West Virginia Department of Environmental Protection

Austin Caperton
Cabinet Secretary

Title V Operating Permit Revision

For Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

Permit Action Number: MM01 and MM02 **SIC:** 3241, 1422
Name of Permittee: Argos USA LLC
Facility Name/Location: Martinsburg
County: Berkeley
Facility Address: 1826 South Queen Street, Martinsburg, WV 25401

Description of Permit Revision: The purpose of MM01 is to revise opacity requirements and to increase haul road emission limits, and MM02 is for the installation of an air compressor engine.

Title V Permit Information:
Permit Number: R30-00300006-2017
Issued Date: October 12, 2017
Effective Date: October 26, 2017
Expiration Date: October 12, 2022

Directions To Facility: Take south Queen Street exit off of WV State Route 45 at Martinsburg. The facility is 0.5 miles south at the end of Queen Street.

THIS PERMIT REVISION IS ISSUED IN ACCORDANCE WITH THE WEST VIRGINIA AIR POLLUTION CONTROL ACT (W.VA. CODE §§ 22-5-1 ET SEQ.) AND 45CSR30 - "REQUIREMENTS FOR OPERATING PERMITS." THE PERMITTEE IDENTIFIED AT THE FACILITY ABOVE IS AUTHORIZED TO OPERATE THE STATIONARY SOURCES OF AIR POLLUTANTS IDENTIFIED HEREIN IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF THIS PERMIT.

William F. Durham
Director

July 3, 2018
Date Issued

Permit Number: **R30-00300006-2017**
Permittee: **Argos USA LLC**
Mailing Address: **1826 South Queen Street, Martinsburg, WV 25401**

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location:	Martinsburg, Berkeley County, West Virginia
Mailing Address:	1826 South Queen Street, Martinsburg, WV 25401
Telephone Number:	(304) 267-8966
Type of Business Entity:	Corporation
Facility Description:	Argos USA LLC's Martinsburg Plant is a Portland cement manufacturing facility. Their cement is used to make concrete, concrete products and masonry cement.
SIC Codes:	Primary 3241; Secondary 1422; Tertiary NA
UTM Coordinates:	243.50 km Easting • 4369.00 km Northing • Zone 18

Permit Writer: Denton B. McDerment

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

Table of Contents

1.0. Emission Units and Active R13, R14, and R19 Permits 4

2.0. General Conditions 20

3.0. Facility-Wide Requirements and Permit Shield 29

Source-specific Requirements

4.0. Modern Preheater-Precalciner Kiln System and related Equipment 60

5.0. Air Compressor Engine 94

APPENDIX A Site Specific Monitoring Plan ..... ~~94~~ 113

1.0. Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
Modern Precalciner Kiln System and Related Equipment							
Quarry and Crushing EU1							
EP0X.01	Quarry drilling	N/A	4,490,653 TPY	PE			None
EP0X.02	Quarry blasting	N/A	4,490,653 TPY	PE			None
EP0X.03.01	Loader to truck (good rock)	N/A	4,276,653 TPY	PE			None
EP0X.03.02	Loader to truck (waste rock)	N/A	213,841 TPY	PE			None
EP0X.03.03	Truck to waste pile	N/A	213,841 TPY	PE			None
EP37.02.01	Truck(T) to large bin (LB)	2009	4,125,933 TPY	WS		T to LB	None
EP37.02.02	Large Bin (LB) to conveyor (C1)	2009	4,125,933 TPY	WS, PE		LB to C1	None
EP37.03.01	Conveyor (C1) to Feeder (F1)	2009	4,125,933 TPY	CD37.03		C1 to F1	Baghouse
EP37.03.02	Conveyor (C1) to Hammermill (H1)	2009	4,125,933 TPY	CD37.03		C1 to H1	Baghouse
EP37.03.03	Hammermill (H1) to Feeder (F1)	2009	4,125,933 TPY	CD37.03		H1 to F1	Baghouse
EP37.03.04	Feeder (F1) to Conveyor (C2)	2009	4,125,933 TPY	CD37.03		F1 to C2	Baghouse
CD37.03	New Primary Crusher D\C	2009	41,200 dscfm				N/A
EP37.04.01	Conveyor (C2) to Split (SPT1)	2009	4,125,933 TPY	CD37.04		C2 to SPT1	Baghouse
EP37.04.02	Split (SPT1) to Conveyor (C3)	2009	4,125,933 TPY	CD37.04		SPT1 to C3	Baghouse
CD37.04	Crushing System Transfer Tower	2009	4,709 dscfm				N/A
EP37.05	Split (SPT1) to Surge Pile (SP1)	2009	412,593 TPY	None		SPT1 to SP1	None
EP37.06.01	Conveyor (C3) to Split (SPT2)	2009	4,125,933 TPY	CD37.06		C3 to SPT2	Baghouse
EP37.06.02	Split (SPT2) to Top Conveyor (TC1)	2009	3,395,680 TPY	CD37.06		SPT2 to TC1	Baghouse
EP37.06.03	Split (SPT2) to Bottom Conveyor (BC1)	2009	4,125,933 TPY	CD37.06		SPT2 to BC1	Baghouse
CD37.06	Premix Conveying D\C	2009	6,357 dscfm				N/A

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[(1)]
EP38.01.01	Top Conveyor (TC1) to Swing Conveyor (SW1)	2009	3,395,680 TPY	CD38.01		TC1 to SW1	Baghouse
EP38.01.02	Swing Conveyor (SW1) to Limestone Pile (LP)	2009	3,395,680 TPY	CD38.01		SW1 to LP	Baghouse
CD38.01	Premix Storage Feeding D\C	2009	2,119 dscfm				N/A
EP37.06	Limestone Crusher Feed Pile (for Finish Mills)	2015	66,138 TPY	None			None
EP37.07	Limestone Crusher Feed Pile Reclaim	2015	66,138 TPY	None		FEL to Crusher	None
EP37.08	Limestone/Clinker Storage Pile (Quarry)	2015	132,276 TPY	None			None
EP37.09	Limestone/Clinker Reclaim from Quarry Storage Pile	2015	132,276 TPY	None		FEL to Truck	None
EP37.10	Truck Dump to Craneway Storage Pile	2015	132,276 TPY	None		Truck to Pile	None
EP37.11	Limestone/Clinker Storage Pile (Outside Craneway)	2015	132,276 TPY	None			None
EP37.12	Limestone/Clinker Transfer to Craneway Storage Building	2015	132,276 TPY	None		FEL to Pile	None
EP37.13	Clinker Transfer from Craneway to Truck	2015	66,138 TPY	None		FEL to Truck	None
EP37.14	Limestone Dump to Mobile Crushers	2016	4,125,933 stons/year	None		FEL to Hopper	None
EP37.15	Mobile Limestone Crushers Operations (1 engine rated at 440 hp and 2 engines rated at 415 hp)	2016	4,125,933 stons/year	None			None
Raw Material Preparation EU2							
EP38.02.01	Pile (LP) to Feeder 1 (FD1)	2009	3,395,680 TPY	CD38.02		LP to FD1	Baghouse
EP38.02.02	Feeder 1 (FD1) to Bottom Conveyor (BC2)	2009	3,395,680 TPY	CD38.02		FD1 to BC2	Baghouse
EP38.02.03	Pile (LP) to Feeder 2 (FD2)	2009	3,395,680 TPY	CD38.02		LP to FD2	Baghouse
EP38.02.04	Feeder 2 (FD2) to Bottom Conveyor (BC2)	2009	3,395,680 TPY	CD38.02		FD2 to BC2	Baghouse
CD38.02	Premix Storage Discharge D\C	2009	2,119 dscfm				N/A
EP39.01.01	Conveyor (BC1) to Split (SPT3)	2009	949,330 TPY	CD39.01		BC1 to SPT3	Baghouse
EP39.01.02	Split (SPT3) to Conveyor (C4)	2009	949,330 TPY	CD39.01		SPT3 to C4	Baghouse
EP39.03.02	Conveyor (C4) to Shale Bin (SB)	2009	730,254 TPY	CD39.01		C4 to SB	Baghouse
EP39.04.01	Conveyor (C4) to Shale Bin 2 (SB2)	2009	730,254 TPY	CD39.01		C4 to SB2	Baghouse

