.3		Control Equipment Maintenance	Annual Certification
Opacity	7.4	Shall not exceed 20%, except as provided for below Certain Operating Conditions -Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Inspection Method 9 Baghouse Maintenance and Operation	Daily As Needed
MACT Standard - Opacity	7.5	Shall not exceed 10%		Method 9 Method 22 O&M Plan	Every five (5) years Monthly to Annually

7.1 Records of the annual amounts of raw material throughputs shall be maintained and made available to the Division for inspection upon request.

7.2 For APEN reporting and fee purposes, annual emissions shall be estimated using the actual annual raw material throughputs recorded under Condition 7.1, and the emission factor listed in the table above (AP-42, Section 11.6, January, 1995). This factor accounts for the control equipment efficiency. Records of the calculations shall be maintained and made available for inspection upon request.

7.3 During any consecutive sixty (60) minute period, PM emissions shall not exceed the following limitation (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 credible evidence to the contrary, compliance with the particulate matter limit is presumed provided the baghouse operating and maintenance requirements specified in Condition 21 are met.

7.4 These sources are subject to the opacity limits set forth in Condition 21 of this permit.

7.5 These sources are subject to the MACT requirements, as set forth in Conditions 23 of this permit.

8. P005 - Raw Material Grinding

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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	8.1			Recordkeeping	Annually
PM &PM_{10}	8.2		PM & PM_{10}: S010 - 0.012 lb/ton S011 - 0.032 lb/ton S012 - 0.019 lb/ton S013 - 0.0031 lb/ton	Recordkeeping and Calculation	Annually
PM	8.3	See Condition 8.3		Control Equipment Maintenance	Annual Certification
Opacity	8.4	Shall not exceed 20%, except as provided for below Certain Operating Conditions – Shall not exceed 30%		Inspection Method 9 Baghouse Maintenance and Operation	Daily As Needed
MACT Standard – Opacity	8.5	Shall not exceed 10%		Method 9 Method 22 O&M Plan	Every five (5) years Daily

8.1 Records of the annual amounts of raw material throughputs shall be maintained and made available to the Division for inspection upon request.

8.2 For APEN reporting and fee purposes, annual emissions shall be estimated using the actual annual raw material throughputs recorded under Condition 8.1, and the emission factors listed in the table above (AP-42, Section 11.6, January, 1995). These factors account for the control equipment efficiency. Records of the calculations shall be maintained and made available for inspection upon request.

8.3 During any consecutive sixty (60) minute period, PM emissions shall not exceed the following limitation (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 credible evidence to the contrary, compliance with the particulate matter limit is presumed provided the baghouse operating and maintenance requirements specified in Condition 21 are met.

8.4 Theses sources are subject to the opacity limits set forth in Condition 21 of this permit.

8.5 The raw mill is subject to the MACT standard, as set forth in Condition 23 of this permit.

9. P006 - Homogenizing and Blending

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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Process Rate	9.1			Recordkeeping	Annually
PM &PM_{10}	9.2		PM & PM_{10}: 2.9×10^{-5} lb/ton (for each baghouse stack)	Recordkeeping and Calculation	Annually
PM	9.3	See Condition 9.3		Control Equipment Maintenance	Annual Certification
Opacity	9.4	Shall not exceed 20%, except as provided for below Certain Operating Conditions - Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Inspection Method 9 Baghouse Maintenance and Operation	Daily As Needed
MACT Standard – Opacity	9.5	Shall not exceed 10%		Method 9 Method 22 O&M Plan	Every five (5) years Daily

9.1 Records of the annual amounts of material throughput shall be maintained and made available to the Division for inspection upon request.

9.2 For APEN reporting and fee purposes, annual emissions shall be estimated using the actual annual material throughputs recorded under Condition 9.1, and the emission factor listed in the table above (AP-42, Section 11.6, January, 1995). This factor accounts for control equipment efficiency. Records of the calculations shall be maintained and made available for inspection upon request.

9.3 During any consecutive sixty (60) minute period, PM emissions shall not exceed the following limitation (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 credible evidence to the contrary, compliance with the particulate matter limit is presumed provided the baghouse operating and maintenance requirements specified in Condition 21 are met.

9.4 These sources are subject to the opacity limits set forth in Condition 21 of this permit.

9.5 The raw mill is subject to the MACT standard, as set forth in Condition 23 of this permit.

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

AIRs pt 007 (P007): S016 – Precalciner Kiln

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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Kiln Feed Rate & Clinker Production Rate	10.1			Recordkeeping	Daily
Operating Hours	10.2	8,064 hours/year		Recordkeeping	Daily and Monthly
Kiln Feed Rate	10.3	120 tons/hour 967,680 tons/year (dry basis)		Recordkeeping	Daily and Monthly
Kiln Fuel		Natural Gas: 2,438 MMSCF/yr Coal: 113,945 tons/yr 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	Monthly
PM & PM_{10} – Kiln	10.4	0.275 pound/ton of feed (dry basis)		Stack Test	Annually to Every Five (5) Years (See Condition 10.4)

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Opacity	10.5	Shall not exceed 20%, except as provided for in 10.6		Continuous Opacity Monitoring System Method 9	Continuously During Each Spray Tower Blasting Event
	10.6	Certain Operating Conditions - Shall not exceed 30%			
PM & PM_{10} – P007	10.7	133 tons/year	See Condition 10.7	Stack Test Recordkeeping and Calculation	Annually to Every Five (5) Years (See Condition 10.4) Monthly
PM & PM^{10} – P008	10.8		See Condition 10.8	Recordkeeping and Calculation	Annually
NO_X	10.7	2649.0 tons/year		Continuous Emission Monitoring Systems	Continuously
CO		396.0 tons/year			
SO_2		1340 tons/year			
	10.9	**Facility Wide Limit:** 7 lbs/ton of material		See Condition 10.9	Daily
VOC	10.7	138 tons/year	Stack Test	Stack Test Recordkeeping and Calculation	Annually Monthly
HCl	10.10		0.98 lbs/hr	Recordkeeping and Calculation	Annually
Lead	10.11	4.4 tons/year	See Condition 10.11	Stack Test Recordkeeping and Calculation	Every Five (5) Years Monthly
RACT – VOC	10.12	Process Design		Compliance Certification	Annually
MACT Standards	10.13	**Kiln:** 0.30 lb PM/ton feed (dry) 20% opacity D/F emission limit **Clinker Cooler:** 0.10 lb PM/ton feed (dry) 10% opacity		Stack Test COM (opacity), Temperature (D/F) O & M Plan Kiln: PM CEMS	PM: Every Five (5) Years D/F: Every thirty (30) months* Continuously (Deferred)
CAM	10.14	See Condition 24			

*In addition, for periodic monitoring purposes (Colorado Regulation No. 3, Part C, Section V.C.5.b), testing for D/F shall be conducted 45 days after burning tire derived fuel.

10.1 The permittee shall record the daily production rates and kiln feed rates (Construction Permit 12BO444-2). In addition, the permittee shall maintain a record of daily raw material consumption and clinker production rates (Construction Permit 12BO444-2).

10.2 Annual 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. Records of daily, monthly and annual operating hours shall be kept on-site and made available for inspection upon request.

10.3 The Construction Permit was issued based on permitted fuels consisting of natural gas, coal, and/or used tires. The use of petroleum coke is incorporated directly into this operating permit according to Section 1, Condition 1.3 of this permit. No other fuels shall be used without prior approval from the Division.

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

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

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

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. Records of the hourly, daily and twelve month total kiln feed rates shall be maintained and made available for inspection upon request.

10.4 Particulate matter emissions **from the kiln** shall not exceed 0.275 pound per ton of feed (dry basis). (Incorporated directly into this operating permit through a combined construction/operating permit process, to make the annual PM emission limits enforceable.)

Stack Testing

Stack testing for PM shall be performed as set forth in Condition 22 of this permit. Frequency of testing shall be annual, except that: (1) if the first annual test or any subsequent test results indicate emissions are less than or equal to 50% of the emission limit, another test is required within five years; (2) if the first annual or any subsequent 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; (3) if the first annual or any subsequent 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.

Note that PM past performance test results for the kiln are as follows:

Pollutant	Emissions (lb/ton feed			Next Test Required[1]
	Emission Limitation	May 2006	June 2008	
PM	0.275	0.142	0.069	5 years

[1]Next required test is based on the results of the June 2008 Test.

Tests shall be performed using the primary fuel that will be used during the annual, three year or five year period, whichever is applicable, however, a stack test shall be performed according to Condition 22 of this permit, to determine compliance when any other fuel is used, if any other fuel is used for 45 days or more during any calendar year.

Alternatively, the permittee may test using the worst case particulate matter emitting fuel, as approved by the Division, and shall then use this emission rate to estimate PM emissions from all fuels.

The emission rate of particulate matter shall be computed for each run using the procedures and equation set forth in 40 CFR Part 63, Subpart LLL, § 63.1349.

In addition, stack testing shall be performed within forty five (45) days of commencing burning of tire derived fuel in the kiln. If the burning of tire derived 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 tires are burned in the kiln. If tire derived fuel is burned in the kiln only part of a day, that day counts towards the 45 day total. If tires are 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, subject to the 45 day criteria set forth above.

Bagfilter 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. These procedures shall be in written format. Any maintenance work performed shall be documented and maintained to be made available to the Division upon request.

The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of the kiln and clinker cooler; any malfunction of the air pollution control equipment.

10.5 Except as provided in Condition 10.6, 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).

Compliance with this opacity limit shall be monitored using the continuous opacity monitor as set forth in Condition 23.

In addition, during each spray tower blasting event, an EPA Reference Method 9 visual opacity observation (in accordance with 40 CFR Part 60, Appendix A, as adopted by reference in Colorado Regulation No. 6, Part A) shall be performed. If any such observation indicates an exceedance of the limit, additional observations shall be performed. 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. All EPA Reference Method 9 readings shall be conducted by a certified observer.

Records of the date, time and length of each blasting event shall be maintained and made available for inspection upon request. Records of the results of Method 9 readings and a copy of the Method 9 reader's certification shall be kept on site and made available to the Division upon request. Copies of the blasting event date and time information, and observations shall be submitted on a quarterly basis, based on the operating permit reporting dates. A copy of the COM data for each blasting event shall also be submitted with the quarterly report.

10.6 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 limit shall be demonstrated using the continuous opacity monitor as set forth in Condition 23.

10.7 Emissions of PM, PM_{10}, NO_X, SO_2, CO and VOC **from the kiln (P007)** shall not exceed the limits listed in the above table. (Construction Permit 12BO444-2, revised according to Section I, Condition 1.3, to revise the NO_X, CO, and VOC emission limits).

Emissions of NO_X, SO_2, and CO emissions shall be determined in units of pounds per hour using the continuous emission monitoring systems (CEMS). Hourly emissions from the CEMS shall be summed to determine monthly emissions. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual, tons per year, limitations. Each month a new twelve month rolling total shall be calculated using the previous twelve months' data.

Proper installation, certification and operation of the CEMS shall include annual certification and quarterly audits of the calibration gases. (Construction Permit 12BO444-2). The CEMS shall be installed, operated and certified in accordance with a Division-approved QA/QC plan. When the CEMS are unable to provide quality assured data the following applies: When data is not available for 48 hours or less, the highest recorded hourly emission rate from the previous 24 hours shall be used. When data is not available for more than 48 hours, the maximum daily emission rate, based on the previous 30 days, shall be used.

Compliance with the PM and PM_{10} emission limits from the kiln (P007) shall be monitored using the stack test results and baghouse maintenance procedures specified in Condition 10.4. Compliance with the annual emission limits shall be monitored by calculating emissions for the kiln monthly using the PM and PM_{10} emission factors (in lbs/ton feed) indicated in the table below and the monthly quantity of feed to the kiln.

Pollutant	Emission Factor	Source
Kiln		
PM[1]	0.069 lbs/ton feed	June 2008 Stack Test
PM_{10}[1]	0.069 lbs/ton feed	
Lead[1]	9.17×10^{-6} lbs/ton feed	

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

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.

PM emissions from the kiln and clinker cooler shall be calculated in the manner prescribed in 40 CFR Part 63, Subpart LLL, Section 63.1349 for all records, calculations and reports. (Compliance Order on Consent 2002-124, Paragraph 37.b, revised to require procedure in Part 63 instead of Part 60)

Compliance with the VOC emission limit shall be monitored through stack tests and emission calculations as discussed below.

Stack Tests

Performance testing for VOC shall be performed once during each calendar year, in accordance with the requirements and procedures set forth in EPA Test Method 25A forth in 40 CFR Part

60, Appendix A. The length of time between each test shall be at least six months. Test results shall be converted to units of lbs/ton feed, for use in subsequent emission calculations. The initial test shall be conducted within 180 days of renewal permit issuance [March 1, 2008].

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.

In addition, stack testing shall be performed within forty five (45) days of commencing burning of tire derived fuel in the kiln. If the burning of tire derived 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 tires are burned in the kiln. If tire derived fuel is burned in the kiln only part of a day, that day counts towards the 45 day total. If tires are 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, subject to the 45 day criteria set forth above.

The stack testing is subject to the "Test Protocol, Notification and Report Submittal Requirements" specified in Condition 5.5 of this permit.

Emission Calculations

Compliance with the annual VOC emission limits shall be monitored by calculating monthly emissions using the emission factor determined from the stack test (in units of lbs/ton feed) and the monthly quantity of feed to the kiln. The emission factor from the most recent stack test shall be used to calculate emissions, when more than one stack test has been conducted. 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 emission limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data. Prior to conducting the initial stack test, emissions shall be calculated using an emission factor of 41.4 lbs/hr and monthly hours of operation.

10.8 Annual emissions of PM and PM_{10} from emission group P008 (Clinker Cooling and Transfer to Storage for Finish Mill) shall be calculated for the purposes of APEN reporting and the payment of fees. Annual emissions from the clinker cooler (S018) shall be calculated using the PM and PM10 emission factors (in lbs/ton) indicated in the table below and the annual quantity of feed to the kiln. Annual PM and PM^{10} emissions from the remaining emission units (S017, S023 and S024B) within P008 shall be calculated using appropriate methods. The methods used to calculate emissions from S017, S023 and S024 shall be documented, maintained and made available to the Division upon request.

Pollutant	Emission Factor	Source
Clinker Cooler		
PM[1]	0.03 lbs/ton feed	April 2011 Stack Test
PM_{10}[1]	0.03 lbs/ton feed	

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

10.9 **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, Colorado Regulation No. 1, Section VI.A.3.f.). Compliance with the facility wide limit shall be monitored using the CEMS data obtained under Condition 10.7, and actual material throughputs recorded under Conditions 10.1 and 10.3, the relevant information recorded for the dryer, and any other information necessary from any other sources emitting sulfur dioxide at this facility.

10.10 For APEN reporting and fee purposes, annual HCl emissions shall be estimated using actual hours of operation and the emission factor listed in the table above (from November 2002 performance test). Records of emission calculations shall be maintained for inspection upon request.

10.11 Emissions of lead shall not exceed the limits shown in the table above. Compliance with the annual limitations shall be monitored using the results of the stack tests and the baghouse maintenance and operating procedures required in this condition 10.11.

Compliance with the annual limitations shall be monitoring by calculating monthly emissions using the emission factor (in lbs/ton feed) indicated in the table in Condition 10.7 and the monthly quantity of feed to the kiln. 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.

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.

Stack Testing

Performance testing for lead shall be performed every five years in accordance with the requirements and procedures set forth in EPA Test Methods 12 or 29 forth in 40 CFR Part 60, Appendix A.

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 permit term. A stack test shall be performed to determine compliance when any other fuel is used, if any other fuel is used for 45 days or more during any calendar year. Alternatively, the permittee may test using the worst case lead emitting fuel, and shall then use this emission rate to estimate lead emissions from all fuels except natural gas if natural gas is the only fuel used for any twelve month rolling period.

The stack testing is subject to the "Test Protocol, Notification and Report Submittal Requirements" specified in Condition 5.5 of this permit.

Bagfilter 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. These procedures shall be in written format. Any maintenance work performed shall be documented and maintained to be made available to the Division upon request.

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

10.13 On and after the MACT compliance date of June 10, 2002, these sources are subject to the MACT standard, as set forth in Conditions 23 of this permit. Note that as specified in Condition 23, under "Performance Testing Requirements" for nonopacity standards a test for dioxin/furans (D/F) is required within 45 days of burning tire-derived fuel in the kiln (Colorado Regulation No. 3, Part C, Section V.C.5.b).

10.14 These sources are subject to the CAM requirements set forth in Condition 24 of this permit.

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 Storage 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 Clinker Storage 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 – Masonry Storage Silos A10 and A13, S044 – Cement Storage Silo A7, S045 – Cement Finish Silo A2, S046 - Packhouses East and West (loading spouts), S048 - Recirculating System, S048 - Packer (South Masonry) and S049 – Packer (North Portland Cement)

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

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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Opacity	11.4	Shall not exceed 20%, except as provided for below Certain Operating Conditions - Shall not exceed 30%		Inspection Method 9	Daily As Needed
Fugitive Particulate Emissions	11.5	Emission Control Plan		Inspection	Weekly
MACT Standard – Opacity	11.6	Shall not exceed 10%		Method 9 Method 22 O&M Plan	Every Five (5) Years Monthly to Annually
CAM	11.7	Condition 24			

11.1 The amount of clinker and cement 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. 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.

The permittee shall maintain records of the number of days of operation for each month. Note that if any unit within an emission group operates during a day, that day counts as a day of operation. Compliance with the daily limits shall be monitored by dividing the monthly handling rates by the monthly number of days of operation. Records of the number of days of operation, the daily, monthly and twelve month total handling rates and any other information used to determine the monthly quantities of material handled shall be maintained and made available upon request.

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

11.3 PM and PM_{10} emission rates 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 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)). For all sources except P015, compliance with the emission limits shall be monitored using the results of the stack tests and the baghouse maintenance and operating procedures required in this Condition 11.3.

For all sources except P015, compliance with the annual emission limitations shall be monitored by calculating monthly emissions using the PM and PM_{10} emission factors described in the paragraphs below (in gr/dscf), hours of operation (as required by Condition 11.2) and the maximum design flow rate of the control devices (see table below).