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
EP39.07.01	Split (SPT3) to Pyrite Silo (P S)	2009	36,513 TPY	CD39.01		SPT3 to PS	Baghouse
EP39.08.01	Split (SPT3) to sand silo (SS)	2009	182,563 TPY	CD39.01		SPT3 to SS	Baghouse
CD39.01	Additive Feeding System D\C	2009	7,416 dscfm				N/A
EP39.03.01	Conveyor (BC2) to Limestone Mix Bin (LMB)	2009	3,395,680 TPY	CD39.02		BC2 to LMB	Baghouse
CD39.02	Limestone Bin D\C	2009	2,119 dscfm				N/A
EP39.03.03	Shale Bin (SB) to Feeder (SBF)	2009	730,254 TPY	CD39.03		SB to SBF	Baghouse
EP39.03.04	Shale Bin Feeder (SBF) to Conveyor (C5)	2009	730,254 TPY	CD39.03		SBF to C5	Baghouse
EP39.02.01	Conveyor (C6) Limestone Mix Bin (LMB) to Feeder (LMBF)	2009	3,395,680 TPY	CD39.03		LMB to LMBF	Baghouse
EP39.02.02	Limestone Mix Feeder (LMBF) to Conveyor (C5)	2009	3,395,680 TPY	CD39.03		LMBF to C5	Baghouse
EP39.07.02	Pyrite Silo (PS) to Feeder (PSF)	2009	36,513 TPY	CD39.03		PS to PSF	Baghouse
EP39.07.03	Pyrite Silo Feeder (PSF) to Conveyor (C5)	2009	36,513 TPY	CD39.03		PSF to C5	Baghouse
EP39.08.02	Sand Silo (SS) to Feeder (SSF)	2009	182,563 TPY	CD39.03		SS to SSF	Baghouse
EP39.08.03	Sand Silo Feeder (SSF) to Conveyor (C5)	2009	182,563 TPY	CD39.03		SSF to C5	Baghouse
CD39.03	Raw Material Discharge D\C1	2009	4,238 dscfm				N/A
EP39.04.02	Shale Silo 2 (SB2) to Feeder (SB2F)	2009	730,254 TPY	CD39.04		SB2 to SB2F	Baghouse
EP39.04.03	High Silo Feeder (HSF) Shale Silo 2 Feeder (SB2F) to Conveyor (C5)	2009	730,254 TPY	CD39.04		SB2F to C5	Baghouse
CD39.04	Raw Material Discharge D\C2	2009	3,178 dscfm				N/A
EP39.05	Additive Truck (T3) to Conveyor (C6)	2009	219,076 TPY	CD39.05		T3 to C6	Baghouse
EP39.04.04	Conveyor (C6) to Conveyor (C7)	2009	219,076 TPY	CD39.05		C6 to C7	Baghouse
CD39.05	Additives Delivery System D\C	2009	29,429 dscfm				N/A
EP40.03	Split to Surge Pile (SP3)	2009		None			
EP39.06.01	Raw Mill Feed Conveyor (C5)	2009	3,651,268 TPY	CD39.06			Baghouse
CD39.06	Raw Mill Feeding D\C	2009	2,119 dscfm				N/A
EP40.01.01	RM Feed Conveyor (C5) to conveyor (C6)	2009	3,651,268 TPY	CD40.01		C5 to C6	Baghouse
EP40.01.02	Conveyor (C6) to Split (SPT4)	2009	3,651,268 TPY	CD40.01		C6 to SPT4	Baghouse
EP40.01.03	Split (SPT4) to Hopper (HP1)	2009	3,651,268 TPY	CD40.01		SPT4 to HP1	Baghouse
EP40.02.03	Bucket Elevator (BE2) to Conveyor (C6)	2009	3,651,268 TPY	CD40.01		BE2 to C6	Baghouse

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
EP40.04.01	Split (SPT4) to Raw Mill (RM1)	2009	3,651,268 TPY	CD40.01		SPT4 to RM1	Baghouse
CD40.01	Raw Mill High Zone D\C	TBD	9,005 dscfm				N/A
EP40.02.01	Conveyor (C7) to Split (SPT5)	2009	3,651,268 TPY	CD40.02		C7 to SPT5	Baghouse
EP40.02.02	Split (SPT5) to Bucket Elevator (BE2)	2009	3,651,268 TPY	CD40.02		SPT5 to BE2	Baghouse
EP40.04.02	Raw Mill (RM1) to conveyor (C8)	2009	3,651,268 TPY	CD40.02		RM1 to C8	Baghouse
EP40.02.04	Conveyor (C8) to Bucket Elevator (BE2)	2009	3,651,268 TPY	CD40.02		C8 to BE2	Baghouse
CD40.02	Raw Mill Low Zone D\C	2009	7,416 dscfm				N/A
EP40.05	Raw Meal Conveying Equipment	2009	3,651,268 TPY	CD40.05		EP40.05 to EP40.06	Baghouse
CD40.05	Raw Meal Air Slide D\C	2009	4,803 dscfm				N/A
EP40.06	Homogenizing Silo Feeding Equipment	2009	3,651,268 TPY	CD40.06		EP40.06 to EP40.07	Baghouse
CD40.06	Homogenizing Silo Feeding D\C	2009	5,297 dscfm				N/A
EP40.07	Homogenizing Silo Discharging Equipment	2009	3,651,268 TPY	CD40.07		EP40.07 to EP42.02	Baghouse
CD40.07	Homogenizing Silo Discharge D\C	2009	4,238 dscfm				N/A
CD40.08	Top of Homo Silo D\C	2010	2220 dscfm			Raw Feed to Homo Silo	N/A
EP39.07.04	Inert Raw Material Hauling to Quarry (Paved)	2011	882 VMT/year				DSWS
EP39.07.05	Inert Raw Material Hauling to Quarry (Unpaved)	2011	7,055 VMT/year				DSWS
EP39.08	Inert Raw Material Truck Dump to Pile	2011	220,460 ston/yr			Truck to Pile	None
EP39.09	Inert Raw Material Storage Pile (Within Mines)	2011	0.5 acres				PE
EP39.10	Inert Raw Material Pile Reclaim	2011	220,460 ston/yr			Pile to FEL	None
EP39.11	Inert Raw Material Dump to Primary Crusher	2011	220,460 ston/yr			FEL to Crusher	None
EP39.12.01	Hauling to Additives Unloading Bin (Paved)	2011	529 VMT/year				DSWS
EP39.12.02	Hauling to Additives Unloading Bin (Unpaved)	2011	1,058 VMT/year				DSWS
EP39.14	Additives Dump to Pile within Additives Storage Buildings	2015	314,156 TPY	None		Truck to Pile	None