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

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

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

Emission Group	Stack ID/ Baghouse ID	Baghouse Grain Loading (gr/dscf)		Design Flow Rate (ACFM)	Stack ID/ Baghouse ID	Baghouse Grain Loading (gr/dscf)		Design Flow Rate (ACFM)
		PM	PM_{10}			PM	PM_{10}	
P009	S024/ BH 625-12	0.03	0.015	2,000	S031/BH 625-9	0.03	0.015	1,000
	S038/BH 725-5	0.03	0.015	1,000	S035/BH 625-14	0.03	0.015	1,000
	S026/BH 625-4	0.03	0.015	1,000	S039/BH 725-6	0.03	0.015	1,000
	S027/BH 625-5	0.03	0.015	1,000	S040/BH 725-7	0.03	0.015	1,000
	S029/BH 625-7	0.03	0.015	1,000	S041/BH 725-8	0.03	0.015	1,000
	S030/BH 625-8	0.03	0.015	1,000	S032/BH 625-10	0.03	0.015	2,000
	S021/BH 525-15	0.03	0.015	1,000	S033BH 625-11	0.03	0.015	1,000
P010	BH 625-15	0.02	0.01	45,000	S051/BH 525-17	0.02	0.01	10,000
P011	BH 725-2	0.03	0.015	18,200	S037BH 725-3	0.03	0.015	14,300
P012/031*	S065/ BH-725-10/ 11	0.006	0.003	147,060	S069/BH 725-28 (SEP BH)	0.01	0.005	1,300
P013	S043/BH 825-1	0.03	0.015	4,400	S046/BH 824-5	0.03	0.015	2,540
	S044/BH 825-2	0.03	0.015	4,400	S048/BH 825-6	0.03	0.015	1,280
	S045/BH 825-3	0.03	0.015	4,400	S049/BH925-1	0.03	0.015	9,200
	S046BH 825-4	0.03	0.015	1,640	S050/BH 925-2	0.03	0.015	9,200

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

Compliance with the daily PM_{10} emission limitations shall be monitored by dividing the monthly PM_{10} emissions by the number of days the emission group operated during that month. Note that if any unit within the emission group operates during a day, that day counts as a day of operation.

For P015, compliance with the emission limits shall be monitored by meeting the production limits set forth in Condition 11.1, and by applying the Fugitive Particulate Emission Control Plan set forth in Condition 11.5. For purposes of APEN reporting and fees, annual PM and PM_{10} emissions shall be calculated using the actual throughput rates recorded under Condition 11.1 and the appropriate emissions factors, equations and control efficiencies. Records of the emission calculations shall be maintained and made available for inspection upon request.

Stack Testing

Stack testing for PM shall be performed as set forth in Condition 22 of this permit. Frequency of testing is every five years. A test shall be performed for a representative bagfilter for each activity group (P009, P010, P011, P012, and P013) to monitor compliance with the grain loading (gr/scf) requirements. A different bagfilter from each activity group shall be tested during each five year test event, unless all bagfilters within the activity group have been tested or Division approval has been received for testing a bagfilter that had been tested previously.

At least one activity group will be tested within one year of initial permit issuance (February 1, 2000) to include a PM_{10} fraction analysis on a representative bagfilter from each activity group to monitor compliance with the grain loading (gr/dscf) requirements. (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 verify the PM_{10} emission factor rather than the percent of PM that is PM_{10} as specified in the March 25, 2011 modification application). Subsequent tests shall be conducted every five years. A different bagfilter from each activity group shall be tested during each five year test event, unless all bagfilters within the activity group have been tested or Division approval has been received for testing a bagfilter that had been tested previously.

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.

Bagfilter Operation and Maintenance

Routine maintenance of and operational procedures performed on the baghouse shall be conducted in accordance with manufacturer's specifications and good engineering practices. These procedures shall be in written format. Any maintenance work performed shall be documented and maintained to be made available to the Division upon request. (Construction Permit 98BO0259)

11.4 **Except for P015**, these sources are subject to the opacity limits set forth in Condition 21 of this permit.

11.5 The following particulate emission control measures shall be applied to particulate emission producing sources (Construction Permit 98BO0259).

11.5.1 If, at any time, the opacity of particulate emissions from the pile(s) exceeds ten (10) percent (as required under 40 CFR Part 63, Subpart LLL), then the pile(s) shall be watered at least once per day until a crust forms on the surface.

11.5.2 The permittee shall operate a water truck during the day shift for 12 hours a day, 7 days a week to minimize fugitive particulate emissions from haul roads, loading areas, and edges of piles. 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. Additionally, 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.

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

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

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

11.5.6 Clinker shall be reclaimed from the storage pile(s) as soon as possible.

11.5.7 Paved areas shall be kept clean using high efficiency sweeper(s) (vacuum trucks).

11.5.8 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)

11.5.9 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.

11.5.10 During the night shift, the Outdoor Clinker Discharge area shall be swept or watered at least every two hours 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. (Compliance Order on Consent 2002-124, Paragraph 39.b and c)

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.

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 These sources are subject to the MACT standard, as set forth in Conditions 23 of this permit.

11.7 The following sources are subject to the CAM requirements set forth in Condition 24 of this permit: S032, S024, S051, S034, S065, S043, S044, S046, S049 and S050.

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		PM & PM_{10}: 2.9×10^{-5} lb/ton (for each baghouse stack)	Recordkeeping and Calculation	Annually
PM	12.3	See Condition 12.3		Control Equipment Maintenance	Annual Certification
Opacity	12.4	Shall not exceed 20%, except as provided for below Certain Operating Conditions - Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Inspection Method 9 Baghouse Maintenance and Operation	Daily As Needed
MACT Standard – Opacity	12.5	Shall not exceed 10%		Method 9 Method 22 O&M Plan	Every Five (5) Years Monthly to Annually

12.1 Records of the annual amounts of material throughput shall be maintained and made available to the Division for inspection upon request.

12.2 For APEN reporting and fee purposes, annual emissions shall be estimated using the actual annual material throughputs recorded under Condition 12.1, and the emission factor listed in the table above (AP-42, Section 11.6, January, 1995). This factor accounts for control equipment efficiency. Records of the calculations shall be maintained and made available for inspection upon request.

12.3 During any consecutive sixty (60) minute period, PM emissions shall not exceed the following limitation (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 credible evidence to the contrary, compliance with the particulate matter limitation is presumed provided the baghouse operating and maintenance requirements of Condition 21 are met.

12.4 These sources are subject to the opacity limits set forth in Condition 21 of this permit.

12.5 On and after the MACT compliance date of June 10, 2002, the material unloading hoppers (S019 and S025) are subject to the MACT standard, as set forth in Conditions 23 of this permit.

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

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

Parameter	Permit Condition Number	Limitations		Emission Factors	Monitoring	
					Method	Interval
Process Rate	13.1	S001, S022, S066 & S067, 041 - Pug Mill/Truck Loading	Total Quantity of Materials conveyed, CKD and benification dust, together, on a dry basis: 133,000 tons/year 600 tons/day		Recordkeeping	Monthly
		042 - Hauling and Disposal	Total Quantity of material Hauled and Disposed, on Wet Basis: 173,403 tons/year 800 tons/day			
PM	13.2	S001, S022, S066 & S067	19.95 tons/year	See Condition 13.2	Stack Test S066 – Pressure Drop	Every Five (5) Years Daily
		041 - Pug Mill/Truck Loading	2.66 tons/year	0.8 lb/ton	Recordkeeping and Calculation	Monthly
		042 - Hauling and Disposal	5.50 tons/year		Recordkeeping and Calculation Emission Control Plan	Monthly
PM_{10}	13.2	S001, S022, S066 & S067	9.98 tons/year 69.5 lbs/day	See Condition 13.2	Recordkeeping and Calculation	Monthly
		041 - Pug Mill/Truck Loading	2.66 tons/year 24.00 lbs/day	0.2 lb/ton		
		042 - Hauling and Disposal	2.50 tons/year 23 lbs/day		Recordkeeping and Emission Control Plan	Monthly
Hours of Operation	13.3	S001 and S022: 8064 hours/year S066 and S067: 3000 hours/year			Recordkeeping	Monthly

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
MACT Standard – Opacity	13.4	Shall not exceed 10%		Method 9 Method 22 O&M Plan	Every Five (5) Years Monthly to Annually
Opacity	13.5	Shall not exceed 20%, except as provided for below Certain Operating Conditions - Shall not exceed 30%		Inspection Method 9 Baghouse O&M S066 – Pressure Drop	Daily As Needed Daily
Fugitive PM Emissions	13.6	Emission Control Plan		Inspection	Twice per Shift
Pit Restriction	13.7	Pit C Only		Compliance Certification	Annually
CAM	13.8	See Condition 24			

13.1 Process rates shall not exceed the maximum rates specified in the table above (Construction Permit 98BO0315). The quantity of materials handled shall be monitored and recorded monthly. 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.

The permittee shall maintain records of the number of operating days for each month. Note that if any unit in an emission group operates during a day, that day counts as a day of operation. Compliance with the daily process rates shall be monitored by dividing the monthly process rate by the number of days of operation. Records of the number of days of operation, the monthly and twelve month total handling rates and any other information used to determine the monthly quantities of material handled shall be maintained and made available for inspection upon request.

13.2 PM and PM_{10} emission rates shall not exceed the limits listed in the table above. (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)).

For the pug mill/truck loading (041) compliance with the emission limitations shall be monitored by calculating PM and PM_{10} emissions monthly using the above emission factors and the monthly quantity of materials processed. Control efficiencies of 95% for PM and 80% for PM_{10} may be applied to the monthly calculations provided the pug mill and pelletizing machine are operated and maintained in accordance with manufacturer's recommendations and good engineering practices to provide a minimum moisture content of 20% water by weight.

For S001, S022, S066, and S067 compliance with the annual emission limitations monitored by calculating monthly emissions using the PM and PM_{10} emission factors described in the paragraphs below (in gr/dscf), hours of operation (as required by Condition 13.3) and the maximum design flow rate of the control devices (see table below).

For all but BH 525-21 (S022): The PM and PM_{10} emission factor for any baghouse, within an emission group that has been performance tested shall be the results of the most recent performance test. The PM and PM_{10} emission factor for any baghouse within an emission group that has not been performance tested, shall be the results of the most recent performance test for any baghouse within that emission group that has been performance tested. Since S067 is located and vents inside a building performance testing is not required for this baghouse.

For BH 525-21 (S022): The PM and PM_{10} emission factor shall be the baghouse grain loading specified in the table below. Since BH 525-21 was not previously subject to emission limitations and the emission limitations are based on the grain-loading specified in the table below performance testing is not required for this baghouse.

For S001, S066 and S067 and the pug mill/truck loading (P041), monthly emissions of PM and PM_{10} shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data.

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

Compliance with the daily PM_{10} limitations shall be monitored by dividing the monthly PM_{10} emissions by the number of days the unit was operated. Note that if any unit within the emission group operates during a day, that day counts as a day of operation.

For hauling and disposal (042), compliance with the emission limits shall be monitored by meeting the production limits set forth in Condition 13.1 and by applying the Fugitive Particulate Emission Control Plan set forth in Condition 13.6. For purposes of APEN reporting and payment of fees, annual PM and PM_{10} emissions shall be calculated using the actual throughput rates recorded under Condition 13.1, appropriate emission factors and equations, and control efficiencies shall be used to estimate emissions. Records of the emissions calculations shall be maintained and made available for inspection upon request.

Stack Testing

Stack testing for PM from S001 and S066 shall be performed as set forth in Condition 22 of this permit. Frequency of testing shall be every five years. 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.

Notwithstanding the above, a stack test shall be conducted to demonstrate compliance with the grain loading (gr/dscf) requirements for baghouses BH 525-28 and 225-3 within 180 days of renewal permit issuance [March 1, 2008]. The stack test shall be performed in accordance with the provisions set forth in Condition 22.

The first test (to be performed within one year of initial permit issuance February 1, 2000) shall include a PM_{10} fraction analysis on a representative baghouse to monitor compliance with the grain loading requirements. (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 verify the PM_{10} emission factor rather than the percent of PM that is PM_{10} as specified in the March 25, 2011 modification application) Subsequent tests shall be conducted every five years. A different baghouse shall be tested during each five year test event, unless all baghouses have been tested or Division approval has been received for testing a baghouse that had been tested previously.

Bagfilter Operation and Maintenance

Routine maintenance of and operational procedures performed on the baghouses shall be conducted in accordance with manufacturer's specifications and good engineering practices. These procedures shall be in written format. Any maintenance work performed shall be documented and maintained to be made available to the Division upon request. (Construction Permit 98BO0315)

S066 – Cement Silo A5 Pressure Drop Monitoring

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

13.3 Annual hours of operation shall not exceed the above limitations (Construction Permit 98BO0315, as modified under the provisions of Section I, Condition 1.3 to include the 3,000

hrs/yr limit for the A5 silo (S066) and CKD loadout spout (S067)). 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. Records of monthly and twelve month totals of operation hours shall be kept on-site and made available for inspection upon request.

13.4 These sources 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, as set forth in Condition 23 of this permit.

13.5 These sources, except for hauling and disposal, are subject to the opacity limits set forth in Condition 21 of this permit.

13.6 The following particulate emission control measures shall be applied to particulate emission producing sources (Construction Permit 98BO0315 and Compliance Order on Consent 2002-124)

13.6.1 Transfer points shall be enclosed.

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

13.6.3 The permittee shall operate a water truck during day shift for 12 hours a day, 7 days a week to minimize fugitive particulate emissions from haul roads, loading areas, and edges of piles. 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. Additionally, 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 at the site.

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

13.6.5 Disturbed and exposed areas at the disposal site shall be minimized, and no more than seven (7) acres shall be used for disposal at a time. Fugitive particulate matter emissions from areas not being actively used shall be minimized using a shale cover.

13.6.6 A sprinkler system shall be in operation as much as necessary to effectively control emissions at the disposal area, and at a minimum be in operation when material is being dumped, and continue operating until emissions are suppressed.

13.6.7 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.

13.6.8 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.

13.6.9 Compliance inspections shall be conducted on a daily basis. Records of such inspections shall be maintained at the site.

13.6.10 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)

13.6.11 Operate an automated sprinkler system to water the active CKD disposal site.

13.6.11.1 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.

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

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

13.6.12 Water trucks will be used to water the active CKD disposal area as follows:

13.6.12.1 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.

13.6.12.2 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.

13.6.12.3 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.

13.6.13 CEMEX agrees to limit the active disposal or working area of the CKD storage pit to 3 acres at any time.

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

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

Records of dust suppressant use shall be maintained and made available upon request.

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

13.8 The following sources are subject to the CAM requirements set forth in Condition 24 of this permit: S001.

14. P018 –General Fugitive Emissions Requirements

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

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

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

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

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

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

NOTE: Some haul roads and/or fugitive emission sources at the Lyons Cement Plant, Lyons Quarry and/or Dowe Flats Quarry are subject to annual emission and throughput limits. These sources are addressed in Section II, Conditions 1 (Dowe Flats and Lyons Quarry fugitive dust

sources), 3 (storage and handling of raw materials), 11 (outdoor clinker storage and handling) and 13 (CKD and waste dust hauling and disposal) of this permit.

14.3 The permittee shall document all reported observations or complaints from citizens, inspectors, contractors, or employees of fugitive or excess emissions. The permittee will investigate each occurrence and will document its findings and any corrective action taken or implemented. (Compliance Order on Consent 2002-234, Paragraph 44)

14.4 Fugitive Particulate Emissions 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 shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions (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 a magnesium chloride or calcium chloride solution as often as necessary to maintain a surface crust, as required in Section II, Condition 13.6.3 of this permit. Such solutions shall be applied to the haul road to the CKD disposal pit at least every six months. The solution shall have a concentration of at least 32 percent magnesium chloride or calcium chloride by weight. As an alternative, the permittee may substitute another hydroscopic material, as long as such treatment is at least as effective as the solution described in this condition in controlling fugitive emissions. (Compliance Order on Consent 2002-124, Paragraph 43)

14.4.1.2 The permittee shall use a water truck and truck wash to minimize fugitive particulate emissions from roads and other traffic areas, loading areas, the edges of clinker piles, and other sources of fugitive particulate emissions. At a minimum the water truck and truck wash 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. Operation of the water truck will be the sole assignment of the individual assigned such duty. 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, including but not limited to storing the water truck in a heated garage at night, to prevent such freezing conditions. (Compliance Order on Consent 2002-124, Paragraph 41.a)

b. The water truck shall be operated during nights as necessary to water such areas adequately to control particulate emissions. (Compliance Order on Consent 2002-124, Paragraph 41.b)

c. 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 and the reason it is not being used 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 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 A fugitive particulate emission control plan, or a modification to an existing plan, shall be required to be submitted if the Division determines that for this source or activity visible emissions are in excess of 20% opacity; or visible emissions are being transported off the property; or if this source or activity is operating with emissions that create a nuisance. The control plan shall be submitted to the Division within the time period specified by the Division (Colorado Regulation No. 1, Section III.D.1.c). The 20% opacity, no off-property transport, and nuisance emission limitations are guidelines and not enforceable standards and no person shall be cited for violation thereof pursuant to C.R.S. 25-7-115 (Colorado Regulation No. 1, Section III.D.1.e.(iii)).

15. Gasoline Storage Tank, 3,000 Gallon Capacity

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

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

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

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

15.3 The vapor control system shall meet the following requirements:

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

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

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

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

16. Opacity - Daily Plant Walk Through

A daily plant walk through shall be performed to look for visible emissions. During the walk through, an observer will survey the plant from 5 observation points. From these 5 locations, all of the facility's baghouses and material transfer points can be observed. The results of these observations shall be logged on a daily observations sheet.

If visible emissions are observed from any stack, 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. If visible emissions persist, the permittee shall perform a Method 9 test of that stack. 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.

The corrective actions taken and the follow-up observations shall be noted on the daily observation sheet. The daily observation sheets shall be maintained and made available for inspection upon request.