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
EP39.15	Additives Storage Building (4 piles)	2015	314,156 TPY	None			None
EP39.16	Reclaim from Additives Piles	2015	314,156 TPY	None		FEL to Hopper	None
Pyroprocessing EU3							
EP42.02	Kiln Feeding Bucket Elevator D\C	2009	3,651,268 TPY	CD42.02		EP42.02 to EP42.03	Baghouse
CD42.02	Kiln Feeding Bucket Elevator D\C	2009	5,297 dscfm				N/A
EP42.03	Kiln Feed Belt	2009	3,651,268 TPY	CD42.03		EP42.03 to EP42.05	Baghouse
CD42.03	Kiln Feeding D\C1	2009	12,713 dscfm				N/A
EP42.04	Kiln System – Inline Raw Mill/PH/PC Kiln/Clinker Cooler	2009	In = 3,651,268 TPY of Kiln Feed Out = 2,212,890 TPY of Clinker	CD42.04			Baghouse
EP42.08	Kiln Bypass Baghouse DC	2009	N/A	CD42.04			Baghouse
EP41.03.01	Coal Mill	2009	292,110 TPY	CD42.04			Baghouse
CD42.04	Inline Raw Mill/PH/PC Kiln/Clinker Cooler & Bypass & Coal Mill D\C	2009	713,986 dscfm				N/A
EP42.05	Kiln Feed Belt	2009	3,651,268 TPY	CD42.05		EP42.05 to EP42.04	Baghouse
CD42.05	Kiln Feeding D\C2	2009	2,119 dscfm				N/A
EP42.01	Bypass Dust Transfer to Existing Cement Silos	2009	176,368 TPY	CD42.01			Baghouse
CD42.01	Cement Fringe Bin D/C	2009	7,662 dscfm				N/A
EP42.06	Lime Storage for Scrubber System	2009	77,161 TPY	CD42.06			Baghouse
CD42.06	Lime Storage D\C	2009	1,000 dscfm				N/A
CD42.07	Bypass Truck Spout Dedusting	2009	294 dscfm	CD42.07			N/A
EP42.07	Bypass Truck Spout Dedusting	2009	N/A	CD42.07			
Clinker Handling and Storage EU4							
EP43.05	Clinker Conveyor to big clinker silo (ClC1)	2009	2,212,890 TPY	CD43.03 CD43.21			Baghouse
CD43.03	Clinker Storage Feeding D\C	2009	7,063 dscfm				N/A

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
EP43.21	Top of Normal Clinker Silo	2013	2,212,890 TPY	CD43.21			Baghouse
CD43.21	Top of Normal Clinker Silo D/C	2013	8,000 dscfm				N/A
EP43.04	Clinker Conveyor to Clinker Silo (C1C2)	2009	2,212,890 TPY	CD43.04 CD43.19			Baghouse
CD43.04	Small Clinker Storage Feeding D\C	2009	3,178 dscfm-				N/A
EP43.19	Top of LA Clinker Silo	2013	2,212,890 TPY	CD43.19			Baghouse
CD43.19	Top of LA Clinker Silo D/C	2013	6,500 dscfm				N/A
EP43.06.01	Low alkali clinker silo (LACS) to upper conveyors UCS	2009	2,212,890 TPY	CD43.06		LACS to UCS	Baghouse
EP43.06.02	Upper conveyors (UCS) to lower conveyor (LC)	2009	2,212,890 TPY	CD43.06		UCS to LC	Baghouse
EP43.06.03	Low alkali clinker silo to lower conveyor (LC)	2009	2,212,890 TPY	CD43.06		LACS to LC	Baghouse
CD43.06	Small Clinker Storage Discharge D\C	2009	2,119 dscfm				N/A
EP43.07.01	Big clinker silo (BCS) to upper conveyor 1 (UC1)	2009	2,212,890 TPY	CD43.07		BCS to UC1	Baghouse
EP43.07.02	Big clinker silo (BCS) to upper conveyor 2 (UC2)	2009	2,212,890 TPY	CD43.07		BCS to UC2	Baghouse
EP43.07.03	Big clinker silo (BCS) to lower conveyor (LC)	2009	2,212,890 TPY	CD43.07		BCS to LC	Baghouse
EP43.07.04	Big clinker silo (BCS) to short conveyor (SC)	2009	2,212,890 TPY	CD43.07		BCS to SC	Baghouse
EP43.07.05	Short conveyor (SC) to lower conveyor (LC)	2009	2,212,890 TPY	CD43.07		SC to LC	Baghouse
CD43.07	Clinker Storage Discharge D\C	2009	2,119 dscfm				N/A
EP43.08	Upper conveyor 1 (UC1) to FM feed hoppers belt (FM FHB)	2009	2,212,890 TPY	CD43.08		UC1 to FM FHB	Baghouse
CD43.08	Finish Mill Conveying D\C1	2009	2,119 dscfm				N/A
EP43.09	Lower Conveyor (LC) to FM feed hoppers belt (FM FHB)	2009	2,212,890 TPY	CD43.09		LC to FM FHB	Baghouse
CD43.09	Finish Mill Conveying D\C2	2009	2,119 dscfm				N/A
EP43.13	Upper conveyor 2 (UC2) to FM feed hoppers belt (FM FHB)	2009	2,212,890 TPY	CD43.13		UC2 to FM FHB	Baghouse
CD43.13	Finish Mill Conveying D\C3	2009	2,119 dscfm				N/A

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
Fuel Handling EU5							
EP15.01.01	Rail Unloading (RU) to Petcoke Hopper (PH)	1966, 1972, and 2009	116,844 TPY	PE		RU to PH	None
EP15.01.02	Petcoke Hopper (PH) to feeders (PF)	1966, 1972, and 2009	116,844 TPY	PE		PH to PF	None
EP41.01.01	Petcoke feeders (PF) to conveyor (PC1)	2009	116,844 TPY	WS		PF to PC1	None
EP41.01.02	Petcoke conveyor (PC1) to split to conveyor (PC2)	2009	116,844 TPY	WS		PC1 to PC2	None
EP41.01.03	Petcoke Conveyor (PC2) to CSH Fuel Bins (FB) or pile	2009	116,844 TPY	PE		PC2 to FB	None
EP41.01.04	Coal truck unloading (TU) to storage hall (CSH)	2009	175,266 TPY	PE		TU to CSH	None
EP41.01.05	Clam bucket (CB) to coal pile (CP)	2009	175,266 TPY	PE		CB to CP	None
EP41.01.06	Pile (CP) to clam bucket (CB)	2009	292,110 TPY	PE		CP to CB	None
EP41.01.07	Clam bucket (CB) to CSH fuel bins (FB)	2009	292,110 TPY	PE		CB to FB	None
EP41.02.01	CSH Fuel Bins (FB) to feeders (FB FD)	2009	292,110 TPY	PE		FB to FB FD	None
EP41.02.02	Feeders (FB FD) to Conveyor (CM C1)	2009	292,110 TPY	WS		FB FD to CM C1	None
EP41.02.03	Conveyor (CM C1) to split to conveyor (CM C2)	2009	292,110 TPY	WS		CM C1 to CM C2	None
EP41.02.04	Conveyor (CM C2) to Coal Mill (CM)	2009	292,110 TPY	CD42.04		CM C2 to CM	Baghouse
Cement Production EU6							
EP43.14	Conveyor (FM FHB) to clinker feeding hoppers (CFH1/2) (FM 1&2)	2009	2,212,890 TPY	CD43.14		FM FHB to CFH1/2	Baghouse
EP43.15	Conveyor (FM FHB) to lower conveyor (LC2) (FM3)	2009	2,212,890 TPY	CD43.14		FM FHB to LC2	Baghouse
CD43.14	Finish Mill 1 & 2 Hoppers D\C	2009	5,297 dscfm				N/A
EP43.20	Normal Clinker Bin at Pan Conv. 73	2013	2,212,890 TPY	CD43.20			Baghouse
CD43.20	Normal Clinker Bin at Pan Conv. 73 D/C	2013	9,500 dscfm				N/A
EP43.16	Lower conveyor (LC2) to clinker feeding hopper (CFH3) (FM3)	2009	2,212,890 TPY	CD43.16		LC2 to CFH3	Baghouse
CD43.16	Finish Mill 3 Hopper D\C	2009	5,297 dscfm				N/A
EP43.17	Normal Clinker Bin-Bin Vent	2010	2,212,890 TPY	CD43.17			Baghouse