If visible emissions from fugitive sources are noted, the permittee shall investigate to insure that the provisions of the appropriate fugitive dust control plan are being implemented, and shall s note on the observation sheet, along with additional actions taken.

The daily walk through applies to remote locations of the facility, i.e. Dowe Flats Quarry and the conveyor. Daily visible emission observations are not required at these remote locations on days when operations are not occurring at these locations.

These procedures do not apply to the kiln and clinker cooler, which are equipped with opacity monitors.

Sources subject to CAM requirements (see Condition 24) are subject to visible emission observations as specified in the CAM Plan in Appendix G of this permit.

17. Insignificant Activities

The permittee shall at least annually inspect and determine whether the categorically insignificant activities are in compliance with the opacity standard and are exempt from the current regulatory APEN reporting requirements. The permittee shall record in a log the results of this inspection.

18. Cold Cleaner Solvent Vats

Parameter	Permit Condition Number	Limitations	Compliance Emission Factor	Monitoring	
				Method	Interval
Work Practice Standards	18.1.			Certification	Annually
Transfer and Storage of Waste Solvents	18.2.			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.

18.1 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.

18.2 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):

18.2.1 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).

18.2.2 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.

19. Good Operating Practices

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. (40 CFR Part 60, 60.11(d)).

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 gases discharged to the atmosphere. (40 CFR Part 60, Subpart A, 60.12)

20. Opacity and PM Limits for Subpart OOO Sources

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, limits emissions as follows:

20.1 The permittee shall not cause to be discharged into the atmosphere any stack emissions which exhibit greater than 7 percent opacity.

Monitoring

A six (6) minute EPA Method 9 opacity observation shall be conducted semi-annually for the primary crusher bagfilter and a representative bagfilter for the conveyor. Method 9 observations shall be conducted in accordance with Appendix A of 40 CFR Part 60. 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.

This semi-annual test is in addition to the daily observations set forth under Condition 16 of this permit.

The results of the semi-annual Method 9 readings and a copy of the Method 9 reader's certification shall be kept on site and made available to the Division upon request. Copies of any observations exceeding the applicable standard shall be submitted with the next scheduled monitoring and permit deviation report required by Appendix B of this permit.

20.2 The permittee shall not cause to be discharged into the atmosphere any stack emissions which contain particulate matter in excess of 0.05 gram per dry standard cubic meter.

Stack Testing

Stack testing for PM shall be performed as set forth in Condition 22 of this permit. Frequency of testing shall be every five years. Performance test shall be conducted on the primary crusher bagfilter and one representative bagfilter stack for the conveyor.

Bagfilter 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. These procedures shall be in written format. Any maintenance work performed shall be documented and maintained to be made available to the Division upon request.

This PM and opacity standard apply at all times except during periods of startup, shutdown, and malfunction (40 CFR Part 60, 60.11 (c)), however, at all times, the permittee shall use good operating practices as required by Condition 19 of this permit. The permittee shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in operation of this source; and any malfunction of the air pollution control equipment (40 CFR Part 60, Subpart A, 60.7(b), as adopted by reference in Colorado Regulation No. 6, Part A).

21. Opacity Limits

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

21.1 Except as provided in Condition 21.2, 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).

21.2 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 limits shall be monitored by meeting the requirements of Condition No. 16 of this permit, and by meeting the Bagfilter Operation and Maintenance requirements specified in this Condition 21.

Compliance with the 30% limit set forth in Condition 21.2 shall be monitored by conducting visual emission observations in accordance with EPA Method 9, if any of the activities listed in Condition 21.2 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.

If any observation indicates an exceedance of the limit, additional observations shall be performed. 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.

The permittee shall maintain records of the day, time and length for which any listed activity occurs, and the type of activity. 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. Copies of observations exceeding the applicable standard shall be submitted with the next scheduled report.

Bagfilter 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. These procedures shall be in written format. Any maintenance work performed shall be documented and maintained to be made available to the Division upon request.

S066 – Cement Silo A5 Pressure Drop Monitoring

The pressure drop across the inlet and outlet of the baghouse shall be recorded daily, when the silo is operating. Results of the daily 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.

22. PM Stack Testing

This requirement applies only to those sources, which are referred to this condition throughout this permit. Performance testing for particulate emissions shall be performed in accordance with the requirements and procedures set forth in EPA Test Method 5 as set forth in 40 CFR Part 60, Appendix A. Frequency of testing 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 to performance of the test required under this condition. No stack test required herein shall be performed without prior written 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 tests 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 required number of copies of 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.

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

Parameter	Permit Condition Number	Limitations	Emission Factors	Monitoring	
				Method	Interval
Compliance Date	23.1	See Condition 23.1			
Circumvention	23.2	See Condition 23.2			
O&M Requirements	23.3	See Condition 23.3			
Startup, Shutdown, & Malfunction Plan	23.4	See Condition 23.4			
General Monitoring Requirements	23.5	See Condition 23.5			
Recordkeeping Requirements	23.6	See Condition 23.6			
Reporting Requirements	23.7	See Condition 23.7			
Emission standards and operating limits	23.8.1.1	Kiln: 0.30 lb PM/ ton feed (dry basis)		Performance test O&M Plan	Once every five years
	23.8.1.2	Kiln D/F emission limit - See Condition 23.8.1.2		Performance test Temperature monitoring Inspection O&M Plan	Once every 30 months* Annually
	Kiln operating limits - See Conditions 23.8.1.3 thru 23.8.1.7				
	23.8.2	Clinker Cooler: 0.10 lb/ton feed (dry basis)		Performance test O&M Plan	Once every five years
Opacity	23.9.1	Kiln: Shall not exceed 20%		COM	Continuous
	23.9.2	Clinker cooler: Shall not exceed 10%			
	23.9.3	Raw mill: Shall not exceed 10%		Method 9 Method 22 O&M Plan	Once every five years Daily
	23.9.4	Other sources: Shall not exceed 10%		Method 9 Method 22 O&M Plan	Once every five years Monthly to Annually

*In addition, for periodic monitoring purposes (Colorado Regulation No. 3, Part C, Section V.C.5.b), testing for D/F shall be conducted 45 days after burning tire derived fuel.

This source is subject to the requirements of 40 CFR Part 63, Subpart LLL - National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry, as follows.

23.1 Compliance Date

The compliance date for an existing source to meet the requirements of good combustion practices (GCP) for total hydrocarbons (THC) is December 20, 2007. (63.1351(c))

23.2 Circumvention

No owner or operator subject to the provisions of this part shall build, erect, install, or use any article, machine, equipment, or process to conceal an emission that would otherwise constitute noncompliance with a relevant standard. Such concealment includes, but is not limited to: the use of diluents to achieve compliance with a relevant standard based on the concentration of a pollutant in the effluent discharged to the atmosphere; the use of gaseous diluents to achieve compliance with a relevant standard for visible emissions; and the fragmentation of an operation such that the operation avoids regulation by a relevant standard. (63.4(b))

23.3 Operation and maintenance requirements

23.3.1 At all times, including periods of startup, shutdown, and malfunction, the owner or operator 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. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the owner or operator reduce emissions from the affected source to the greatest extent which is consistent with safety and good air pollution control practices. The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the owner or operator to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable 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 (including the startup, shutdown, and malfunction plan required in paragraph (e)(3) of this section), review of operation and maintenance records, and inspection of the source. (63.6(e)(1)(i))

23.3.2 Malfunctions must be corrected as soon as practicable after their occurrence. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, an owner or operator must comply by minimizing emissions during such a startup, shutdown, and malfunction event consistent with safety and good air pollution control practices. (63.6(e)(1)(ii))

23.3.3 Operation and maintenance requirements established pursuant to section 112 of the Act are enforceable independent of emissions limitations or other requirements in relevant standards. (63.6(e)(1)(iii))

23.3.4 The permittee shall prepare for each affected source subject to this subpart, a written operations and maintenance plan. The plan shall be submitted for Division review and approval, and shall include the information set forth in 63.1350. (63.1350(a)) Failure to comply with any provision of the operations and maintenance plan developed in accordance with 63.1350(a) shall be a violation of the standard. (63.1350(b))

23.4 Startup, shutdown, and malfunction plan

The owner or operator of an affected source must develop a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. (63.6(e)(3)) The plan shall be developed, maintained and made available to the Division in accordance with the requirements set forth in 63.6(e)(3) and the permittee shall follow the recordkeeping and reporting requirements set forth in 63.6(e)(3).

23.5 General monitoring requirements

Monitoring shall be conducted as set forth in 63.8 and the relevant standards. The owner or operator of an affected source shall maintain and operate each continuous monitoring system (CMS) as specified in 63.8, or in the relevant standard, and in a manner consistent with good air pollution control practices. The owner or operator of an affected source that is required to use a CMS and is subject to the monitoring requirements of 63.8 and a relevant standard shall develop and implement a CMS quality control program, as set forth in 63.8(d). When required by a relevant standard, and at any other time the Administrator may require under section 114 of the Act, the owner or operator of an affected source being monitored shall conduct a performance evaluation of the CMS, as set forth in 63.8(e). The owner or operator of each CMS shall reduce the monitoring data as specified in 63.8(g), and in addition, as set forth in Subpart LLL. (63.8(a-e) and (g))

23.6 Recordkeeping requirements

The permittee shall maintain files of all information (including all reports and notifications) required by 63.1355 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))

The owner or operator shall maintain records for each affected source as required by 63.10(b)(2) and (3), and the items listed in 63.1355(b). (63.1355(b))

In addition, to the recordkeeping requirements in 63.1355(b), the owner or operator of an affected source equipped with a CMS shall maintain all records required by 63.10(c). (63.1355(c))

You must keep annual records of the amount of CKD which is removed from the kiln system and either disposed of as solid waste or otherwise recycled for a beneficial use outside of the kiln system. (63.1355(d))

You must keep records of all fly ash supplier certifications as required by §63.1350(o). (63.1355(f))

23.7 Reporting requirements

The permittee shall submit reports of the results of performance tests, results of opacity or visible emission observations, progress reports, and periodic startup, shutdown, and malfunction reports in accordance with the procedures set forth in 63.10(d) and 63.1354.

Additional reporting requirements for sources with CMS
For each CMS, the permittee shall report the results of CMS performance evaluations, excess emissions and CMS performance report and summary report, and continuous opacity monitoring system data produced during a performance test in accordance with the procedures set forth in 63.10(e) and 63.1354, except that the excess emissions and CMS performance summary reports shall be submitted on a quarterly basis, based on the operating permit reporting dates.

23.8 Non-opacity emissions standards and operating limits

Standards for kilns and in-line kiln/raw mills(S016 – Precalciner Kiln)

23.8.1 No owner or operator of an existing kiln or an existing kiln/raw mill located at a facility that is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from these affected sources, any gases which:

23.8.1.1 Contain particulate matter (PM) in excess of 0.15 kg per Mg (0.30 lb per ton) of feed (dry basis) to the kiln. When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the combined particulate matter emissions from the kiln or in-line kiln/raw mill and the alkali bypass are subject to this emission limit. (63.1343(b)(1))

23.8.1.2 Contain D/F in excess of:

a. 0.20 ng per dscm (8.7×10^{-11}gr per dscf) (TEQ); or

b. 0.40 ng per dscm (1.7×10^{-10}gr per dscf) (TEQ) when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 °C (400 °F) or less. (63.1343(b)(3))

Operating limits for kilns and in-line kiln/raw mills

23.8.1.3 The owner or operator of a kiln subject to a D/F emission limitation under §63.1343 (Condition 23.8.1.2) must operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in paragraph (b) of this section. The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under §63.1343 must operate the in-line kiln/raw mill, such that:

a. When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was operating is not exceeded.

b. When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of this section and established during the performance test when the raw mill was not operating, is not exceeded.

c. If the in-line kiln/raw mill is equipped with an alkali bypass, the applicable temperature limit for the alkali bypass specified in paragraph (b) of this section and established during the performance test, with or without the raw mill operating, is not exceeded. (63.1344(a))

23.8.1.4 The temperature limit for affected sources meeting the limits of paragraph (a) of this section or paragraphs (a)(1) through (a)(3) of this section is determined in accordance with §63.1349(b)(3)(iv). (63.1344(b))

23.8.1.5 Existing kilns and in-line kilns/raw mills must implement good combustion practices (GCP) designed to minimize THC from fuel combustion. GCP include training all operators and supervisors to operate and maintain the kiln and calciner, and the pollution control systems in accordance with good engineering practices. The training shall include methods for minimizing excess emissions. (63.1344(f))

23.8.1.6 No kiln and in-line kiln/raw mill may use as a raw material or fuel any fly ash where the mercury content of the fly ash has been increased through the use of activated carbon, or any other sorbent unless the facility can demonstrate that the use of that fly ash will not result in an increase in

mercury emissions over baseline emissions (i.e. emissions not using the fly ash). The facility has the burden of proving there has been no emissions increase over baseline. (63.1344(g))

23.8.1.7 All kilns and in-line kilns/raw mills must remove (i.e. not recycle to the kiln) from the kiln system sufficient cement kiln dust to maintain the desired product quality. (63.1344(h))

Standards for clinker coolers (S018 - Clinker Cooler)

23.8.2 No owner or operator of a new or existing clinker cooler at a facility which is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from the clinker cooler any gases which contain particulate matter in excess of 0.050 kg per Mg (0.10 lb per ton) of feed (dry basis) to the kiln. (63.1345(a)(1))

Compliance with nonopacity emission standards

Compliance with nonopacity emission standards will be determined as set forth in 63.6(f).

The non-opacity emission standards set forth in this part shall apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in Subpart LLL. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the non-opacity emission standards set forth in this part, then that emission point must still be required to comply with the non-opacity emission standards and other applicable requirements. (63.6(f)(1)).

Performance testing requirements

The permittee shall demonstrate initial compliance with these emission limits using the test methods and procedures in paragraph (b) of 63.1349 and 40 CFR Part 63, Subpart A, 63.7. Performance test results shall be documented in complete test reports that contain the information required by 63.1349(a)(1) through (a)(10). The plan to be followed during testing shall be made available to the Division prior to testing. (63.1349(a))

The permittee shall perform such tests within 180 days after the compliance date. (63.7(a)(2))

The owner or operator of an affected source must notify the Division in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Division to review and approve the site-specific test plan required under 63.7(c) and to have an observer present during the test. In the event the owner or operator is unable to conduct the performance test on the date specified in this notification due to unforeseeable circumstances beyond his or her control, the owner or operator must notify the Division as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. (63.7(b)(1) and (2), and 63.9(e))

Performance tests for PM shall be conducted in accordance with the requirements in 63.1349(b)(1) and shall be repeated every five years (except as provided for below), except that the owner or operator of a kiln, in-line kiln/raw mill or clinker cooler is not required to repeat the initial performance test of opacity for the kiln, in-line kiln/raw mill or clinker cooler. (63.1349(c))

Performance tests for D/F shall conducted in accordance with the requirements in 63.1349(b)(3) and shall be repeated every 30 months (except as provided for below). (63.1349(d))

If a source plans to undertake a change in operations that may adversely affect compliance with an applicable D/F standard under this subpart, the source must conduct a performance test and establish new temperature limit(s) as specified in 63.1349(b)(3). (63.1349(e)(1))

If a source plans to undertake a change in operations that may adversely affect compliance with an applicable PM standard under §63.1343 (Conditions 23.8.1.1 and 23.8.2), the source must conduct a performance test as specified in 63.1349(b)(1). (63.1349(e)(2))

In preparation for and while conducting a performance test required in 63.1349(e)(1), a source may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in 63.1349(e)(3)(i) through (iv) are met. The source shall submit temperature and other monitoring data that are recorded during the pretest operations. (63.1349(e)(3))

When tire derived fuel is to be burned in the kiln, a performance test shall be conducted within 45 days of initiating the change to tires. (Colorado Regulation No. 3, Part C, Section V.C.5.b)

Stack tests performed to demonstrate compliance with the MACT standard may be used to comply with any other stack tests requirements in this permit for the same pollutant from the same stack that would otherwise be required that year or permit term.

Quality assurance program

Submission of site-specific test plan: Before conducting a required performance test, the owner or operator of an affected source shall develop and submit a site-specific test plan to the Division for approval, as set forth in 63.7(c)(1), (2) and (3). The plan shall be submitted at least 60 days before the performance test is scheduled to take place. (63.7(c)(1-3))

Performance test method audit program: The owner or operator shall analyze performance audit (PA) samples during each performance test, as set forth in 63.7(c)(4). (63.7(c)(4))

Performance testing facilities: At the request of the Division, the owner or operator shall provide performance testing facilities as set forth in 64.7(d). (63.7(d))

Conduct of performance tests: Performance tests shall be conducted as set forth in 63.7(e). (63.7(e))

Data analysis, recordkeeping and reporting: Unless otherwise specified in a relevant standard or test method, or as otherwise approved by the Administrator in writing, results of a performance test shall include the analysis of samples, determination of emissions, and raw data. A performance test is "completed" when field sample collection is terminated. The owner or operator of an affected source shall report the results of the performance test to the Division before the close of business on the 60th day following the completion of the performance test, unless specified otherwise in a relevant standard. The results of the performance test shall be submitted as part of the notification of compliance status required under 63.9(h). For a minimum of 5 years after a performance test is conducted the owner or operator shall retain and make available, upon request, for inspection by the Division the records of results of such performance test and other data needed to determine emission s from an affected source. (63.7(g))

Monitoring requirements

Kiln and in-line kiln/raw mill - D/F emission limit (S016 – Precalciner Kiln)

The owner or operator shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill and/or alkali bypass PM control devices in accordance with 63.1350(f)(1) through (6). (63.1350(f))

In addition, the owner or operator of any kiln or in-line kiln/raw mill subject to a D/F emission limit shall conduct an inspection of the components of the combustion system of each kiln or in-line kiln/raw mill at least once per year. (63.1350(i))

For kilns and in-line kilns/raw mills complying with the requirements in Section 63.1344(g) (Condition 23.8.1.6), each owner or operator must obtain a certification from the supplier for each shipment of fly ash received to demonstrate that the fly ash was not derived from a source in which the use of activated carbon, or any other sorbent, is used as a method of mercury emissions control. The certification shall include the name of the supplier and a signed statement from the supplier confirming that the fly ash was not derived from a source in which the use of activated carbon, or any other sorbent, is used as a method of emission control. (63.1350(o))

If the facility opts to use a fly ash derived from a source in which the use of activated carbon, or any other sorbent, is used as a method of mercury emissions control and demonstrate that the use of this fly ash does not increase mercury emissions, they must obtain daily fly ash samples, composites monthly, and analyze the samples for mercury. (63.1350(p))

23.9 Opacity standards

Standards for kilns and in-line kiln/raw mills (S016 – Precalciner Kiln)

23.9.1 No owner or operator of an existing kiln or an existing kiln/raw mill located at a facility that is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from these affected sources, any gases which exhibit opacity greater than 20 percent. (63.1343(b)(2))

Standards for clinker coolers (S018 - Clinker Cooler)

23.9.2 No owner or operator of a new or existing clinker cooler at a facility which is a major source subject to the provisions of this subpart shall cause to be discharged into the atmosphere from the clinker cooler any gases which exhibit opacity greater than ten percent. (63.1345(a)(2))

Standards for raw and finish mills (S010 – Raw Material Grinding, S011 – Raw Mill Separator, S036 – Finish Mill, S065 – Finish Mill Separator)

23.9.3 The owner or operator of each new or existing raw mill or finish mill at a facility which is a major source subject to the provisions of this subpart shall not cause to be discharged from the mill sweep or air separator air pollution control devices of these affected sources any gases which exhibit opacity in excess of ten percent. (63.1347)

Standards for affected sources other than kilns, in-line kiln/raw mills, clinker coolers, new and reconstructed raw material dryers, and raw and finish mills

Emission Group	Affected Emission Unit from Emission Group
P002 – Raw Materials Drying	S005 – Raw Material Dryer
P004 – Raw Material Storage Silos	S006 – S008 – Raw Material Storage Silos
P006 – Homogenizing and Blending	S014 – Homogenizing Silo, S015 – Kiln Feed Silo
P008 – Clinker Cooling and Transfer to Storage for Finish Mill	S017 – Clinker Drag Chains, S023 – Drag Conveyor, S024B – Outside Clinker Drop Hood
P009 – Clinker and Gypsum/Additive Silos and Weigh Feeders (Storage and Transfer to Finish Mill	S021 – North Side of A Frame (Belt 529-30 to 529 – 63), S026, S027, S029, S030 & S031 – Weigh Feeders 1, 2, 4 5, & 6, S032 – Bottom of A Frame Transfer, S024 - #2 Clinker Silo, S035 – Discharge of 629-3 Belt, S039 – S041 – Finish Mill Weigh Feeders, S033 – Gypsum/Limestone from 529-31 belt to Silo, S038 – Surge Bin
P010 – Sheltered (A-Frame) Clinker Storage and Reclaim	S034 - #6 Reclaim Feeder and Top of A-Frame Building, S051 – Top of A Frame from 529-29 belt to 529-30 belt
P011 and P012 – Cement Finish Mill and Auxiliaries	S037 – Finish Mill Auxiliary Dust Collector, Grinding and Limestone Handling, S069 -Clinker Dust to Finish Mill (SEP project)
P015 – Outdoor Clinker Storage and Handling	Outdoor Clinker Storage Pile
P013 – Cement Silos/Packhouse/Loadout	S043 – Masonry Storage Silos A10 and A13, S044 – Cement Storage Silo A7, S045 – Cement Finish Silo A2, S046 – Packhouses West and East (Loading Spouts), S048 – Recirculating System, S049 – Packer (South - Masonry), S050 – Packer (North Portland Cement)
P014 – Material Handling System – Load-In and Load-out	S019 – Material Unloading Hopper (Railcar), S025 – Material Unloading Hopper and Spout (Trucks)

Emission Group	Affected Emission Unit from Emission Group
P007A – Handling and Processing of CKD and Raw Material Waste Dust	S066 – Cement Silo A5, S067 – CKD Loading Spout, S001 – Waste Dust Silo, S022 – Kiln Return Dust Silo, 041 - Pug Mill
P050 – Rail Car Unloading System	Hopper, screw conveyor and pneumatic transfer system

23.9.4 The owner or operator of each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading system; and each existing raw material dryer, at a facility which is a major source subject to the provisions of this subpart shall not cause to be discharged any gases from these affected sources which exhibit opacity in excess of ten percent. (63.1348)

Compliance with opacity and visible emission standards

Compliance with the opacity and visible emission standards in this part will be determined as set forth in 63.6(h), except for (h)(5)(ii-iv). (Subpart LLL specifies the test duration.)

The opacity and visible emission standards set forth in this part must apply at all times except during periods of startup, shutdown, and malfunction, and as otherwise specified in Subpart LLL. If a startup, shutdown, or malfunction of one portion of an affected source does not affect the ability of particular emission points within other portions of the affected source to comply with the opacity and visible emission standards set forth in this part, then that emission point shall still be required to comply with the opacity and visible emission standards and other applicable requirements. (63.6(h)(1)

Performance testing requirements

The permittee shall demonstrate initial compliance with these emission limits using the test methods and procedures in paragraph (b) of 63.1349 and 40 CFR Part 63, Subpart A, 63.7. Performance test results shall be documented in complete test reports that contain the information required by 63.1349(a)(1) through (a)(10). The plan to be followed during testing shall be made available to the Division prior to testing. (63.1349(a))

The permittee shall perform such tests within 180 days after the compliance date. (63.7(a)(2))

The owner or operator of an affected source must notify the Division in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is initially scheduled to begin to allow the Division to review and approve the site-specific test plan required under 63.7(c) and to have an observer present during the test. In the event the owner or operator is unable to conduct the performance test on the date specified in this notification due to unforeseeable circumstances beyond his or her control, the owner or operator must notify the Division as soon as practicable and without delay prior to the scheduled performance test date and specify the date when the performance test is rescheduled. (63.7(b)(1) and (2), and 63.9(e))

Performance tests for opacity shall be conducted in accordance with the requirements in 63.1349(b)(2) and shall be repeated every five years, except that the owner or operator of a kiln, in-line kiln/raw mill or clinker cooler is not required to repeat the initial performance test of opacity for the kiln, in-line kiln/raw mill or clinker cooler.. (63.1349(c))

Quality assurance program

The permittee shall follow the quality assurance program requirements set forth above for the nonopacity emission standards.

Notification of opacity and visible emission observations

The owner or operator of an affected source shall notify the Division in writing of the anticipated date for conducting the opacity or visible emission observations specified in 63.6(h)(5) and Subpart LLL, if such observations are required for the source by the relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in 63.9(e), or if no performance test is required or visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under 63.7, the owner or operator shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place. (63.9(f))

Monitoring requirements

Kiln and in-line kiln/raw mill (S016 – Precalciner Kiln)

The owner or operator of a kiln or in-line kiln/raw mill shall monitor opacity at each point where emissions are vented from these affected sources including alkali bypasses as follows. 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 the 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. To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 20 percent. If the average opacity for any 6-minute block period exceeds 20 percent, this shall constitute a violation of the standard. (63.1350(c)(1) and (3))

Clinker cooler (S018 - Clinker Cooler)

The owner or operator of a clinker cooler shall monitor opacity at each point where emissions are vented from the clinker cooler as follows. 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 the 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. To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average

opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard. (63.1350(d)(1) and (3))

Raw mill or finish mill (S010 – Raw Material Grinding, S011 – Raw Mill Separator, S036 – Finish Mill, S065 – Finish Mill Separator)

The owner or operator of a raw mill or finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCD of these affected sources in accordance with the procedures of Method 22 of appendix A to part 60 of this chapter. The Method 22 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 22 test shall be 6 minutes. If visible emissions are observed during any Method 22 visible emissions test, the owner or operator must:

(1) Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with 63.1350(a) (Condition 23.2.4 of this permit); and
(2) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a followup Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 test in accordance with Method 9 of appendix A to part 60 of this chapter. The duration of the Method 9 test shall be 30 minutes. (63.1350(e))

Affected sources other than kilns, in-line kiln/raw mills, clinker coolers, new and reconstructed raw material dryers, and raw and finish mills

Emission Group	Affected Emission Unit from Emission Group
P002 – Raw Materials Drying	S005 – Raw Material Dryer
P004 – Raw Material Storage Silos	S006 – S008 – Raw Material Storage Silos
P006 – Homogenizing and Blending	S014 – Homogenizing Silo, S015 – Kiln Feed Silo
P008 – Clinker Cooling and Transfer to Storage for Finish Mill	S017 – Clinker Drag Chains, S023 – Drag Conveyor, S024B – Outside Clinker Drop Hood
P009 – Clinker and Gypsum/Additive Silos and Weigh Feeders (Storage and Transfer to Finish Mill	S021 – North Side of A Frame (Belt 529-30 to 529 – 63), S026, S027, S029, S030 & S031 – Weigh Feeders 1, 2, 4 5, & 6, S032 – Bottom of A Frame Transfer, S024 - #2 Clinker Silo, S035 – Discharge of 629-3 Belt, S039 – S041 – Finish Mill Weigh Feeders, S033 – Gypsum/Limestone from 529-31 belt to Silo, S038 – Surge Bin
P010 – Sheltered (A-Frame) Clinker Storage and Reclaim	S034 - #6 Reclaim Feeder and A-Frame Building, S051 – Top of A Frame from 529-29 belt to 529-30 belt
P011 and P012 – Cement Finish Mill and Auxiliaries	S037 – Finish Mill Auxiliary Dust Collector, Grinding and Limestone Handling, S069 -Clinker Dust to Finish Mill (SEP project)
P015 – Outdoor Clinker Storage and Handling	Outdoor Clinker Storage Pile

Emission Group	Affected Emission Unit from Emission Group
P013 – Cement Silos/Packhouse/Loadout	S043 – Masonry Storage Silos A10 and A13, S044 – Cement Storage Silo A7, S045 – Cement Finish Silo A2, S046 – Packhouses West and East (Loading Spouts), S048 – Recirculating System, S049 – Packer (South - Masonry), S050 – Packer (North Portland Cement)
P014 – Material Handling System – Load-In and Load-out	S019 – Material Unloading Hopper (Railcar), S025 – Material Unloading Hopper and Spout (Trucks)
P007A – Handling and Processing of CKD and Raw Material Waste Dust	S066 – Cement Silo A5, S067 – CKD Loading Spout, S001 – Waste Dust Silo, S022 – Kiln Return Dust Silo, 041 - Pug Mill
P050 – Rail Car Unloading System	Hopper, screw conveyor and pneumatic transfer system

For these sources, the permittee shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with 63.1350(a) (Condition 23.3.4 of this permit). (63.1350(j))

Additional notification requirements for sources with Continuous Monitoring Systems

The owner or operator of an affected source required to use a CMS by a relevant standard shall furnish the Division written notification as follows:

(1) notification of the date the CMS performance evaluation is scheduled to begin, submitted simultaneously with the notification of the performance test date required under 63.7(b). If no performance test is required, or if the requirement to conduct a performance test has been waived for an affected source under 63.7(h), the owner or operator shall notify the Division in writing of the date of the performance evaluation at least 60 calendar days before the evaluation is scheduled to begin;
(2) a notification that COMS data results will be used to determine compliance with the applicable opacity emission standard during a performance test required by 63.7 in lieu of Method 9 or other opacity emissions test method data, as allowed by 63.6(h)(7)(ii), if compliance with an opacity emission standard is required for the source by a relevant standard. The notification shall be submitted at least 60 calendar days before the performance test is scheduled to begin;
(3) a notification that the criterion necessary to continue use of an alternative to relative accuracy testing, as provided by 63.8(f)(6), has been exceeded. The notification shall be delivered or postmarked not later than 10 days after the occurrence of such exceedance, and it shall include a description of the nature and cause of the increased emissions. (63.9(g))

Temporary, conditioned exemption from particulate matter and opacity standards (P007 - Kiln/Calciner)

Subject to the limitations specified in 63.1357(b) through (f), an owner or operator conducting PM CEMS correlation tests (that is, correlation with manual stack methods) is exempt from the following:

(1) Any particulate matter and opacity standards of 40 CFR Part 60 or 63 that are applicable to cement kilns and in-line kiln/raw mills.

(2) Any permit or other emissions or operating parameter or other limitation on workplace practices that are applicable to cement kilns and in-line kiln raw mills to ensure compliance with any particulate matter and opacity standards of 40 CFR Part 60 or 63.

24. Compliance Assurance Monitoring (CAM)

24.1 The Compliance Assurance Monitoring (CAM) requirements in 40 CFR Part 64, as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV, apply to the sources listed below with respect to the PM/PM_{10} and Pb limitations identified in the Conditions listed below**,** as follows:

Source	Condition/Limit
P002 – Raw Materials Drying	
S005 – Raw Materials Dryer	Condition 5.4 - 22.8 tons/year PM/PM_{10} 6.5 lbs/hour PM_{10} Condition 5.5 - 1.6 tons/year Pb
P007 – Kiln Burning and P008 – Clinker Cooling and Transfer to Storage for Finish Mill	
S016 – Precalciner Kiln	Condition 10.7 - 133 tons/year PM/PM_{10} (Kiln and Clinker) Condition 10.4 - 0.275 lb PM/PM_{10}/ton feed Condition 10.11 - 4.4 tons/year Pb (Kiln and Cooler)
S018 – Clinker Cooler	
P009 – Clinker and Gypsum/Additive Silos and Weigh Feeders (Storage and Transfer to Finish Mill)	
S032 – Bottom of A Frame Transfer	Condition 11.3 – 9.3 tons/year PM
S024 - #2 Clinker Silo	
P010 – Sheltered (A-Frame) Clinker Storage and Reclaim	
S051 – Top of A Frame – Transfer from 529-29 belt to 529-30 belt	Condition 11.3 - 21.96 tons/year PM 10.98 tons/year, 201 lb/day PM_{10}
S034- #6 Reclaim Feeder and A Frame Building	
P011 and P012 – Cement Finish Mill and Auxiliaries	
S036 – Finish Mill	Condition 11.3 – 17.05 ton PM/year 8.65 ton PM_{10}/year 48 lbs PM_{10}/day
S037 – Finish Mill Auxillary Dust Collector	
S065 – Finish Mill Separator	Condition 11.3 - 21.90 ton PM/year 10.95 ton PM_{10}/year 107 lbs PM_{10}/day
P013 – Cement Silos/Packhouse/Loadout	
S043 – Masonry Storage Silos A10 and A13	Condition 11.3 – 12.3 ton PM/year 6.2 ton PM_{10}/year 43 lbs PM_{10}/day
S044 – Cement Storage Silo A7	
S046 – Packhouses West and East (loading spouts) – baghouses vent to a common stack	
S049 - Packer (South - Masonry)	
S050 – Packer (North - Portland Cement)	
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}

24.1.1 The permittee shall follow the CAM Plan provided in Appendix G of this permit. Excursions for purposes of reporting are as follows

24.1.1.1 For Visible Emissions:

a. All stacks except kiln: any calendar day (midnight to midnight) in which visible emissions are observed, or

b. All stacks except kiln: any calendar day (midnight to midnight) in which the equipment was operating but no visible emission observation was conducted.

c. Kiln stack: Any six (6) minute average opacity reading from the COMS at or above 15% opacity, or

d. Kiln stack: Any instance where the six (6) minute average opacity readings from the COMS increases and remains consistently equal to or greater than 10% opacity for a period exceeding eight (8) hours.

24.1.1.2 For Pressure Differential:

a. All stacks: any calendar day (midnight to midnight) in which the pressure drop is at or below 0 or above 7 inches of water.

b. All stacks: any calendar day (midnight to midnight) in which the equipment was operating but a pressure differential reading was not recorded.

Excursions shall be reported as required by Section IV, Conditions 21 and 22.d of this permit.

24.1.2 Operation of Approved Monitoring

24.1.2.1 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).

24.1.2.2 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).

24.1.2.3 Response to excursions or exceedances

a. 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).

b. Determination of whether the owner of operator has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process (40 CFR Part 64 § 64.7(d)(2), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

24.1.2.4 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).

24.1.3 Quality Improvement Plan (QIP) Requirements

24.1.3.1 Based on the results of a determination made under the provisions of Condition 24.1.2.3.b, 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).

24.1.3.2 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).

24.1.3.3 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:

a. 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).

b. 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).

c. 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).

d. 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).

e. More frequent or improved monitoring (only in conjunction with one or more steps under Conditions 24.1.3.3.a through d above) (40 CFR Part 64 § 64.8(b)(2)(v), as adopted by reference in Colorado Regulation No. 3, Part C, Section XIV).

24.1.3.4 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).

24.1.3.5 Following implementation of a QIP, upon any subsequent determination pursuant to Condition 24.1.2.3.b, 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:

a. 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

b. 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).

24.1.3.6 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).

24.1.4 Reporting and Recordkeeping Requirements

24.1.4.1 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:

a. 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

b. 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 24.1.3 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).

24.1.4.2 General Recordkeeping Requirements: In addition to the recordkeeping requirements in Section IV, Condition 22.a through c.

a. The owner or operator shall maintain records of any written QIP required pursuant to Condition 24.1.3 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).

b. 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).

24.1.5 Savings Provisions

24.1.5.1 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).

24.1.5.2 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).

25. 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	25.1	50,000 tons/yr of imported cement		Recordkeeping	Monthly
PM &PM_{10}	25.2	PM - 0.6 tons/yr PM_{10} – 0.4 tons/yr	See Condition 25.2	Recordkeeping and Calculation	Monthly
Control Device and Operating Requirements	25.3	See Condition 25.3		Control Equipment Maintenance	Annual Certification
Opacity	25.4	Shall not exceed 20%, except as provided for below Certain Operating Conditions -Shall not exceed 30%, for a period or periods aggregating more than six (6) minutes in any 60 consecutive minutes		Inspection Method 9 Baghouse Maintenance and Operation	Daily As Needed
MACT Standard - Opacity	25.5	Shall not exceed 10%		Method 9 Method 22 O&M Plan	Every five (5) years Monthly to Annually

25.1 The amount of cement processed through the rail car unloading system shall not exceed the limitation listed in the table above (Construction Permit 05BO0703). 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.