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
CD43.17	Normal Clinker Bin-Bin Vent D\C	2010	2,793 dscfm			Clinker to Clinker Bin	N/A
EP26.06.03	Gypsum/synthetic gypsum truck unloading (GTU) to storage hall (SH)	2009	150,879 TPY			GTU to SH	None
EP26.06.04	Clam bucket (CB1) to gypsum/synthetic gypsum pile (GP)	2009	150,879 TPY	PE		CB1 to GP	None
EP26.06.05	Gypsum/synthetic gypsum pile (GP) to clam bucket (CB1)	2009	150,879 TPY	PE		GP to CB1	None
EP26.06.06	Clam bucket (CB1) to gypsum/synthetic gypsum bin (GB) (FM1/2/3)	2009	150,879 TPY	PE		CB1 to GB	None
EP26.07.01	Limestone Pile (LP) to clam bucket (CB1)	2009	150,879 TPY	PE		LP to CB1	None
EP26.07.02	Clam bucket (CB1) to limestone bin (LB) (FM1/2/3)	2009	150,879 TPY	PE		CB1 to LB	None
EP27.01	Conveyor (FM FHB) to clinker hopper (CFH1/2)	2009	25,000 TPY	PE		FM FHB to CFH1/2	None
EP27.02	Clinker hopper (CFH1/2) to crane (CB1)	2009	25,000 TPY	PE		CFH1/2 to CB1	None
EP27.03	Crane (CB1) to clinker pile (CP)	2009	25,000 TPY	PE		CB1 to CP	None
EP27.04	Clinker pile (CP) to crane (CB1)	2009	25,000 TPY	PE		CP to CB1	None
EP27.05	Crane (CB1) to clinker bins (CFH1/2 & CFH3) (FM1/2/3)	2009	25,000 TPY	PE		CB1 to CFH1/2 & CFH3	None
EP27.06	Transfer to Outdoor Clinker Storage Pile	2015	55,115 TPY	None		Truck to Pile	None
EP27.07	Outdoor Clinker Storage Pile-Tarped	2015	55,115 TPY	None			None
EP27.08	Outdoor Clinker Storage Pile Reclaim	2015	55,115 TPY	None		FEL to CP	None
EP44.01	L.A. clinker bin (LACB) to FM2 conveyor (FM2C)	2009	2,212,890 TPY	CD44.01		LACB to FM2C	Baghouse
CD44.01	Finish Mill 2 Feeding System D\C1	2009	3,178 dscfm				N/A
EP44.02	Clinker bin (CB) to FM1 conveyor (FM1C)	2009	2,212,890 TPY	CD44.02		CB to FM1C	Baghouse
CD44.02	Finish Mill 1 Feeding D\C1	2009	3,178 dscfm				N/A
EP44.03	Clinker Bin (CB) to FM2 conveyor (FM2C)	2009	2,212,890 TPY	CD44.03		CB to FM2C	Baghouse
CD44.03	Finish Mill 2 Feeding D\C2	2009	2,119 dscfm				N/A
EP44.04.01	Limestone bin (LB) to FM2 conveyor (FM2C)	2009	150,879 TPY	CD44.04		LB to FM2C	Baghouse

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
EP44.04.02	Gypsum/synthetic gypsum bin (GB) to FM2 conveyor (FM2C)	2009	150,879 TPY	CD44.04		GB to FM2C	Baghouse
CD44.04	Finish Mill 2 Feeding D\C3	2009	3,178 dscfm				N/A
EP44.05.01	Limestone bin (LB) to FM1 conveyor (FM1C)	2009	150,879 TPY	CD44.05		LB to FM1C	Baghouse
EP44.05.02	Gypsum/synthetic gypsum bin (GB) to FM1 conveyor (FM1C)	2009	150,879 TPY	CD44.05		GB to FM1C	Baghouse
CD44.05	Finish Mill 1 Feeding D\C 2	2009	3,178 dscfm				N/A
EP44.06	FM1 conveyor (FM1C) to conveyor (FM1C2)	2009	1,839,600 TPY	CD44.06		FM1C to FM1C2	Baghouse
CD44.06	Finish Mill 1 Conveying D\C	2009	3,178 dscfm				N/A
EP44.07.01	Elevator (EL1) to FM1 conveyor (FM1C2)	2009	1,839,600 TPY	CD44.07 CD44.18		EL1 to FM1C2	Baghouse
EP44.07.02	FM1 Conveyor (FM1C2) to bin (FM1B)	2009	1,839,600 TPY	CD44.07 CD44.18		FM1C2 to FM1B	Baghouse
EP44.07.03	Conveyor (FM1C2) to Finish Mill 1 (FM1)	2009	1,839,600 TPY	CD44.07 CD44.18		FM1C2 to FM1	Baghouse
CD44.07	Finish Mill 1 High Zone D\C	2009	7,416 dscfm				N/A
EP44.18	Finish Mill 1 Reject Elevator High Zone	2013	1,839,600 TPY	CD44.18			Baghouse
CD44.18	Finish Mill 1 Reject Elevator High Zone D/C	2013	1,500 dscfm				N/A
EP44.08.01	Finish Mill 1 (FM1) to conveyor (FM1C3)	2009	1,839,600 TPY	CD44.08		FM1 to FM1C3	Baghouse
EP44.08.02	Bin (FM1B) to FM1 conveyor (FM1C3)	2009	1,839,600 TPY	CD44.08		FM1B to FM1C3	Baghouse
EP44.08.03	FM1 Conveyor (FM1C3) to bucket elevator (EL1)	2009	1,839,600 TPY	CD44.08		FM1C3 to EL1	Baghouse
CD44.08	Finish Mill 1 Low Zone D\C	2009	4,238 dscfm				N/A
EP44.09	Finish Mill 1	2009	1,839,600 TPY	CD44.09			Baghouse
CD44.09	Finish Mill 1 D\C	2009	76,515 dscfm				N/A
EP44.13	Finish Mill 1 Conveying	2009	1,839,600 TPY	CD44.13			Baghouse
CD44.13	Finish Mill 1 Discharge D\C	2009	2,119 dscfm				N/A
EP44.14	FM2 Conveyor (FM2C) to conveyor (FM2C2)	2009	1,839,600 TPY	CD44.14		FM2C to FM2C2	Baghouse
CD44.14	Finish Mill 2 Conveying D\C	2009	3,178 dscfm				N/A
EP44.10.01	FM2 Elevator (EL2) to conveyor (FM2C2)	2009	1,839,600 TPY	CD44.10 CD44.19		EL2 to FM2C2	Baghouse
EP44.10.02	FM2 Conveyor (FM2C2) to bin (FM2B)	2009	1,839,600 TPY	CD44.10 CD44.19		FM2C2 to FM2B	Baghouse

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
EP44.10.03	Conveyor (FM2C2) to Finish Mill 2 (FM2)	2009	1,839,600 TPY	CD44.10 CD44.19		FM2C2 to FM2	Baghouse
CD44.10	Finish Mill 2 High Zone D\C	2009	7,416 dscfm				N/A
EP44.19	Finish Mill 2 Reject Elevator High Zone	2013	1,839,600 TPY	CD44.19			Baghouse
CD44.19	Finish Mill 2 Reject Elevator High Zone D/C	2013	1,500 dscfm				N/A
EP44.11.01	Finish Mill 2 (FM2) to conveyor (FM2C3)	2009	1,839,600 TPY	CD44.11		FM2 to FM2C3	Baghouse
EP44.11.02	Bin (FM2B) to FM2 conveyor (FM2C3)	2009	1,839,600 TPY	CD44.11		FM2B to FM2C3	Baghouse
EP44.11.03	FM2 Conveyor (FM2C3) to bucket elevator (EL2)	2009	1,839,600 TPY	CD44.11		FM2C3 to EL2	Baghouse
CD44.11	Finish Mill 2 Low Zone D\C	2009	4,238 dscfm				N/A
EP44.12	Finish Mill 2	2009	1,839,600 TPY	CD44.12			Baghouse
CD44.12	Finish Mill 2 D\C	2009	76,515 dscfm				N/A
EP44.15	Finish Mill 2 conveying	2009	1,839,600 TPY	CD44.15			Baghouse
CD44.15	Finish Mill 2 Discharge D\C	2009	2,119 dscfm				N/A
EP44.17	Finish Mills Reject Bin	2011		CD44.17			Baghouse
CD44.17	Finish Mills Reject Bin D\C	2011	294 dscfm			Rejects to Reject Bin	N/A
EP44.16	Finish Mill 1/2 Air Heater	2009	19.84 MMBtu/hr	CD44.09 CD44.12			Baghouse
EP19.01Pb	No. 3 Finish Mill Separator (Existing FM10)	1965, 1986, 2009	695,243 TPY	CD19.02			Baghouse
CD19.02	Finish Mill 3 Baghouse D\C	1986, 2009	1,801 dscfm				N/A
EP19.01U	FM3 Feed bins (FM3B) to feeders (FM3F)	1965, 1986, 2009	695,243 TPY	CD19.01		FM3B to FM3F	Baghouse
EP19.01Pa.01	FM3 Feeders (FM3F) to belt conveyor 650	1965, 1986, 2009	695,243 TPY	CD19.01		FM3F to 650	Baghouse
EP19.01Pa.02	Belt conveyor 650 to FM3	1965, 1986, 2009	695,243 TPY	CD19.01		650 to FM3	Baghouse
EP19.02	Finish Mill 3	1965, 1986, 2009	695,243 TPY	CD19.01			Baghouse
CD19.01	Finish Mill 3 Norblo D\C	1986, 2009	20,000 dscfm				N/A
Shipping EU7							
EP45.01	Finish Mill 1 airslides (FM1A)	2013	1,839,600 TPY	CD45.01		FM1 to FM1A	Baghouse
CD45.01	Finish Mill 1 Airslides D\C	2013	4,620 dscfm				N/A

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
EP45.02	Finish Mill 2 airslides (FM2A)	2013	1,839,600 TPY	CD45.02		FM2 to FM2A	Baghouse
CD45.02	Finish Mill 2 airslides D\C	2013	4,620 dscfm				N/A
EP45.03	Finish Mill 1 to cement silos (CS)	2009	1,839,600 TPY	CD45.03		FM1A to CS	Baghouse
CD45.03	Cement Silos Feeding D\C1	2009	3,178 dscfm				N/A
EP45.04	Finish Mill 2 to cement silos (CS)	2009	1,839,600 TPY	CD45.04		FM2A to CS	Baghouse
CD45.04	Cement Silos Feeding D\C2	2009	3,178 dscfm				N/A
EP45.05	Cement Silo A1 & A2	2009	1,810,546 TPY	CD45.05			Baghouse
CD45.05	Cement Silo A1 & A2 D\C	2009	5,062 dscfm				N/A
EP45.06	Cement Silo B1 & B2	2009	1,810,546 TPY	CD45.06			Baghouse
CD45.06	Cement Silo B1 & B2 D\C	2009	5,062 dscfm				N/A
EP45.07	Cement Silo C1 & C2	2009	1,810,546 TPY	CD45.07			Baghouse
CD45.07	Cement Silo C1 & C2 D\C	2009	5,297 dscfm				N/A
EP45.08	Bulk lane loudout 1	2009	1,810,546 TPY	CD45.08		CS to Trucks	Baghouse
CD45.08	Truck Loudout 1 D\C	2009	3,178 dscfm				N/A
EP45.09	Bulk lane loadout 2	2009	1,810,546 TPY	CD45.09		CS to Trucks	Baghouse
CD45.09	Truck Loadout 2 D\C	2009	2,825 dscfm				N/A
EP45.10	Bulk lane loadout 3	2009	1,810,546 TPY	CD45.10		CS to Trucks	Baghouse
CD45.10	Truck Loadout 3 D\C	2009	2,825 dscfm				N/A
EP45.11	Bulk lane loadout 4	2009	1,810,546 TPY	CD45.11		CS to Trucks	Baghouse
CD45.11	Truck Loadout 4 D\C	2009	3,178 dscfm				N/A
EP45.14	Cement Analyzer	2009	1,810,546 TPY	CD45.14			Baghouse
CD45.14	Cement Analyzer D\C	2009	1,471 dscfm				N/A
EP45.15	Transfer Airslide at the Multi Cell	2010	1,810,546 TPY	CD45.15			Baghouse
CD45.15	Transfer Airslide D\C at the Multi Cell	2010	2,420 dscfm			Cement Transfer to Multi Cell	N/A
EP21.05	Middle Bank Silos 1 DC	2009	2,514,648 TPY	CD21.05			Baghouse
CD21.05	Middle Bank Silos 1 D\C	2009	4,560 dscfm				N/A
EP21.06	Middle Bank Silos 2 DC	2009	2,514,648 TPY	CD21.06			Baghouse
CD21.06	Middle Bank Silos 2 D\C	2009	4,560 dscfm				N/A
EP21.07	Middle Bank Silos 3 DC	2009	2,514,648 TPY	CD21.07			Baghouse