25.2 PM and PM_{10} emissions from the rail car unloading system shall not exceed the limitations listed in the table above (Construction Permit 05BO0703, as modified under the provisions of Section I, Condition 1.3 to increase the PM_{10} emission limitation). Compliance with the PM and PM_{10} emission limitations shall be monitored by calculating emissions monthly using the emission factors specified in the table below and the monthly quantity of cement unloaded. Monthly emissions shall be used in a rolling twelve month total to monitor compliance with the annual limitations. Each month a new twelve month total shall be calculated using the previous twelve months' data.

Pollutant	Activity	Emission Factor	Control Efficiency	Source
PM	Rail car to hopper	0.60	98 %	From Division's Preliminary Analysis for Construction Permit – AP-42, cement handling portion of concrete batching, section 11.12, corrected for site differences.
	hopper to pneumatic pump (screw conveyor)	0.45	99 %	
	Pneumatic trans to silo	0.27	98 %	
PM_{10}	Rail car to hopper	0.40	98 %	
	hopper to pneumatic pump (screw conveyor)	0.29	99 %	
	Pneumatic trans to silo	0.17	98 %	

Note that the control efficiencies listed in the above table may be applied to the emission calculations provided the requirements in Condition 25.3 have been met.

25.3 The rail car unloading system shall is subject to the following control device and operational requirements:

25.3.1 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 loding limitation is presumed provided the baghouse is operated and maintain in accordance with the following requirements.

Bagfilter Operation and Maintenance

Routine maintenance of and operational procedures performed on the baghouses shall be conducted in accordance with manufacturer's specifications and good engineering practices. These procedures shall be in written format. Any maintenance work performed shall be documented and maintained to be made available to the Division upon request.

25.3.2 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 ot the operations. (Construction Permit 05BO0703)

25.4 These sources are subject to the opacity limits set forth in Condition 21 of this permit.

25.5 These sources are subject to the MACT requirements, as set forth in Conditions 23 of this permit.

SECTION III - Permit Shield

Regulation No. 3, 5 CCR 1001-5, Part C, §§ I.A.4, V.D., & XIII.B; § 25-7-114.4(3)(a), C.R.S.

1. Specific Non-Applicable Requirements

No requirements were specifically identified as being non-applicable for this facility, except for those which any reasonable person would determine are obviously not applicable.

2. General Conditions

Compliance with this Operating Permit shall be deemed compliance with all applicable requirements specifically identified in the permit and other requirements specifically identified in the permit as not applicable to the source. This permit shield shall not alter or affect the following:

2.1 The provisions of §§ 25-7-112 and 25-7-113, C.R.S., or § 303 of the federal act, concerning enforcement in cases of emergency;

2.2 The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

2.3 The applicable requirements of the federal Acid Rain Program, consistent with § 408(a) of the federal act;

2.4 The ability of the Air Pollution Control Division to obtain information from a source pursuant to § 25-7-111(2)(I), C.R.S., or the ability of the Administrator to obtain information pursuant to § 114 of the federal act;

2.5 The ability of the Air Pollution Control Division to reopen the Operating Permit for cause pursuant to Regulation No. 3, Part C, § XIII.

2.6 Sources are not shielded from terms and conditions that become applicable to the source subsequent to permit issuance.

3. Streamlined Conditions

The following applicable requirements have been subsumed within this operating permit using the pertinent streamlining procedures approved by the U.S. EPA. For purposes of the permit shield, compliance with the listed permit conditions will serve as a compliance determination for purposes of the associated subsumed requirements.

Permit Condition(s)	Streamlined (Subsumed) Requirement
Section II, Conditions 2.2, 3.2, 10.4, 10.13, 11.3, 13.2 and 25.2	Colorado Regulation No. 1, III.C.1.b and Colorado Regulation No. 6, Part B, III.C.2 [particulate matter emissions – process weight rate limit] **- State-only Requirement**
Section II, Condition 5.4	Colorado Regulation No. 1, III.C.1.b [particulate matter emissions – process weight rate limit]
Section II, Conditions 2.2, 10.13, 11.6, 13.4 and 25.5	Colorado Regulation No. 6, Part B, III.C.3 [20% opacity requirement] **- State-only Requirement**

SECTION IV - General Permit Conditions

5/22/12 version

1. Administrative Changes

Regulation No. 3, 5 CCR 1001-5, Part A, § III.

The permittee shall submit an application for an administrative permit amendment to the Division for those permit changes that are described in Regulation No. 3, Part A, § I.B.1. The permittee may immediately make the change upon submission of the application to the Division.

2. Certification Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.9., V.C.16.a.& e. and V.C.17.

a. Any application, report, document and compliance certification submitted to the Air Pollution Control Division pursuant to Regulation No. 3 or the Operating Permit shall contain a certification by a responsible official of the truth, accuracy and completeness of such form, report or certification stating that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

b. All compliance certifications for terms and conditions in the Operating Permit shall be submitted to the Air Pollution Control Division at least annually unless a more frequent period is specified in the applicable requirement or by the Division in the Operating Permit.

c. Compliance certifications shall contain:

(i) the identification of each permit term and condition that is the basis of the certification;

(ii) the compliance status of the source;

(iii) whether compliance was continuous or intermittent;

(iv) method(s) used for determining the compliance status of the source, currently and over the reporting period; and

(v) such other facts as the Air Pollution Control Division may require to determine the compliance status of the source.

d. All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

e. If the permittee is required to develop and register a risk management plan pursuant to § 112(r) of the federal act, the permittee shall certify its compliance with that requirement; the Operating Permit shall not incorporate the contents of the risk management plan as a permit term or condition.

3. Common Provisions

Common Provisions Regulation, 5 CCR 1001-2 §§ II.A., II.B., II.C., II,.E., II.F., II.I, and II.J

a. To Control Emissions Leaving Colorado

When emissions generated from sources in Colorado cross the State boundary line, such emissions shall not cause the air quality standards of the receiving State to be exceeded, provided reciprocal action is taken by the receiving State.

b. Emission Monitoring Requirements

The Division may require owners or operators of stationary air pollution sources to install, maintain, and use instrumentation to monitor and record emission data as a basis for periodic reports to the Division.

c. Performance Testing

The owner or operator of any air pollution source shall, upon request of the Division, conduct performance test(s) and furnish the Division a written report of the results of such test(s) in order to determine compliance with applicable emission control regulations.

Performance test(s) shall be conducted and the data reduced in accordance with the applicable reference test methods unless the Division:

(i) specifies or approves, in specific cases, the use of a test method with minor changes in methodology;

(ii) approves the use of an equivalent method;

(iii) approves the use of an alternative method the results of which the Division has determined to be adequate for indicating where a specific source is in compliance; or

(iv) waives the requirement for performance test(s) because the owner or operator of a source has demonstrated by other means to the Division’s satisfaction that the affected facility is in compliance with the standard. Nothing in this paragraph shall be construed to abrogate the Commission's or Division’s authority to require testing under the Colorado Revised Statutes, Title 25, Article 7, and pursuant to regulations promulgated by the Commission.

Compliance test(s) shall be conducted under such conditions as the Division shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Division such records as may be necessary to determine the conditions of the performance test(s). Operations during period of startup, shutdown, and malfunction shall not constitute representative conditions of performance test(s) unless otherwise specified in the applicable standard.

The owner or operator of an affected facility shall provide the Division thirty days prior notice of the performance test to afford the Division the opportunity to have an observer present. The Division may waive the thirty day notice requirement provided that arrangements satisfactory to the Division are made for earlier testing.

The owner or operator of an affected facility shall provide, or cause to be provided, performance testing facilities as follows:

(i) Sampling ports adequate for test methods applicable to such facility;

(ii) Safe sampling platform(s);

(iii) Safe access to sampling platform(s); and

(iv) Utilities for sampling and testing equipment.

Each performance test shall consist of at least three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic mean of results of at least three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other

circumstances beyond the owner or operator's control, compliance may, upon the Division's approval, be determined using the arithmetic mean of the results of the two other runs.

Nothing in this section shall abrogate the Division's authority to conduct its own performance test(s) if so warranted.

d. Affirmative Defense Provision for Excess Emissions during Malfunctions

An affirmative defense to a claim of violation under these regulations is provided to owners and operators for civil penalty actions for excess emissions during periods of malfunction. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of evidence that:

(i) The excess emissions were caused by a sudden, unavoidable breakdown of equipment, or a sudden, unavoidable failure of a process to operate in the normal or usual manner, beyond the reasonable control of the owner or operator;

(ii) The excess emissions did not stem from any activity or event that could have reasonably been foreseen and avoided, or planned for, and could not have been avoided by better operation and maintenance practices;

(iii) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded;

(iv) The amount and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

(v) All reasonably possible steps were taken to minimize the impact of the excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence;

(viii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

(ix) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This section is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement; and

(x) During the period of excess emissions, there were no exceedances of the relevant ambient air quality standards established in the Commissions' Regulations that could be attributed to the emitting source.

The owner or operator of the facility experiencing excess emissions during a malfunction shall notify the division verbally as soon as possible, but no later than noon of the Division's next working day, and shall submit written notification following the initial occurrence of the excess emissions by the end of the source's next reporting period. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to failures to meet federally promulgated performance standards or emission limits, including, but not limited to, new source performance standards and national emission standards for hazardous air pollutants. The affirmative defense provision does not apply to state implementation plan (sip) limits or permit limits that have been set taking into account potential emissions during malfunctions, including, but

not necessarily limited to, certain limits with 30-day or longer averaging times, limits that indicate they apply during malfunctions, and limits that indicate they apply at all times or without exception.

e. Circumvention Clause

A person shall not build, erect, install, or use any article, machine, equipment, condition, or any contrivance, the use of which, without resulting in a reduction in the total release of air pollutants to the atmosphere, reduces or conceals an emission which would otherwise constitute a violation of this regulation. No person shall circumvent this regulation by using more openings than is considered normal practice by the industry or activity in question.

f. Compliance Certifications

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any standard in the Colorado State Implementation Plan, nothing in the Colorado State Implementation Plan shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed. Evidence that has the effect of making any relevant standard or permit term more stringent shall not be credible for proving a violation of the standard or permit term.

When compliance or non-compliance is determined by a test or procedure provided by permit or other applicable requirement, the owner or operator shall be presumed to be in compliance or non-compliance unless other relevant credible evidence overcomes that presumption.

g. Affirmative Defense Provision for Excess Emissions During Startup and Shutdown

An affirmative defense is provided to owners and operators for civil penalty actions for excess emissions during periods of startup and shutdown. To establish the affirmative defense and to be relieved of a civil penalty in any action to enforce an applicable requirement, the owner or operator of the facility must meet the notification requirements below in a timely manner and prove by a preponderance of the evidence that:

(i) The periods of excess emissions that occurred during startup and shutdown were short and infrequent and could not have been prevented through careful planning and design;

(ii) The excess emissions were not part of a recurring pattern indicative of inadequate design, operation or maintenance;

(iii) If the excess emissions were caused by a bypass (an intentional diversion of control equipment), then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;

(iv) The frequency and duration of operation in startup and shutdown periods were minimized to the maximum extent practicable;

(v) All possible steps were taken to minimize the impact of excess emissions on ambient air quality;

(vi) All emissions monitoring systems were kept in operation (if at all possible);

(vii) The owner or operator's actions during the period of excess emissions were documented by properly signed, contemporaneous operating logs or other relevant evidence; and,

(viii) At all times, the facility was operated in a manner consistent with good practices for minimizing emissions. This subparagraph is intended solely to be a factor in determining whether an affirmative defense is available to an owner or operator, and shall not constitute an additional applicable requirement.

The owner or operator of the facility experiencing excess emissions during startup and shutdown shall notify the Division verbally as soon as possible, but no later than two (2) hours after the start of the next working day, and shall

submit written quarterly notification following the initial occurrence of the excess emissions. The notification shall address the criteria set forth above.

The Affirmative Defense Provision contained in this section shall not be available to claims for injunctive relief.

The Affirmative Defense Provision does not apply to State Implementation Plan provisions or other requirements that derive from new source performance standards or national emissions standards for hazardous air pollutants, or any other federally enforceable performance standard or emission limit with an averaging time greater than twenty-four hours. In addition, an affirmative defense cannot be used by a single source or small group of sources where the excess emissions have the potential to cause an exceedance of the ambient air quality standards or Prevention of Significant Deterioration (PSD) increments.

In making any determination whether a source established an affirmative defense, the Division shall consider the information within the notification required above and any other information the Division deems necessary, which may include, but is not limited to, physical inspection of the facility and review of documentation pertaining to the maintenance and operation of process and air pollution control equipment.

4. Compliance Requirements

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.C.9., V.C.11. & 16.d. and § 25-7-122.1(2), C.R.S.

a. The permittee must comply with all conditions of the Operating Permit. Any permit noncompliance relating to federally-enforceable terms or conditions constitutes a violation of the federal act, as well as the state act and Regulation No. 3. Any permit noncompliance relating to state-only terms or conditions constitutes a violation of the state act and Regulation No. 3, shall be enforceable pursuant to state law, and shall not be enforceable by citizens under § 304 of the federal act. Any such violation of the federal act, the state act or regulations implementing either statute is grounds for enforcement action, for permit termination, revocation and reissuance or modification or for denial of a permit renewal application.

b. It shall not be a defense for a permittee in an enforcement action or a consideration in favor of a permittee in a permit termination, revocation or modification action or action denying a permit renewal application that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

c. The permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of any request by the permittee for a permit modification, revocation and reissuance, or termination, or any notification of planned changes or anticipated noncompliance does not stay any permit condition, except as provided in §§ X. and XI. of Regulation No. 3, Part C.

d. The permittee shall furnish to the Air Pollution Control Division, within a reasonable time as specified by the Division, any information that the Division may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Division copies of records required to be kept by the permittee, including information claimed to be confidential. Any information subject to a claim of confidentiality shall be specifically identified and submitted separately from information not subject to the claim.

e. Any schedule for compliance for applicable requirements with which the source is not in compliance at the time of permit issuance shall be supplemental, and shall not sanction noncompliance with, the applicable requirements on which it is based.

f. For any compliance schedule for applicable requirements with which the source is not in compliance at the time of permit issuance, the permittee shall submit, at least every 6 months unless a more frequent period is specified in the applicable requirement or by the Air Pollution Control Division, progress reports which contain the following:

(i) dates for achieving the activities, milestones, or compliance required in the schedule for compliance, and dates when such activities, milestones, or compliance were achieved; and

(ii) an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

g. The permittee shall not knowingly falsify, tamper with, or render inaccurate any monitoring device or method required to be maintained or followed under the terms and conditions of the Operating Permit.

5. Emergency Provisions

Regulation No. 3, 5 CCR 1001-5, Part C, § VII.

An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed the technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. "Emergency" does not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error. An emergency constitutes an affirmative defense to an enforcement action brought for noncompliance with a technology-based emission limitation if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence that:

a. an emergency occurred and that the permittee can identify the cause(s) of the emergency;

b. the permitted facility was at the time being properly operated;

c. during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. the permittee submitted oral notice of the emergency to the Air Pollution Control Division no later than noon of the next working day following the emergency, and followed by written notice within one month of the time when emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

This emergency provision is in addition to any emergency or malfunction provision contained in any applicable requirement.

6. Emission Controls for Asbestos

Regulation No. 8, 5 CCR 1001-10, Part B

The permittee shall not conduct any asbestos abatement activities except in accordance with the provisions of Regulation No. 8, Part B, "asbestos control."

7. Emissions Trading, Marketable Permits, Economic Incentives

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.13.

No permit revision shall be required under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are specifically provided for in the permit.

8. Fee Payment

C.R.S. §§ 25-7-114.1(6) and 25-7-114.7

a. The permittee shall pay an annual emissions fee in accordance with the provisions of C.R.S. § 25-7-114.7. A 1% per month late payment fee shall be assessed against any invoice amounts not paid in full on the 91st day after the date of invoice, unless a permittee has filed a timely protest to the invoice amount.

b. The permittee shall pay a permit processing fee in accordance with the provisions of C.R.S. § 25-7-114.7. If the Division estimates that processing of the permit will take more than 30 hours, it will notify the permittee of its estimate of what the actual charges may be prior to commencing any work exceeding the 30 hour limit.

c. The permittee shall pay an APEN fee in accordance with the provisions of C.R.S. § 25-7-114.1(6) for each APEN or revised APEN filed.

9. Fugitive Particulate Emissions

Regulation No. 1, 5 CCR 1001-3, § III.D.1.

The permittee shall employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere, in accordance with the provisions of Regulation No. 1, § III.D.1.

10. Inspection and Entry

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.16.b.

Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Air Pollution Control Division, or any authorized representative, to perform the following:

a. enter upon the permittee's premises where an Operating Permit source is located, or emissions-related activity is conducted, or where records must be kept under the terms of the permit;

b. have access to, and copy, at reasonable times, any records that must be kept under the conditions of the permit;

c. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the Operating Permit;

d. sample or monitor at reasonable times, for the purposes of assuring compliance with the Operating Permit or applicable requirements, any substances or parameters.

11. Minor Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, §§ X. & XI.

The permittee shall submit an application for a minor permit modification before making the change requested in the application. The permit shield shall not extend to minor permit modifications.

12. New Source Review

Regulation No. 3, 5 CCR 1001-5, Part B

The permittee shall not commence construction or modification of a source required to be reviewed under the New Source Review provisions of Regulation No. 3, Part B, without first receiving a construction permit.

13. No Property Rights Conveyed

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.11.d.

This permit does not convey any property rights of any sort, or any exclusive privilege.

14. Odor

Regulation No. 2, 5 CCR 1001-4, Part A

As a matter of state law only, the permittee shall comply with the provisions of Regulation No. 2 concerning odorous emissions.

15. Off-Permit Changes to the Source

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.B.

The permittee shall record any off-permit change to the source that causes the emissions of a regulated pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from the change, including any other data necessary to show compliance with applicable ambient air quality standards. The permittee shall provide contemporaneous notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit . The permit shield shall not apply to any off-permit change.