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
CD21.07	Middle Bank Silos 3 D\C	2009	4,560 dscfm				N/A
EP21.08	Middle Bank Silos 4 DC	2009	2,514,648 TPY	CD21.08			Baghouse
CD21.08	Middle Bank Silos 4 D\C	2009	4,560 dscfm				N/A
EP21.09	Middle Bank Silos 5 DC	2009	2,514,648 TPY	CD21.09			Baghouse
CD21.09	Middle Bank Silos 5 D\C	2009	4,560 dscfm				N/A
EP21.10	Middle Bank Bin Vent 1 - Silos Inlet	2009	2,514,648 TPY	CD21.10			Baghouse
CD21.10	Middle Bank Vent 1 D\C	2009	1,615 dscfm				N/A
EP21.11	Middle Bank Bin Vent 2 - Silos Inlet	2009	2,514,648 TPY	CD21.11			Baghouse
CD21.11	Middle Bank Vent 2 D\C	2009	1,615 dscfm				N/A
EP21.12	Middle Bank Bin Vent 3 - Silos Discharge	2013	2,514,648 TPY	CD21.12			Baghouse
CD21.12	Middle Bank Vent 3 D\C	2013	350 dscfm				N/A
EP21.13	Middle Bank Bin Vent 4 - Silos Discharge	2013	2,514,648 TPY	CD21.13			Baghouse
CD21.13	Middle Bank Vent 4 D\C	2013	350 dscfm				N/A
EP22.05	West Bank Silo #70/71	2014	2,514,648 TPY	CD22.05			Baghouse
CD22.05	West Bank Silos #70/71 D\C	2014	7,357 dscfm				N/A
EP22.06	West Bank Silo #72	2014	2,514,648 TPY	CD22.06			Baghouse
CD22.06	West Bank Silos #72 D\C	2014	7,357 dscfm				N/A
EP22.07	West Bank Silo #84	2014	2,514,648 TPY	CD22.07			Baghouse
CD22.07	West Bank Silos #84 D\C	2014	7,357 dscfm				N/A
EP22.08	West Bank Silo Loadout Spout	2014	2,514,648 TPY	CD22.08			Baghouse
CD22.08	West Bank Silos Loadout Spout	2014	3,200 dscfm				N/A
EP23.01	Packer #1 N.E.	1956, 1971, and 1997	251,465 TPY	CD23.01			Baghouse
CD23.01	N.E. Packer D\C		7,043 dscfm				N/A
EP45.12	Bulk rail loadout 1	2009	2,514,648 TPY	CD45.12			Baghouse
CD45.12	Rail Loadout 1 D\C	2009	2,750 dscfm				N/A
EP45.13	Bulk rail loadout 2	2009	2,514,648 TPY	CD45.13			Baghouse
CD45.13	Rail Loadout 2 D\C	2009	2,750 dscfm				N/A
EP46.01	Truck Loadout Silo 1	2010	1,810,546 TPY	CD46.01			Baghouse
CD46.01	Truck Loadout Silo 1 D\C	2010	3,323 dscfm				N/A

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
EP46.02	Truck Loadout Silo 2	2010	1,810,546 TPY	CD46.02			Baghouse
CD46.02	Truck Loadout Silo 2 D\C	2010	7,283 dscfm				N/A
EP46.03	Truck Loadout Silo 3	2010	1,810,546 TPY	CD46.03			Baghouse
CD46.03	Truck Loadout Silo 3 D\C	2010	2,503 dscfm				N/A
EP46.04	Truck Loadout Silo 4	2010	1,810,546 TPY	CD46.04			Baghouse
CD46.04	Truck Loadout Silo 4 D\C	2010	2,503 dscfm				N/A
EP46.05	Truck Loadout Silo 5	2010	1,810,546 TPY	CD46.05			Baghouse
CD46.05	Truck Loadout Silo 5 D\C	2010	2,354 dscfm				N/A
EP46.06	Bulk loadout 5 - Truck Loadout Silos	2010	1,810,546 TPY	CD46.06			Baghouse
CD46.06	Truck Loadout 5 D\C	2010	1,791 dscfm				N/A
EP46.07	Bulk loadout 6 - Truck Loadout Silos	2010	1,810,546 TPY	CD46.07			Baghouse
CD46.07	Truck Loadout 6 D\C	2010	1,791 dscfm				N/A
EP20.04	East Bank Silos 1	2009	695,243 TPY	CD20.04			Baghouse
CD20.04	East Bank Silos 1 D\C	2009	3,800 dscfm				N/A
EP20.05	East Bank Silos 2	2009	695,243 TPY	CD20.05			Baghouse
CD20.05	East Bank Silos 2D\C	2009	3,800 dscfm				N/A
EP20.06	East Bank Silos 3	2009	695,243 TPY	CD20.06			Baghouse
CD20.06	East Bank Silos 3D\C	2009	3,800 dscfm				N/A
EP48.01	Packhouse	2009	251,465 TPY	CD48.01			Baghouse
CD48.01	Packhouse D\C	2009	13,449 dscfm				N/A
EP45.16	Rail Transloader (50-hp diesel engine-driven)	2013	219,960 TPY	CD45.16			Baghouse
CD45.16	Rail Transloader D\C	2013	8,200 dscfm				N/A
Other Miscellaneous Sources EU8							
EP31.01	Flyash Tank #1	2009	50,293 TPY	CD31.01			Baghouse
CD31.01	Flyash Tank No.1 D\C	2009	2,401 dscfm				N/A
EP31.02	Bypass Dust Tank	2009	50,293 TPY	CD31.02			Baghouse
CD31.02	Bypass Dust Tank D\C	2009	2,401 dscfm				N/A
EP31.03	Bypass Dust silo/loadout	2009	50,293 TPY	CD31.03			Baghouse
CD31.03	Bypass Dust Loadout D\C	2009	2,943 dscfm				N/A
EP22.09	Dry Flyash Weigh Bin/Alleviator	2009	264,552 TPY	CD22.09			Baghouse

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device[1]
CD22.09	Dry Flyash Bin D\C	2009	2,750 dscfm				N/A
EP0B.01	Administrative Boiler 1	2009	1.66 MMBtu/hr	None			None
EP0B.02	Administrative Boiler 2	2009	1.66 MMBtu/hr	None			None
EP0G.01	Emergency Generator	2009	1000kw	None			None
EP0X.05	Quarry Waste pile	1972	3.1 acres	None			None
EP0X.06	New Crusher feed pile	2009	2 acres	None			None
EP03.01	Storage Bays – 5 piles	1966 and 1971	1.06 acres	PE			None
EP26.05	Gypsum/synthetic gypsum storage pile (Craneway)	2009	0.25 acre	PE			None
EP26.08	Limestone Storage pile (Craneway)	2009	0.25 acre	PE			None
EP15.04.03	Coal storage pile (Craneway)	2009	0.25 acre	PE			None
EP15.04.04	Petcoke Storage Pile (Craneway)	2009	0.25 acre	PE			None
EP14.08	Clinker stockpile (Craneway)	2009	0.1 acre	PE			None
EP25.01	Quarry Haul Roads (new crusher)	2009	4,125,933 TPY	DSWS	None	None	None
EP25.03	Quarry Haul Roads (waste)	2009	213,841 TPY	DSWS	None	None	None
EP25.04.02	Cement Shipments	2009	2,062,011 TPY	DSWS	None	None	None
EP25.05.01	Additive Trucks (unpaved)	2009	219,076 TPY	DSWS	None	None	None
EP25.05.02	Additive Trucks (paved)	2009	219,076 TPY	DSWS	None	None	None
EP25.06.01	Fuel deliveries (unpaved)	2009	175,266 TPY	DSWS	None	None	None
EP25.06.02	Fuel Deliveries (paved)	2009	175,266 TPY	DSWS	None	None	None
EP25.07	Waste Dust Trucks (unpaved)	2009	90,801 TPY	DSWS	None	None	None
EP25.08	Misc. Plant vehicles (unpaved)	2009		DSWS	None	None	None
EP25.09.01	Dry Flyash trucks (For Cement) (unpaved)	2009	50,293 TPY	DSWS	None	None	None
EP25.09.02	Dry Flyash trucks (For Cement) (paved)	2009	50,293 TPY	DSWS	None	None	None
EP25.09.03	Dry Flyash trucks (For Calciner) (unpaved)	2009	264,552 TPY	DSWS	None	None	None
EP25.09.04	Dry Flyash trucks (For Calciner) (paved)	2009	264,552 TPY	DSWS	None	None	None
EP25.10.01	Waste Dust Customer Trucks (unpaved)	2009	35,274 TPY	DSWS	None	None	None
EP25.10.02	Waste Dust Customer Trucks (paved)	2009	35,274 TPY	DSWS	None	None	None