16. Opacity

Regulation No. 1, 5 CCR 1001-3, §§ I., II.

The permittee shall comply with the opacity emissions limitation set forth in Regulation No. 1, §§ I.-II.

17. Open Burning

Regulation No. 9, 5 CCR 1001-11

The permittee shall obtain a permit from the Division for any regulated open burning activities in accordance with provisions of Regulation No. 9.

18. Ozone Depleting Compounds

Regulation No. 15, 5 CCR 1001-17

The permittee shall comply with the provisions of Regulation No. 15 concerning emissions of ozone depleting compounds. Sections I., II.C., II.D., III. IV., and V. of Regulation No. 15 shall be enforced as a matter of state law only.

19. Permit Expiration and Renewal

Regulation No. 3, 5 CCR 1001-5, Part C, §§ III.B.6., IV.C., V.C.2.

a. The permit term shall be five (5) years. The permit shall expire at the end of its term. Permit expiration terminates the permittee's right to operate unless a timely and complete renewal application is submitted.

b. Applications for renewal shall be submitted at least twelve months, but not more than 18 months, prior to the expiration of the Operating Permit. An application for permit renewal may address only those portions of the permit that require revision, supplementing, or deletion, incorporating the remaining permit terms by reference from the previous permit. A copy of any materials incorporated by reference must be included with the application.

20. Portable Sources

Regulation No. 3, 5 CCR 1001-5, Part C, § II.D.

Portable Source permittees shall notify the Air Pollution Control Division at least 10 days in advance of each change in location.

21. Prompt Deviation Reporting

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.7.b.

The permittee shall promptly report any deviation from permit requirements, including those attributable to malfunction conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken.

"Prompt" is defined as follows:

a. Any definition of "prompt" or a specific timeframe for reporting deviations provided in an underlying applicable requirement as identified in this permit; or

b. Where the underlying applicable requirement fails to address the time frame for reporting deviations, reports of deviations will be submitted based on the following schedule:

(i) For emissions of a hazardous air pollutant or a toxic air pollutant (as identified in the applicable regulation) that continue for more than an hour in excess of permit requirements, the report shall be made within 24 hours of the occurrence;

(ii) For emissions of any regulated air pollutant, excluding a hazardous air pollutant or a toxic air pollutant that continue for more than two hours in excess of permit requirements, the report shall be made within 48 hours; and

(iii) For all other deviations from permit requirements, the report shall be submitted every six (6) months, except as otherwise specified by the Division in the permit in accordance with paragraph 22.d. below.

c. If any of the conditions in paragraphs b.i or b.ii above are met, the source shall notify the Division by telephone (303-692-3155) or facsimile (303-782-0278) based on the timetables listed above. *[Explanatory note: Notification by telephone or facsimile must specify that this notification is a deviation report for an Operating Permit.]* A written notice, certified consistent with General Condition 2.a. above (Certification Requirements), shall be submitted within 10 working days of the occurrence. All deviations reported under this section shall also be identified in the 6-month report required above.

"Prompt reporting" does not constitute an exception to the requirements of "Emergency Provisions" for the purpose of avoiding enforcement actions.

22. Record Keeping and Reporting Requirements

Regulation No. 3, 5 CCR 1001-5, Part A, § II.; Part C, §§ V.C.6., V.C.7.

a. Unless otherwise provided in the source specific conditions of this Operating Permit, the permittee shall maintain compliance monitoring records that include the following information:

(i) date, place as defined in the Operating Permit, and time of sampling or measurements;

(ii) date(s) on which analyses were performed;

(iii) the company or entity that performed the analysis;

(iv) the analytical techniques or methods used;

(v) the results of such analysis; and

(vi) the operating conditions at the time of sampling or measurement.

b. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of the monitoring sample, measurement, report or application. Support information, for this purpose, includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the Operating Permit. With prior approval of the Air Pollution Control Division, the permittee may maintain any of the above records in a computerized form.

c. Permittees must retain records of all required monitoring data and support information for the most recent twelve (12) month period, as well as compliance certifications for the past five (5) years on-site at all times. A permittee shall make available for the Air Pollution Control Division's review all other records of required monitoring data and support information required to be retained by the permittee upon 48 hours advance notice by the Division.

d. The permittee shall submit to the Air Pollution Control Division all reports of any required monitoring at least every six (6) months, unless an applicable requirement, the compliance assurance monitoring rule, or the Division requires submission on a more frequent basis. All instances of deviations from any permit requirements must be clearly identified in such reports.

e. The permittee shall file an Air Pollutant Emissions Notice ("APEN") prior to constructing, modifying, or altering any facility, process, activity which constitutes a stationary source from which air pollutants are or are to be emitted, unless such source is exempt from the APEN filing requirements of Regulation No. 3, Part A, § II.D. A revised APEN shall be filed annually whenever a significant change in emissions, as defined in Regulation No. 3, Part A, § II.C.2., occurs; whenever there is a change in owner or operator of any facility, process, or activity; whenever new control equipment is installed; whenever a different type of control equipment replaces an existing type of control equipment; whenever a permit limitation must be modified; or before the APEN expires. An APEN is valid for a period of five years. The five-year period recommences when a revised APEN is received by the Air Pollution Control Division. Revised APENs shall be submitted no later than 30 days before the five-year term expires. Permittees submitting revised APENs to inform the Division of a change in actual emission rates must do so by April 30 of the following year. Where a permit revision is required, the revised APEN must be filed along with a request for permit revision. APENs for changes in control equipment must be submitted before the change occurs. Annual fees are based on the most recent APEN on file with the Division.

23. Reopenings for Cause

Regulation No. 3, 5 CCR 1001-5, Part C, § XIII.

a. The Air Pollution Control Division shall reopen, revise, and reissue Operating Permits; permit reopenings and reissuance shall be processed using the procedures set forth in Regulation No. 3, Part C, § III., except that proceedings to reopen and reissue permits affect only those parts of the permit for which cause to reopen exists.

b. The Division shall reopen a permit whenever additional applicable requirements become applicable to a major source with a remaining permit term of three or more years, unless the effective date of the requirements is later than the date on which the permit expires, or unless a general permit is obtained to address the new requirements; whenever additional requirements (including excess emissions requirements) become applicable to an affected source under the acid rain program; whenever the Division determines the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or whenever the Division determines that the permit must be revised or revoked to assure compliance with an applicable requirement.

c. The Division shall provide 30 days' advance notice to the permittee of its intent to reopen the permit, except that a shorter notice may be provided in the case of an emergency.

d. The permit shield shall extend to those parts of the permit that have been changed pursuant to the reopening and reissuance procedure.

24. Section 502(b)(10) Changes

Regulation No. 3, 5 CCR 1001-5, Part C, § XII.A.

The permittee shall provide a minimum 7-day advance notification to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit. The permittee shall attach a copy of each such notice given to its Operating Permit.

25. Severability Clause

Regulation No. 3, 5 CCR 1001-5, Part C, § V.C.10.

In the event of a challenge to any portion of the permit, all emissions limits, specific and general conditions, monitoring, record keeping and reporting requirements of the permit, except those being challenged, remain valid and enforceable.

26. Significant Permit Modifications

Regulation No. 3, 5 CCR 1001-5, Part C, § III.B.2.

The permittee shall not make a significant modification required to be reviewed under Regulation No. 3, Part B ("Construction Permit" requirements) without first receiving a construction permit. The permittee shall submit a complete Operating Permit application or application for an Operating Permit revision for any new or modified source within twelve months of commencing operation, to the address listed in Item 1 in Appendix D of this permit. If the permittee chooses to use the "Combined Construction/Operating Permit' application procedures of Regulation No. 3, Part C, then the Operating Permit must be received prior to commencing construction of the new or modified source.

27. Special Provisions Concerning the Acid Rain Program

Regulation No. 3, 5 CCR 1001-5, Part C, §§ V.C.1.b. & 8

a. Where an applicable requirement of the federal act is more stringent than an applicable requirement of regulations promulgated under Title IV of the federal act, 40 Code of Federal Regulations (CFR) Part 72, both provisions shall be incorporated into the permit and shall be federally enforceable.

b. Emissions exceeding any allowances that the source lawfully holds under Title IV of the federal act or the regulations promulgated thereunder, 40 CFR Part 72, are expressly prohibited.

28. Transfer or Assignment of Ownership

Regulation No. 3, 5 CCR 1001-5, Part C, § II.C.

No transfer or assignment of ownership of the Operating Permit source will be effective unless the prospective owner or operator applies to the Air Pollution Control Division on Division-supplied Administrative Permit Amendment forms, for reissuance of the existing Operating Permit. No administrative permit shall be complete until a written agreement containing a specific date for transfer of permit, responsibility, coverage, and liability between the permittee and the prospective owner or operator has been submitted to the Division.

29. Volatile Organic Compounds

Regulation No. 7, 5 CCR 1001-9, §§ III & V.

The requirements in paragraphs a, b and e apply to sources located in an ozone non-attainment area or the Denver 1-hour ozone attainment/maintenance area. The requirements in paragraphs c and d apply statewide.

a. All storage tank gauging devices, anti-rotation devices, accesses, seals, hatches, roof drainage systems, support structures, and pressure relief valves shall be maintained and operated to prevent detectable vapor loss except when opened, actuated, or used for necessary and proper activities (e.g. maintenance). Such opening, actuation, or use shall be limited so as to minimize vapor loss.

   Detectable vapor loss shall be determined visually, by touch, by presence of odor, or using a portable hydrocarbon analyzer. When an analyzer is used, detectable vapor loss means a VOC concentration exceeding 10,000 ppm. Testing shall be conducted as in Regulation No. 7, Section VIII.C.3.

b. Except when otherwise provided by Regulation No. 7, all volatile organic compounds, excluding petroleum liquids, transferred to any tank, container, or vehicle compartment with a capacity exceeding 212 liters (56 gallons), shall be transferred using submerged or bottom filling equipment. For top loading, the fill tube shall reach within six inches of the bottom of the tank compartment. For bottom-fill operations, the inlet shall be flush with the tank bottom.

c. The permittee shall not dispose of volatile organic compounds by evaporation or spillage unless Reasonably Available Control Technology (RACT) is utilized.

d. No owner or operator of a bulk gasoline terminal, bulk gasoline plant, or gasoline dispensing facility as defined in Colorado Regulation No. 7, Section VI, shall permit gasoline to be intentionally spilled, discarded in sewers, stored in open containers, or disposed of in any other manner that would result in evaporation.

e. Beer production and associated beer container storage and transfer operations involving volatile organic compounds with a true vapor pressure of less than 1.5 PSIA actual conditions are exempt from the provisions of paragraph b, above.

30. Wood Stoves and Wood burning Appliances

Regulation No. 4, 5 CCR 1001-6

The permittee shall comply with the provisions of Regulation No. 4 concerning the advertisement, sale, installation, and use of wood stoves and wood burning appliances.

OPERATING PERMIT APPENDICES

A - INSPECTION INFORMATION
B - MONITORING AND PERMIT DEVIATION REPORT
C - COMPLIANCE CERTIFICATION REPORT
D - NOTIFICATION ADDRESSES
E - PERMIT ACRONYMS
F - PERMIT MODIFICATIONS
G - COMPLIANCE ASSURANCE MONITORING PLAN

*DISCLAIMER:

None of the information found in these Appendices shall be considered to be State or Federally enforceable, unless otherwise stated in this permit, and is presented to assist the source, permitting authority, inspectors, and citizens.

APPENDIX A - Inspection Information

Directions to Plant:

Follow US Route 36 north from Boulder to Lyons, Colorado. From Lyons, turn right onto Colorado Highway 66 for approximately 1/4 mile to plant entrance on the right.

Safety Equipment Required:

Eye Protection Hard Hat Safety Shoes Hearing Protection

Facility Plot Plan:

Please see the large plot plan submitted with the source's Title V Operating Permit Application.

List of Insignificant Activities:

The following list of insignificant activities was provided by the source to assist in the understanding of the facility layout. Since there is no requirement to update such a list, activities may have changed since the last filing.

The asterisk (*) denotes an insignificant activity source category based on the size of the activity, emissions levels from the activity or the production rate of the activity. The owner or operator of individual emission points in insignificant activity source categories marked with an asterisk (*) must maintain sufficient record keeping verifying that the exemption applies. Such records shall be made available for Division review upon request. (Colorado Regulation No. 3, Part C, Section II.E)

Insignificant activities and/or sources of emissions as submitted in the application are as follows:

<u>Units with emissions less than APEN de minimis - criteria & non-criteria pollutants (Reg 3 Part C.II.E.3.a & b)*</u>

Two (2) portable, self-contained conveyors, Loadmaster Model 3600

<u>Landscaping and site housekeeping devices < 10 hp (Reg 3 Part C.II.E.3.bb)*</u>

<u>Storage of butane, propane, or liquefied petroleum gas in a tank < 60,000 gallons, provided the requirements of Regulation No. 7, Section IV are met, where applicable (Reg 3, Part C.II.E.3.zz)</u>

One propane storage tank

<u>Lubricating oil storage tanks < 40,000 gal (Reg 3, Part C.II.E.3.aaa)</u>

8,000 gallon lube oil tank at Dowe Flats Quarry

Storage tanks with annual throughput less than 400,000 gal/yr and meeting content specifications (Reg 3 Part C.II.E.3.fff)*

10,000 gallon diesel storage tank at Lyons Plant
20,000 gallon diesel storage tank at Dowe Flats Quarry

Fuel (gaseous) burning equipment < 10 MMBtu/hr used for comfort heat (Reg 3, Part C.II.E.3.ggg)

One (1) natural gas fired 0.80 mmBtu/hr space heating furnace
Four (4) natural gas fired 0.20 mmBtu/hr space heaters

Surface mining activities that mine 70,000 tons/yr or less. Fugitive dust plans are required. Crushers, screens and other processing equipment activities not include in this exemption. (Reg 3, Part C.II.E.3.qqq)*

Sandstone Quarry

Note that the quarry was previously addressed construction permit 02BO0176F, which was canceled at the request of CEMEX on January 22, 2013, since the quarry is exempt from construction permit requirements under Reg 3, Part B.II.D.1.g (throughput less than 70,000 tons/yr). The quarry was also previously identified under AIRS d 013-0124.

Fugitive Dust Control Measures for the quarry include the following:

- Adequate soil moisture must be maintained in topsoil and overburden to control emissions during removal. Water shall be implemented if necessary.
- Topsoil and overburden stockpiles shall be compacted and revegetated within one year.
- Emissions from material handling (i.e. removal, loading and hauling) shall be controlled by watering at all times unless natural moisture is sufficient to control emissions.
- Vehicle speed on unpaved roads and disturbed areas shall not exceed a maximum of 20 mph. Speed limit signs shall be posted.
- Unpaved haul roads shall be watered as often as needed to control fugitive particulate emissions.
- Reclamation works and sequential extraction of material shall be initiated to keep the total disturbed areas at any one time to a minimum.
- Wet drilling and sequential blasting shall be employed to reduce fugitive particulate matter emissions.
- Exposed portion of the quarry shall not exceed five (5) acres at any given time, and total disturbed area subject to wind erosion shall not exceed fifteen (15) acres at any time.

APPENDIX B

Reporting Requirements and Definitions

with codes ver 2/20/07

Please note that, pursuant to 113(c)(2) of the federal Clean Air Act, any person who knowingly:

(A) makes any false material statement, representation, or certification in, or omits material information from, or knowingly alters, conceals, or fails to file or maintain any notice, application, record, report, plan, or other document required pursuant to the Act to be either filed or maintained (whether with respect to the requirements imposed by the Administrator or by a State);

(B) fails to notify or report as required under the Act; or

(C) falsifies, tampers with, renders inaccurate, or fails to install any monitoring device or method required to be maintained or followed under the Act shall, upon conviction, be punished by a fine pursuant to title 18 of the United States Code, or by imprisonment for not more than 2 years, or both. If a conviction of any person under this paragraph is for a violation committed after a first conviction of such person under this paragraph, the maximum punishment shall be doubled with respect to both the fine and imprisonment.

The permittee must comply with all conditions of this operating permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

The Part 70 Operating Permit program requires three types of reports to be filed for all permits.
All required reports must be certified by a responsible official.

Report #1: Monitoring Deviation Report (due at least every six months)

For purposes of this operating permit, the Division is requiring that the monitoring reports are due every six months unless otherwise noted in the permit. All instances of deviations from permit monitoring requirements must be clearly identified in such reports.

For purposes of this operating permit, monitoring means any condition determined by observation, by data from any monitoring protocol, or by any other monitoring which is required by the permit as well as the recordkeeping associated with that monitoring. This would include, for example, fuel use or process rate monitoring, fuel analyses, and operational or control device parameter monitoring.

Report #2: Permit Deviation Report (must be reported "promptly")

In addition to the monitoring requirements set forth in the permits as discussed above, each and every requirement of the permit is subject to deviation reporting. The reports must address deviations from permit

requirements, including those attributable to malfunctions as defined in this Appendix, the probable cause of such deviations, and any corrective actions or preventive measures taken. All deviations from any term or condition of the permit are required to be summarized or referenced in the annual compliance certification.

For purposes of this operating permit, "malfunction" shall refer to both emergency conditions and malfunctions. Additional discussion on these conditions is provided later in this Appendix.

For purposes of this operating permit, the Division is requiring that the permit deviation reports are due as set forth in General Condition 21. Where the underlying applicable requirement contains a definition of prompt or otherwise specifies a time frame for reporting deviations, that definition or time frame shall govern. For example, quarterly Excess Emission Reports required by an NSPS or Regulation No. 1, Section IV.

In addition to the monitoring deviations discussed above, included in the meaning of deviation for the purposes of this operating permit are any of the following:

(1) A situation where emissions exceed an emission limitation or standard contained in the permit;

(2) A situation where process or control device parameter values demonstrate that an emission limitation or standard contained in the permit has not been met;

(3) A situation in which observations or data collected demonstrates noncompliance with an emission limitation or standard or any work practice or operating condition required by the permit; or,

(4) A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only if the emission point is subject to CAM)

For reporting purposes, the Division has combined the Monitoring Deviation Report with the Permit Deviation Report. All deviations shall be reported using the following codes:

1 = Standard:	When the requirement is an emission limit or standard
2 = Process:	When the requirement is a production/process limit
3 = Monitor:	When the requirement is monitoring
4 = Test:	When the requirement is testing
5 = Maintenance:	When required maintenance is not performed
6 = Record:	When the requirement is recordkeeping
7 = Report:	When the requirement is reporting
8 = CAM:	A situation in which an excursion or exceedance as defined in 40CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred.
9 = Other:	When the deviation is not covered by any of the above categories

Report #3: Compliance Certification (annually, as defined in the permit)

Submission of compliance certifications with terms and conditions in the permit, including emission limitations, standards, or work practices, is required not less than annually.

Compliance Certifications are intended to state the compliance status of each requirement of the permit over the certification period. They must be based, at a minimum, on the testing and monitoring methods specified in the permit that were conducted during the relevant time period. In addition, if the owner or operator knows of other material information (i.e. information beyond required monitoring that has been specifically assessed in relation to how the information potentially affects compliance status), that information must be identified and addressed in the compliance certification. The compliance certification must include the following:

- The identification of each term or condition of the permit that is the basis of the certification;
- Whether or not the method(s) used by the owner or operator for determining the compliance status with each permit term and condition during the certification period was the method(s) specified in the permit. Such methods and other means shall include, at a minimum, the methods and means required in the permit. If necessary, the owner or operator also shall identify any other material information that must be included in the certification to comply with section 113(c)(2) of the Federal Clean Air Act, which prohibits knowingly making a false certification or omitting material information;
- The status of compliance with the terms and conditions of the permit, and whether compliance was continuous or intermittent. The certification shall identify each deviation and take it into account in the compliance certification. Note that not all deviations are considered violations.[1]
- Such other facts as the Division may require, consistent with the applicable requirements to which the source is subject, to determine the compliance status of the source.

The Certification shall also identify as possible exceptions to compliance any periods during which compliance is required and in which an excursion or exceedance as defined under 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred. (only for emission points subject to CAM)

Note the requirement that the certification shall identify each deviation and take it into account in the compliance certification. Previously submitted deviation reports, including the deviation report submitted at the time of the annual certification, may be referenced in the compliance certification.

[1] For example, given the various emissions limitations and monitoring requirements to which a source may be subject, a deviation from one requirement may not be a deviation under another requirement which recognizes an exception and/or special circumstances relating to that same event.

Startup, Shutdown, Malfunctions and Emergencies

Understanding the application of Startup, Shutdown, Malfunctions and Emergency Provisions, is very important in both the deviation reports and the annual compliance certifications.

Startup, Shutdown, and Malfunctions

Please note that exceedances of some New Source Performance Standards (NSPS) and Maximum Achievable Control Technology (MACT) standards that occur during Startup, Shutdown or Malfunctions may not be considered to be non-compliance since emission limits or standards often do not apply unless specifically stated in the NSPS. Such exceedances must, however, be reported as excess emissions per the NSPS/MACT rules and would still be noted in the deviation report. In regard to compliance certifications, the permittee should be confident of the information related to those deviations when making compliance determinations since they are subject to Division review. The concepts of Startup, Shutdown and Malfunctions also exist for Best Available Control Technology (BACT) sources, but are not applied in the same fashion as for NSPS and MACT sources.

Emergency Provisions

Under the Emergency provisions of Part 70 certain operational conditions may act as an affirmative defense against enforcement action if they are properly reported.

DEFINITIONS

Malfunction (NSPS) means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Malfunction (SIP) means any sudden and unavoidable failure of air pollution control equipment or process equipment or unintended failure of a process to operate in a normal or usual manner. Failures that are primarily caused by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown shall not be considered malfunctions.

Emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Monitoring and Permit Deviation Report - Part I

1. Following is the **required** format for the Monitoring and Permit Deviation report to be submitted to the Division as set forth in General Condition 21. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

2. Part II of this Appendix B shows the format and information the Division will require for describing periods of monitoring and permit deviations, or malfunction or emergency conditions as indicated in the Table below. One Part II Form must be completed for each Deviation. Previously submitted reports (e.g. EER's or malfunctions) may be referenced and the form need not be filled out in its entirety.

FACILITY NAME: CEMEX Construction Materials South, LLC– Lyons Cement Plant
OPERATING PERMIT NO: 95OPBO082
REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates)

Operating Permit Unit ID	Unit Description	Deviations Noted During Period?[1]		Deviation Code[2]		Malfunction/ Emergency Condition Reported During Period?	
		YES	NO			YES	NO
P017	Dowe Flats Quarry Fugitive Emission Sources & Lyons Quarry						
P017	Dowe Flats Quarry – Point Source Emissions						
P018	General Fugitive Emissions Requirements						
P000	Raw Material Storage and Handling at Plant Site						
P001	Primary Crusher (Plant Site)						
P002	Raw Materials Drying						
P003	Secondary Crushing, Screen, Silo, Belt Transfer						
P004	Raw Material Storage Silos						
P005	Raw Mill Grinding						
P006	Homogenizing and Blending						
P007 & P008	Kiln Burning and Clinker Cooling and Transfer to Storage for Finish Mill						
P009	Clinker and Gypsum/Additive Silos and Weigh Feeders (Storage and Transfer to Finish Mill)						
P010	Sheltered (A-Frame) Clinker Storage and Reclaim						
P015	Outdoor Clinker Storage and Handling						
P011 & P012	Cement Finish Mill and Auxiliaries						
P013	Cement Silos/Packhouse/Loadout						
P014	Material Handling System – Load-In and Load-Out						
P007A	Handling and Processing of CKD and Raw Material Waste Dust						
P050	Cement Rail Car Unloading System						

Operating Permit Unit ID	Unit Description	Deviations Noted During Period?[1]		Deviation Code[2]		Malfunction/ Emergency Condition Reported During Period?	
		YES	NO			YES	NO
	Gasoline Storage Tank						
	Cold Cleaner Solvent Vats						
	Insignificant Activities						
	General Conditions						

[1] See previous discussion regarding what is considered to be a deviation. Determination of whether or not a deviation has occurred shall be based on a reasonable inquiry using readily available information.

[2]Use the following entries as appropriate:

1 = Standard: When the requirement is an emission limit or standard
2 = Process: When the requirement is a production/process limit
3 = Monitor: When the requirement is monitoring
4 = Test: When the requirement is testing
5 = Maintenance: When required maintenance is not performed
6 = Record: When the requirement is recordkeeping
7 = Report: When the requirement is reporting
8 = CAM: A situation in which an excursion or exceedance as defined in 40 CFR Part 64 (the Compliance Assurance Monitoring (CAM) Rule) has occurred.
9 = Other: When the deviation is not covered by any of the above categories

Monitoring and Permit Deviation Report - Part II

FACILITY NAME: CEMEX Construction Materials South, LLC – Lyons Cement Plant
OPERATING PERMIT NO: 95OPBO082
REPORTING PERIOD:

Is the deviation being claimed as an: Emergency _____ Malfunction_____ N/A

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction ____
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Operating Permit Condition Number Citation

Explanation of Period of Deviation

Duration (start/stop date & time)

Action Taken to Correct the Problem

Measures Taken to Prevent a Reoccurrence of the Problem

Dates of Malfunctions/Emergencies Reported (if applicable)

Deviation Code _____ Division Code QA: _____

SEE EXAMPLE ON THE NEXT PAGE

EXAMPLE

FACILITY NAME: Acme Corp.
OPERATING PERMIT NO: 96OPZZXXX
REPORTING PERIOD: 1/1/04 - 6/30/06

Is the deviation being claimed as an: Emergency _____ Malfunction __XX____ N/A

(For NSPS/MACT) Did the deviation occur during: Startup _____ Shutdown _____ Malfunction
Normal Operation _____

OPERATING PERMIT UNIT IDENTIFICATION:

Asphalt Plant with a Scrubber for Particulate Control - Unit XXX

Operating Permit Condition Number Citation

Section II, Condition 3.1 - Opacity Limitation

Explanation of Period of Deviation

Slurry Line Feed Plugged

Duration

START- 1730 4/10/06
END- 1800 4/10/06

Action Taken to Correct the Problem

Line Blown Out

Measures Taken to Prevent Reoccurrence of the Problem

Replaced Line Filter

Dates of Malfunction/Emergencies Reported (if applicable)

5/30/06 to A. Einstein, APCD

Deviation Code _____ Division Code QA: _____

Monitoring and Permit Deviation Report - Part III

REPORT CERTIFICATION

SOURCE NAME: CEMEX Construction Materials South, LLC – Lyons Cement Plant

FACILITY IDENTIFICATION NUMBER: 0130003

PERMIT NUMBER: 95OPBO082

REPORTING PERIOD:_____ (see first page of the permit for specific reporting period and dates)

All information for the Title V Semi-Annual Deviation Reports must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

STATEMENT OF COMPLETENESS

I have reviewed the information being submitted in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this submittal are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in Sub-Section 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of Sub-Section 25-7 122.1, C.R.S.

Printed or Typed Name | Title

Signature of Responsible Official | Date Signed

Note: Deviation reports shall be submitted to the Division at the address given in Appendix D of this permit. No copies need be sent to the U.S. EPA.

APPENDIX C

Required Format for Annual Compliance Certification Report

ver 2/20/07

Following is the format for the Compliance Certification report to be submitted to the Division and the U.S. EPA annually based on the effective date of the permit. The Table below must be completed for all equipment or processes for which specific Operating Permit terms exist.

FACILITY NAME: CEMEX Construction Materials South, LLC – Lyons Cement Plant

OPERATING PERMIT NO: 95OPBO082
REPORTING PERIOD:

I. Facility Status

___ During the entire reporting period, this source was in compliance with **ALL** terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference. The method(s) used to determine compliance is/are the method(s) specified in the Permit.

___ With the possible exception of the deviations identified in the table below, this source was in compliance with all terms and conditions contained in the Permit, each term and condition of which is identified and included by this reference, during the entire reporting period. The method used to determine compliance for each term and condition is the method specified in the Permit, unless otherwise indicated and described in the deviation report(s). Note that not all deviations are considered violations.

Operating Permit Unit ID	Unit Description	Deviations Reported [1]		Monitoring Method per Permit?[2]		Was Compliance Continuous or Intermittent?[3]	
		Previous	Current	YES	NO	Continuous	Intermittent
P017	Dowe Flats Quarry Fugitive Emission Sources & Lyons Quarry						
P017	Dowe Flats Quarry – Point Source Emissions						
P018	General Fugitive Emissions Requirements						
P000	Raw Material Storage and Handling at Plant Site						
P001	Primary Crusher (Plant Site)						
P002	Raw Materials Drying						
P003	Secondary Crushing, Screen, Silo, Belt Transfer						
P004	Raw Material Storage Silos						
P005	Raw Mill Grinding						

Operating Permit Unit ID	Unit Description	Deviations Reported [1]		Monitoring Method per Permit?[2]		Was Compliance Continuous or Intermittent?[3]	
		Previous	Current	YES	NO	Continuous	Intermittent
P006	Homogenizing and Blending						
P007 & P008	Kiln Burning and Clinker Cooling and Transfer to Storage for Finish Mill						
P009	Clinker and Gypsum/Additive Silos and Weigh Feeders (Storage and Transfer to Finish Mill)						
P010	Sheltered (A-Frame) Clinker Storage and Reclaim						
P015	Outdoor Clinker Storage and Handling						
P011 & P012	Cement Finish Mill and Auxiliaries						
P013	Cement Silos/Packhouse/Loadout						
P014	Material Handling System – Load-In and Load-out						
P007A	Handling and Processing of CKD and Raw Material Waste Dust						
P050	Cement Rail Car Unloading System						
	Gasoline Storage Tank						
	Cold Cleaner Solvent Vats						
	General Conditions						
	Insignificant Activities [4]						

[1] If deviations were noted in a previous deviation report , put an "X" under "previous". If deviations were noted in the current deviation report (i.e. for the last six months of the annual reporting period), put an "X" under "current". Mark both columns if both apply.

[2] Note whether the method(s) used to determine the compliance status with each term and condition was the method(s) specified in the permit. If it was not, mark "no" and attach additional information/explanation.

[3] Note whether the compliance status with of each term and condition provided was continuous or intermittent. "Intermittent Compliance" can mean either that noncompliance has occurred or that the owner or operator has data sufficient to certify compliance only on an intermittent basis. Certification of intermittent compliance therefore does not necessarily mean that any noncompliance has occurred.

NOTE:

The Periodic Monitoring requirements of the Operating Permit program rule are intended to provide assurance that even in the absence of a continuous system of monitoring the Title V source can demonstrate whether it has operated in continuous compliance for the duration of the reporting period. Therefore, if a source 1) conducts all of the monitoring and recordkeeping required in its permit, even if such activities are done periodically and not continuously, and if 2) such monitoring and recordkeeping does not indicate non-compliance, and if 3) the Responsible Official is not aware of any credible evidence that indicates non-compliance, then the Responsible Official can certify that the emission point(s) in question were in continuous compliance during the applicable time period.

[4] Compliance status for these sources shall be based on a reasonable inquiry using readily available information.

II. Status for Accidental Release Prevention Program:

A. This facility _____ is subject _____ is not subject to the provisions of the Accidental Release Prevention Program (Section 112(r) of the Federal Clean Air Act)

B. If subject: The facility _____ is _____ is not in compliance with all the requirements of section 112(r).

1. A Risk Management Plan _____ will be _____ has been submitted to the appropriate authority and/or the designated central location by the required date.

III. Certification

All information for the Annual Compliance Certification must be certified by a responsible official as defined in Colorado Regulation No. 3, Part A, Section I.B.38. This signed certification document must be packaged with the documents being submitted.

I have reviewed this certification in its entirety and, based on information and belief formed after reasonable inquiry, I certify that the statements and information contained in this certification are true, accurate and complete.

Please note that the Colorado Statutes state that any person who knowingly, as defined in § 18-1-501(6), C.R.S., makes any false material statement, representation, or certification in this document is guilty of a misdemeanor and may be punished in accordance with the provisions of § 25-7 122.1, C.R.S.

_____

Printed or Typed Name | Title

_____

Signature | Date Signed

NOTE: All compliance certifications shall be submitted to the Air Pollution Control Division and to the Environmental Protection Agency at the addresses listed in Appendix D of this Permit.

APPENDIX D

Notification Addresses

1. **Air Pollution Control Division**

Colorado Department of Public Health and Environment
Air Pollution Control Division
Operating Permits Unit
APCD-SS-B1
4300 Cherry Creek Drive S.
Denver, CO 80246-1530

ATTN: Matt Burgett

2. **United States Environmental Protection Agency**

Compliance Notifications:

Office of Enforcement, Compliance and Environmental Justice
Mail Code 8ENF-T
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

Permit Modifications, Off Permit Changes:

Office of Partnerships and Regulatory Assistance
Air and Radiation Programs, 8P-AR
U.S. Environmental Protection Agency, Region VIII
1595 Wynkoop Street
Denver, CO 80202-1129

APPENDIX E

Permit Acronyms

Listed Alphabetically:

AIRS -	Aerometric Information Retrieval System
AP-42 -	EPA Document Compiling Air Pollutant Emission Factors
APEN -	Air Pollution Emission Notice (State of Colorado)
APCD -	Air Pollution Control Division (State of Colorado)
ASTM -	American Society for Testing and Materials
BTU -	British Thermal Unit
CAA -	Clean Air Act (CAAA = Clean Air Act Amendments)
CCR -	Colorado Code of Regulations
CEMS -	Continuous Emissions Monitor System
CKD -	Cement Kiln Dust
CF -	Cubic Feet (SCF = Standard Cubic Feet)
CFR -	Code of Federal Regulations
CO -	Carbon Monoxide
COM -	Continuous Opacity Monitor
CMS -	Continuous Monitoring System
CRS -	Colorado Revised Statute
D/F -	Dioxins and Furans
EPA -	Environmental Protection Agency
FEL -	Front End Loader
FR -	Federal Register
G -	Gram
GR -	Grain
HCL -	Hydrochloric Acid
LBS -	Pounds
MM -	Million
MMscf -	Million Standard Cubic Feet
NOx -	Nitrogen Oxides
NESHAP -	National Emission Standards for Hazardous Air Pollutants
NSPS -	New Source Performance Standards
O&M -	Operation and Maintenance
P -	Process Weight Rate in Tons/Hr
PE -	Particulate Emissions
PM -	Particulate Matter
PM_{10} -	Particulate Matter Under 10 Microns
PMCDS -	Particulate Matter Control Device
PPM -	Parts Per Million
PSD -	Prevention of Significant Deterioration
RACT -	Reasonably Available Control Technology

SCC -	Source Classification Code
SCF -	Standard Cubic Feet (dscf - dry standard cubic feet)
SIC -	Standard Industrial Classification
SO_2 -	Sulfur Dioxide
TPY -	Tons Per Year
VOC -	Volatile Organic Compounds

APPENDIX F

Permit Modifications

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
April 1, 2013	Minor Modification	Page Following Cover Page	Changed the permit contact and responsible official. Changed the name to "CEMEX Construction Materials South, LLC"
		Permit Headers	Changed the name to "CEMEX Construction Materials South, LLC"
		Section I	Condition 1.1 was revised to correct the citation for the definition of the 8-hr ozone control area and to remove language regarding the oxygen generation plant. Condition 1.4 was revised to remove Section II, Conditions 5.6 and 10.11 (lead) and Section V, Condition 3.d as state-only requirements.
		Section I, Condition 4.1	The summary table was revised to correctly reflect emission units and AIRS point numbers. The column labeled "size" was removed. The 8,000 gal storage tank was removed from the table and included in the insignificant activity list (note that the tank size was corrected in the insignificant activity list). The cold cleaner solvent vats were added to the table. The descriptions of the emission units under P014 were revised to indicate that "materials" were handled rather than "fuel/clinker".
		Section II, General	The summary tables for various conditions in Section II were revised to reflect the changes made to the table in Section I, Condition 4.1.
		Section II.2	The PM emissions limits were corrected to reflect the emission factor and the throughput limits. Condition 2.3 was removed and this requirement (Reg 1 process weight rate limit) is included in the permit shield for streamlined conditions (Section III.3 of the permit). Added a note to Condition 2.4 of the summary table indicating the control efficiency that may be applied to the emission factors.
		Section II.4	Condition 4.5 was removed since CAM does not apply to the primary crusher.
		Section II.5	The emission factors in Conditions 5.4 and 5.5 were revised to reflect the latest stack test. Condition 5.6 (state-only lead standard of 1.5 $\mu g/m^3$) was removed. Condition 5.3 was revised to remove references to Appendix G and to require that every shipment of coal be sampled using ASTM methods or to rely on vendor data (if ASTM methods were used by the vendor). Condition 5.5 was revised to allow the use of Method 12 or 29 as reference methods for lead performance tests.