Emission Unit ID	Emission Unit Description	Year Installed or Modified	Design or Nominal Capacity	Control Device	Associated Emissions Points		
					ID No	Transfer Description	Fugitive Dust Control System/ Control Device(1)
EP25.12	Gypsum/Synthetic Gypsum Haul Roads (paved)	2009	150,879 TPY	DSWS	None	None	None
EP25.14	Gypsum/Synthetic Gypsum Haul Road (unpaved)	2009	150,879 TPY	DSWS	None	None	None
EP25.16	Hauling Clinker to Primary Crusher (Paved)	2015	66,138 TPY	DSWS	None	None	None
EP25.17	Hauling Clinker to Primary Crusher (Unpaved)	2015	66,138 TPY	DSWS	None	None	None
EP25.18	Hauling Limestone/Clinker from Quarry to Craneway (Unpaved)	2015	132,276 TPY	DSWS	None	None	None
EP25.19	Hauling Limestone/Clinker from Quarry to Craneway (Paved)	2015	132,276 TPY	DSWS	None	None	None
EP42.06.01	Lime deliveries (unpaved)	2009	77,161 TPY	DSWS	None	None	None
EP42.06.02	Lime deliveries (paved)	2009	77,161 TPY	DSWS	None	None	None
EP50.01	Quarry Diesel Tank	2009	15,000 gal				None
EP50.02	Light Oil Tank	2009	64,500 gal				None
EP50.03	Grinding Aid Tank	2009	10,600 gal				None
EP50.04	Air Entrainment Tank	2009	5,300 gal				None
Compressor Engine							
EP0G.02	Air Compressor Engine; CI	2018 (Manufacture Date: 2004)	600 HP	None	None	None	None

Alternative Fuel Feeding System							
EP25.15	Alternative Fuel Trucks (Paved)	2015	67,593 TPY	WS			
EP41.04	Alternative Fuel Feeding System	2015	67,593 TPY	CD42.04			Baghouse
CD41.04	Alternative Fuel Feeding System D/C	2015	706 dscfm				
EP41.05	Alternative Fuel Dosing System	2015	67,593 TPY	CD42.04			Baghouse
CD41.05	Alternative Fuel Dosing System D/C	2015	1,413 dscfm				

(1) Transfer points (TP) have the same type of fugitive dust control system as the associated conveyors unless otherwise noted. Fugitive Dust Control System / Control Device abbreviations: FE = Full Enclosure, FE/FE = Full Enclosure in Building, PE = Partial Enclosure, NE = No Enclosure, WT = Water Truck, WS = Water Spray, MD = Minimization of Material Drop, DSWS = Dust Suppressant by Water Spray, DSCS = Dust Suppression by Chemical Stabilization/ Wetting, TBD = To Be Determined, TPH = Tons per hour, VMT = Vehicle Miles Traveled.

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R14-0026~~M~~O	~~April 8, 2016~~ March 27, 2018

2.0. General Conditions

2.1. Definitions

2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.

2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.

2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.

2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CAAA	Clean Air Act Amendments
CBI	Confidential Business Information
CEM	Continuous Emission Monitor
CES	Certified Emission Statement
C.F.R. *or* CFR	Code of Federal Regulations
CO	Carbon Monoxide
C.S.R. *or* CSR	Codes of State Rules
DAQ	Division of Air Quality
DEP	Department of Environmental Protection
FOIA	Freedom of Information Act
HAP	Hazardous Air Pollutant
HON	Hazardous Organic NESHAP
HP	Horsepower
lbs/hr *or* lb/hr	Pounds per Hour
LDAR	Leak Detection and Repair
m	Thousand
MACT	Maximum Achievable Control Technology
mm	Million
mmBtu/hr	Million British Thermal Units per Hour
mmft^3/hr *or* mmcf/hr	Million Cubic Feet Burned per Hour
NA *or* N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM_{10}	Particulate Matter less than 10µm in diameter
pph	Pounds per Hour
ppm	Parts per Million
PSD	Prevention of Significant Deterioration
psi	Pounds per Square Inch
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
TPY	Tons per Year
TRS	Total Reduced Sulfur
TSP	Total Suspended Particulate
USEPA	United States Environmental Protection Agency
UTM	Universal Transverse Mercator
VEE	Visual Emissions Evaluation
VOC	Volatile Organic Compounds

2.3. Permit Expiration and Renewal

2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c.
[45CSR§30-5.1.b.]

2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.
[45CSR§30-4.1.a.3.]

2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3.
[45CSR§30-6.3.b.]

2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.
[45CSR§30-6.3.c.]

2.4. Permit Actions

2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

2.5.1. This permit shall be reopened and revised under any of the following circumstances:

a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§§30-6.6.a.1.A. or B.

b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.

c. The Secretary or U.S. EPA determines that 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.

d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. Administrative Permit Amendments

2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.
[45CSR§30-6.4.]

2.7. Minor Permit Modifications

2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.
[45CSR§30-6.5.a.]

2.8. Significant Permit Modification

2.8.1. The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for permit modifications that do not qualify for minor permit modifications or as administrative amendments.
[45CSR§30-6.5.b.]

2.9. Emissions Trading

2.9.1. 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 provided for in the permit and that are in accordance with all applicable requirements.
[45CSR§30-5.1.h.]

2.10. Off-Permit Changes

2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:

a. The change must meet all applicable requirements and may not violate any existing permit term or condition.

b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.

c. The change shall not qualify for the permit shield.

d. The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.
[45CSR§30-5.8]

2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.
[45CSR§30-5.8.a.]

2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:

a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or

b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
[45CSR§30-2.39]

2.12. Reasonably Anticipated Operating Scenarios

2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.

a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.

b. The permit shield shall extend to all terms and conditions under each such operating scenario; and

c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.
[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:

a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

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

c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution Control equipment), practices, or operations regulated or required under the permit;

d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:

a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and

b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.
[45CSR§30-5.1.f.2.]

2.17. Emergency

2.17.1. 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 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.
[45CSR§30-5.7.a.]

2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.
[45CSR§30-5.7.b.]

2.17.3. The affirmative defense of emergency shall be demonstrated 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. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.
[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement.
[45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.
[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as “State-enforceable only” shall become “Federally-enforceable” requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary 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 Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.
[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof. **[45CSR§30-5.6.a.]**

2.21.2. Nothing in this permit shall alter or affect the following:

a. 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; or

b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.

c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding. **[45CSR§30-5.3.e.3.B. and 45CSR38]**

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect. **[45CSR§30-5.1.e.]**

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege. **[45CSR§30-5.1.f.4]**

2.25. Acid Deposition Control

2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.

a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.

c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.
[45CSR§30-5.1.a.2.]

3.0. Facility-Wide Requirements

3.1. Limitations and Standards

3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. **[45CSR§6-3.1.]**

3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.
[45CSR§6-3.2.]

3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). A copy of this notice is required to be sent to the USEPA, the Division of Waste Management and the Bureau for Public Health - Environmental Health.
[40 C.F.R. §61.145(b) and 45CSR34]

3.1.4. **Odor.** No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
[45CSR§4-3.1 State-Enforceable only.]

3.1.5. Reserved.

3.1.6. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.
[45CSR§11-5.2]

3.1.7. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. This report is to be submitted no later than July 1 of each year unless directed by DAQ.
[W.Va. Code § 22-5-4(a)(14)]

3.1.8. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to C.F.R. §§ 40-82.154 and 82.156.

b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to C.F.R. § 40-82.158.

c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to C.F.R. § 40-82.161.