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
April 1, 2013	Minor Modification	Section II.10	Language was added to Condition 10.7 to clarify that the emission limitations apply to kiln burning (P007). The emission factor table in Condition 10.7 was revised to update emission factors for the kiln. The HCl emission factor in Condition 10.9 was revised to a factor derived from performance testing. Condition 10.10 was revised to allow the use of Method 12 or 29 as reference methods for lead performance tests. Condition 10.11 (state-only lead standard of 1.5 $\mu g/m^3$) was removed. A "new" Condition 10.8 was added for P008 (Clinker Cooling and Transfer to Storage for Finish Mill) which is not subject to PM and PM_{10} emission limitations. Conditions following this "new" Condition 10.8 were re-numbered.
		Section II.11	The column labeled "emission factor" for Condition 11.3 in the summary table was revised to read "see Condition 11.3" and to include the control efficiency and one way road length for PM (for P015) A throughput limit was added to Condition 11.1 for the material processed through the SEP baghouse. The annual PM and PM_{10} limits (Condition 11.3) for P012 were increased by 0.38 tpy for PM and 0.19 tpy of PM_{10} to address the SEP baghouse. The annual PM and PM_{10} limits (Condition 11.3) for P009 were increased by 1.48 tpy for PM and 0.74 tpy of PM_{10} to address S021 and S033 baghouses. Condition 11.3 was also revised to indicate that emissions from the SEP baghouse would be calculated using the specified grain loading. The SEP baghouse and the baghouses for S021 and S033 were added to the table in Condition 11.3. Corrections to baghouse id numbers in the table in Condition 11.3 were revised as indicated in the May 4, 2009 application and to address baghouses not previously addressed in these emission groups. In addition, the table in Condition 11.3 was revised to correct the design flow rate for BH 725-3 and to add the stack ids (e.g. S021). Condition 11.3 was also revised to specify the PM_{10} emission factor to be used to calculate emission, to include the PM_{10} grain-loading level in the table and to specify that performance tests for PM_{10} would verify that the grain loading specification was met. The sentence in Condition 11.3 beginning with "in lieu of" was removed. In addition, language related to PM_{10} being 50% of PM and the discussion related to the reliance on that assumption have been removed from Condition 11.3. Condition 11.3 was also revised to note that performance tests for baghouses vented inside a building are not required. The emission unit id information in Condition 11.7 was corrected to reflect the changes made to Section I, Condition 4.1.
		Section II.12	Revised the description for the summary table to indicated the equipment is used for "material handling", rather than "fuel/clinker handling." Revised Condition 12.5 to indicate which units are subject to MACT requirements.

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
April 1, 2013	Minor Modification	Section II.13	The column labeled "emission factor" for Condition 13.2 in the summary table for PM_{10} was revised to read "see Condition 13.2." Condition 13.2 was also revised to specify the PM_{10} emission factor to be used to calculate emissions, to include the PM_{10} grain-loading level in the table and to specify that performance tests for PM_{10} would verify that the grain loading specification was met. The annual PM and PM_{10} limits (Condition 13.2) for P007A (stacks S001, S066 and S067) were increased by 4.56 tpy for PM and 2.28 tpy of PM_{10} to address the S022 baghouse. Condition 13.2 was also revised to indicate that emissions from the S022 would be calculated using the specified grain loading (S022 will not be subject to performance test requirements). The baghouse information for S022 was added to the table in Condition 13.2. In addition, the table in Condition 13.2 was revised to add the stack ids (e.g. S022). The sentence in Condition 13.2 beginning with "in lieu of" was removed. In addition, language related to PM_{10} being 50% of PM and the discussion related to the reliance on that assumption have been removed from Condition 13.2. Condition 13.2 was also revised to note that performance tests for baghouses vented inside a building are not required.
		Section II.14	This condition was revised to address fugitive emissions from the plant, rather than just haul roads. Section II, Conditions 25 and 26 have been incorporated into this condition. Additional Reg 1 requirements (Section III.D.1.a and c) were also added to this condition.
		Section II.15	The requirements to record throughput and calculate emissions (Conditions 15.1 and 15.2) were removed, since emissions from this unit are below the APEN de minimis level. The language in Condition 15.3 (Reg 7 requirements) was revised and reformatted (this language is now addressed in Conditions 15.1 through 15.3) and the requirements in Reg 7, Section V.B were included (Condition 15.4).
		Section II.18	Removed the reporting requirements in this condition as info on report submittals are elsewhere in the permit (e.g. on the page following the cover page). Requirements for the cold cleaner solvent vats are now included in this condition.
		Section II.23	Emission unit information (e.g. stack id) was updated to address the changes made to the table in Section I, Condition 4.1. In addition, changes were made to more appropriately address the individual emission unit subject to the requirements.
		Section II.24	The emission unit information in the table was updated to reflect the changes made to table in Section I, Condition 4.1. The PM and PM_{10} emission limits for P012 were increased by 0.38 tpy for PM and 0.19 tpy of PM_{10} to address the SEP baghouse. The PM emission limit for P009 was increased by 1.48 to address the baghouses for S021 and S033.
		Section II.25	The language in this condition was included in Section II.14. This condition now includes the rail car unloader (previously Section II.27)

DATE OF REVISION	TYPE OF REVISION	SECTION NUMBER, CONDITION NUMBER	DESCRIPTION OF REVISION
April 1, 2013	Minor Modification	Section II.26	The language in this condition was included in Section II.14. This condition was removed and no longer exists.
		Section II.27	Due to removal of Conditions II.25 and 26, this condition no longer exists (contents of this condition are now re-numbered as II.25).
		Section IV	Added a version date. The paragraph in Condition 3.d indicating that the requirements are state-only was removed, since EPA approved these provisions in into Colorado's SIP effective October 6, 2008. The title for Condition 6 was changed from "Emission Standards for Asbestos" to "Emission Controls for Asbestos" and in the text the phrase "emission standards for asbestos" was changed to "asbestos control". General Condition 29 was revised by reformatting and adding the provisions in Reg 7, Section III.C as paragraph e.
		Appendix A	The cold cleaner solvent vats and the coal unloading spout were removed from the insignificant activity list. Insignificant categories were specifically identified and equipment grouped within those categories. Those categories which require that adequate records be kept to verify they qualify as insignificant were identified. The sandstone quarry was included in the insignificant activity list and three tanks were added to the list.
		Appendices B and C	Changed the name to "CEMEX Construction Materials South, LLC" on the reports. The tables were revised to reflect the changes made to table in Section I, Condition 4.1.
		Appendix D	Changed the name of the Division contact for reports in Appendix D.
		Appendix G	This appendix was removed. Coal sampling requirements are addressed in Section II, Condition 5.3.
		Appendix H	This appendix was renumbered as Appendix G (since Appendix G was removed). Emission unit information was revised to reflect the changes made to the table in Section I, Condition 4.1. The PM and PM_{10} emission limits for P012 were increased by 0.38 tpy for PM and 0.19 tpy of PM_{10} to address the SEP baghouse. The PM emission limit for P009 was increased by 1.48 to address the baghouses for S021 and S033. The PM and PM_{10} emission limits for P007A (S001, S066 and S067) were increased by 4.56 tpy for PM and 2.28 tpy of PM_{10} to address S022.

APPENDIX G

Compliance Assurance Monitoring Plan

I. Background

a. Emission Unit Description:

Facility Descriptions – This facility produces portland cement. Particulate, PM_{10}, and Pb emissions from raw material and product handling are controlled by baghouses.

b. Applicable Regulations, Emission Limits, Monitoring Requirements

1. P002 – S005 Raw Materials Dryer

Regulation:	Operating Permit Conditions 5.4 and 5.5 (underlying Colorado Construction Permit 12BO444-1)
Emission Limitations:	PM = 22.8 tons/year PM_{10} =22.8 tons/year; 6.5 lbs/hour Pb = 1.6 tons/year
Monitoring Requirements:	Pressure Differential and Visible Emissions

2. P007 &P008 – S016 Precalciner Kiln & S017 Clinker Cooler

Regulation:	Operating Permit Conditions 10.7 and 10.11 (underlying Colorado Construction Permit 12BO444-2)
Emission Limitations:	PM = 133 tons/year PM_{10} = 133 tons/year Pb = 4.4 tons/year
Regulation:	Operating Permit Condition 10.4 (incorporated directly into this Operating Permit in accordance with Section I, Condition 1.3 of this permit)
Emission Limitations:	PM = 0.275 lb/ton feed PM_{10} = 0.275 lb/ton feed
Monitoring Requirements:	Pressure Differential and Visible Emissions

3. P009 – S032 Bottom of A Frame Transfer; S024 #2 Clinker Silo

Regulation:	Operating Permit Condition 11.3 (underlying Colorado Construction Permit 98BO0259)
Emission Limitations:	PM = 9.3 tons/year
Monitoring Requirements:	Pressure Differential and Visible Emissions

4. P010 – S051 Top of A Frame Transfer from 529-29 belt to 529-30 belt; S034 #6 Reclaim Feeder and A-Frame Building

Regulation:	Operating Permit Condition 11.3 (underlying Colorado Construction Permit 98BO0259)
Emission Limitations:	PM = 21.96 tons/year PM_{10} = 10.98 tons/year; 201 lbs/day
Monitoring Requirements:	Pressure Differential and Visible Emissions

5. P011 – S036 Finish Mill; S037 Finish Mill Auxiliary Dust Collector

Regulation:	Operating Permit Condition 11.3 (underlying Colorado Construction Permit 98BO0259)
Emission Limitations:	PM = 17.05 tons/year PM_{10} = 8.65 tons/year; 48 lbs/day
Monitoring Requirements:	Pressure Differential and Visible Emissions

6. P012 – S065 Finish Mill Separator

Regulation:	Operating Permit Condition 11.3 (underlying Colorado Construction Permit 98BO0259)
Emission Limitations:	PM = 21.90 tons/year PM_{10} = 10.95 tons/year; 107 lbs/day
Monitoring Requirements:	Pressure Differential and Visible Emissions

7. P013 – S043 Masonry Storage Silos A10 and A13; S044 Cement Storage Silo A7; S046 Packhouses West and East (loading spouts); S049 Packer (South - Masonry); S050 Packer (North - Portland Cement)

Regulation:	Operating Permit Condition 11.3 (underlying Colorado Construction Permit 98BO0259)
Emission Limitations:	PM = 12.3 tons/year PM_{10} = 6.2 tons/year; 43 lbs/day
Monitoring Requirements:	Pressure Differential and Visible Emissions

8. P007A – S001 Waste Dust Silo

Regulation:	Operating Permit Condition 13.2 (underlying Colorado Construction Permit 98BO0315)
Emission Limitations:	PM = 19.95tons/year PM_{10} = 9.98 tons/year; 69.5 lbs/day
Monitoring Requirements:	Pressure Differential and Visible Emissions

c. Control Technology

AIRS Stack Number	Facility Identifier	Description	Pollution Control Device	Air Flow (dscfm)
002	S005	Raw Materials Dryer	Micro Pulsaire Filter: Model No. 80G6	32862
007	S016	Precalciner Kiln	Fuller Filter: Model No. BHS138	123632
008	S018	Clinker Cooler	Two (2) Micro Pulsaire Filter: Model No. 80G6	34480 each
009	S032	Bottom of A Frame Transfer	DCE Volkes Filter: Model No. DLM V10-F	1187
009	S024	#2 Clinker Silo	DCM Volkes Filter: Model No. DLM 20F	1646
010	S051	Top of A Frame Transfer from 529-29 belt to 529-30 belt		5935
010	S034	#6 Reclaim Feeder and A-Frame Building		25829
011	S036	Finish Mill	Norblo Filter: Model No. 648 AMT	9654
011	S037	Finish Mill Auxiliary Dust Collector	Norblo Filter: Model No. 540 AMT	7287
031	S065	Finish Mill Separator	Amerex Filter: Model No. RP-12-1050-D6	121095
013	S043	Masonry Storage Silos A10 and A13	Norblo Filter: Model No. 324 AMT	3622
013	S044	Cement Storage Silo A7	Norblo Filter: Model No. 324 AMT	3622
013	S046	Packhouses West and East (loading spouts) Bagshouses vent to a common stack.	Norblo Filter: Model No. 120 AMT & Norblo Filter: Model No. 120 AMT	1350 & 1811
013	S049	Packer (South - Masonry)	Norblo Filter: Model No. 432 AMT	5449
013	S050	Packer (North - Portland Cement)	Norblo Filter: Model No. 432 AMT	5449
049	S001	Waste Dust Silo	Norblo Filter: Model No. 648 AMT	13252

II. Monitoring Approach

The following monitoring approach will be used for each control device listed in Section 1.c.

	Indicator 1		**Indicator 2**
I. Indicator	Visible Emissions		Pressure Differential
	Kiln /Clinker Cooler	All Others	All Sources
Measurement Approach	Visible emissions from the kiln stack shall be monitored using the continuous opacity monitoring systems (COMS).	Visible emissions from each baghouse will be monitored daily by conducting a six minute visible emission observation.	The pressure differential across each baghouse shall be read and recorded daily.
II. Indicator Range	An Excursion is identified as any six (6) minute average opacity reading from the COMS at or above 15%, or Any instance where the six (6) minute average opacity readings from the COMS increases and remains consistently equal to or greater than 10% for a period exceeding eight (8) hours	An Excursion is identified as any visible emissions. Excursions require the source to investigate the baghouse performance and make any repairs or adjustments necessary. A log of any repairs shall be maintained and made available upon request.	An Excursion is identified as any time during which the manometer reading is above 7" or less than or equal to 0" of water. Excursions trigger the source to investigate the baghouse performance and make any repairs or adjustments necessary. A log of any repairs shall be maintained and made available upon request.
III. Performance Criteria			
a. Data Representativeness	The opacity measurements are made in the kiln stack.	Visual observations are being made of at each emission point (baghouse exhaust stack).	Measurements via pressure taps are made at the inlet and outlet of the baghouse using a pressure gauge. The pressure gauge has an accuracy of $\pm$ 0.2 inches of water.
b. QA/QC Practices and Criteria	The COMS is subject to the requirements in 40 CFR Part 63, Subpart A and PS-1 of 40 CFR Part 60, Appendix B.	Certification is not required for visual emission observations, but personnel shall be trained in general procedures for the determination of visible emissions. Persons performing visible emission observations shall be trained in determining the presence of visible emissions. A list of observers trained to perform the visible emission observations shall be maintained.	Pressure gauges will be inspected monthly. Repairs will be made as necessary according to manufacturer's recommendations.

	Indicator 1		Indicator 2
c. Monitoring Frequency	Continuously, with six (6) minute averages recorded.	Six (6) minute visible emission observations are conducted daily. Results of visible emissions shall be recorded in a log book.	The pressure drop across the inlet and outlet of the baghouse shall be recorded daily. Results of the daily reading will be recorded in a log book.
		Failure to either conduct a visible emission observation or record a pressure drop on any day for any emission unit shall be reported as an excursion. If the emission unit is not operating on a given day, visible emission observations and recording of pressure drop is not required for that day.	

III. Justification

a. Background**:**

The facility produces Portland cement. The specific emission units and control devices are listed in Section I above.

b. Rationale for Selection of Performance Indicators:

Visible emissions were selected as an indicator because the presence of visible emissions is indicative of baghouse performance. If the baghouse is performing properly, then there should be no visible emissions or visible emissions should be minimal.

The pressure differential was selected as an indicator because the pressure differential across a baghouse can be indicative of problems with the baghouse operation, such as broken bags or bad seals. A high pressure differential can be an indication of plugged bags and a low pressure differential can be an indication of broken bags, both of which would affect the performance of the baghouse.

c. Rationale for Selection of Indicator Ranges:

For all emission units except the kiln/clinker cooler an indicator range of no visible emissions was selected. This level was selected because an increase in visible emissions indicates an increase in particulate matter emissions, therefore, the presence of visible emissions is used as an indicator. When visible emissions are detected, corrective action will be initiated, beginning with reporting the excursion to maintenance. Corrective action will be initiated according to manufacturer's recommendations and any corrective action taken will be recorded in a log.

For the kiln/clinker cooler, since these sources are subject to higher particulate matter emission limitations and higher opacity limitations (for the kiln) and are monitored continuously using a COMS, the presence of low visible emissions is normal and is not necessarily an indicator of problems with the particulate matter control device. Therefore, the indicator range is higher for this unit. In addition, the monitoring is based on the kiln stack, not the clinker cooler stack, since the bulk of the emissions are associated with the kiln, rather than the clinker cooler. Hence the monitoring

shall be conducted on the kiln stack. The indicator range has been set as (1) any six (6) minute average opacity reading from the COMS at or above 15% and (2) any instance where the six (6) minute average opacity readings from the COMS increases and remains consistently equal to or greater than 10% for a period exceeding eight (8) hours.

For pressure differential, an indicator range of less than or equal to 0 or more than 7 inches of water was selected. This range was selected because a high or low pressure differential can be indicative of problems with the baghouse such as broken or plugged bags. The pressure differentials will be monitored and recorded electronically and the low reading of 0 is indicates that the system is not operational. The pressure differential is necessary since the pressure differential is read across the entire baghouse and in multi-compartment baghouses, the pressure differential increases temporarily when compartments cycle for cleaning. When the baghouse pressure differential either reaches or falls below 0 inches or exceeds 7 inches of water, corrective action will be initiated according to manufacturers' recommendations and any corrective action taken will be recorded in a log.