[40 C.F.R. 82, Subpart F]

3.1.9. **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.
[40 C.F.R. 68]

3.1.10. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 45CSR§7- 3.2 (See Section 3.1.11), 3.3, 3.4, 3.5, 3.6, and 3.7. (See Section 3.1.12).
[45CSR§7-3.1., 45CSR14, R14-0026, B.3., EU1, EU2, CD45.16 (Rail Transloader) in EU7, EU8]

3.1.11. The provisions of Section 3.1.10 (45CSR§7-3.1.) shall not apply to smoke and/or particulate matter emitted from any process source operation which is less than forty (40) percent opacity for any period or periods aggregating no more than five (5) minutes in any sixty (60) minute period.
[45CSR§7-3.2., EU1, EU2, EU8]

3.1.12. No person shall cause, suffer, allow or permit visible emissions from any storage structure(s) associated with any manufacturing process(es) that pursuant to Section 3.1.15 [45CSR§7-5.1] is required to have a full enclosure and be equipped with a particulate matter control device. Compliance with this streamlined opacity limit for storage structures assures compliance with the storage structures in 40 C.F.R. 63 Subpart LLL, Section 3.1.20 (40 C.F.R. § 63.1345).
[45CSR§7-3.7., EU7, EU8]

3.1.13. Reserved.

3.1.14. Any stack serving any process source operation or air pollution control equipment on any process source operation shall contain flow straightening devices or a vertical run of sufficient length to establish flow patterns consistent with acceptable stack sampling procedures.
[45CSR§7-4.12., EU1, EU2, EU7, EU8]

3.1.15. No person shall cause, suffer, allow, or permit any manufacturing process generating fugitive particulate matter to operate that is not equipped with a system to minimize the emissions of fugitive particulate matter. To minimize means that a particulate capture or suppression system shall be installed to ensure the lowest fugitive particulate emissions reasonably achievable.
[45CSR§7-5.1., 45CSR14, R14-0026, B.3.]

3.1.16. The owner or operator of a plant shall maintain dust control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary dust suppressants shall be applied in relation to stockpiling and general material handling to prevent dust generation and atmospheric entrainment.
[45CSR§7-5.2., 45CSR14, R14-0026, B.3.]

3.1.17. Due to unavoidable malfunction of equipment, emissions exceeding those set forth in 45CSR7 may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the malfunction. In cases of major equipment failure, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.
[45CSR§7-9.1.]

3.1.18. Maintenance operations (as defined in 45CSR7) shall be exempt from the provisions of 45CSR§7-4 provided that at all times the owner or operator shall conduct maintenance operations 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 Director, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source.
[45CSR§7-10.3.]

3.1.19. If your source is an existing or new raw or finish mill, your emission limit is ten percent (10%) opacity.
[45CSR34, 40 C.F.R. §63.1343(b)(1) Table 1, Row 13, 45CSR14, R14-0026, B.10., 40 C.F.R. §60.62(c), 45CSR16, EU2 and EU6]

3.1.20. 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, raw and finish mills, and each existing raw material dryer, at a facility which is a major source subject to the provisions of 40 C.F.R. Part 63 Subpart LLL shall not cause to be discharged any gases from these affected sources which exhibit opacity in excess of ten percent.
[45CSR34, 40 C.F.R. §63.1345, 45CSR14, R14-0026, B.10., 40 C.F.R. §60.62(c), 45CSR16, EU2, EU3, EU4, EU6, EU7, CD31.01, CD31.02, CD31.03, CD22.09]

3.1.21. The compliance date for any affected existing source subject to any rule requirements that were in effect before December 20, 2006, is June 14, 1999 or startup for sources that commenced construction after March 24, 1998.
[45CSR34, 40 C.F.R. §63.1351(a)(2)]

3.1.22. *Compliance Date*. In accordance with 40 C.F.R. §63.1351(c), the compliance date for existing sources for all requirements which became effective February 12, 2013 will be September 9, 2015. The permittee shall comply with all applicable amended requirements for existing sources under 40 C.F.R. 63, Subpart LLL - "National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry" no later than September 9, 2015.

(a) *General.* The provisions in 40 C.F.R. §63.1343 apply to each kiln and any alkali bypass associated with that kiln, clinker cooler, raw material dryer, and open clinker storage pile. All D/F, HCl, and total hydrocarbon (THC) emissions limit are on a dry basis. The D/F, HCl, and THC limits for kilns are corrected to 7 percent oxygen. All THC emissions limits are measured as propane. Standards for mercury and THC are based on a rolling 30-day average. If using a CEMS to determine compliance with the HCl standard, this standard is based on a rolling 30-day average. You must ensure appropriate corrections for moisture are made when measuring flow rates used to calculate mercury emissions. The 30-day period means all operating hours within 30 consecutive kiln operating days excluding periods of startup and shutdown.

(b) *Kilns, clinker coolers, raw mills, and finish mills.* (1) The emissions limits for these sources are shown in Table 1.

Table 1 – Emissions Limits for Kilns, Clinker Coolers, Raw and Finish Mills

If your source is a (an):	And the operating mode is:	And it is located at a:	Your emissions limits are:	And the units of the emissions limit are:	The oxygen correction factor is:
1. Existing Kiln	Normal operation	Major or area source	PM[1] 0.07	lb/ton clinker	NA
			Mercury 55	lb/MM tons clinker	NA
			THC[3,4] 24	ppmvd	7 percent
2. Existing Kiln	Normal operation	Major source	HCl 3	ppmvd	7 percent
3. Existing Kiln	Startup and shutdown	Major or area source	Work practices (§63.1346(g) – Cond. 3.1.24.)	NA	NA
4. New Kiln	Normal operation	Major or area source	D/F[2] 0.2	ng/dscm (TEQ)	7 percent
6. New Kiln	Startup and shutdown	Major or area source	Work practices (§63.1346(g))	NA	NA
7. Existing clinker cooler	Normal operation	Major or area source	PM 0.07	lb/ton clinker	NA
8. Existing clinker cooler	Startup and shutdown	Major or area source	Work practices (§63.1348(b)(9) – Cond. 3.1.25.)	NA	NA

[1] The initial and subsequent PM performance tests are performed using Method 5 or 5I and consist of three test runs.
[2] If the average temperature at the inlet to the first PM control device (fabric filter or electrostatic precipitator) during the D/F performance test is 400 °F or less, this limit is changed to 0.40 ng/dscm (TEQ).
[3] Measured as propane.
[4] Any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP.

[45CSR34; 40 C.F.R. §§ 63.6(c), 63.1351(c), 63.1343(a), 63.1343(b)(1), Table 1, Rows 1, 2, 3, 4, 6, 7, and 8, and 63.9(h)(2)(i) *and* (ii); 45CSR14, R14-0026A, B.10.; EP42.04]

3.1.23. *General duty to minimize emissions.* At all times you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[45CSR34; 40 C.F.R. §63.1348(d)]

3.1.24. **Initial Compliance Requirements for Opacity for affected sources other than kilns; in-line kiln/raw mills; clinker coolers; new and reconstructed raw material dryers; and raw and finish mills, and open clinker piles.** If you are subject to the limitations on opacity under 40 C.F.R. §63.1345 (condition 3.1.20.), you must demonstrate initial compliance with the opacity emissions standards by using the performance test methods and procedures in 40 C.F.R. §63.1349(b)(2) (condition 3.3.3.(2)). The maximum 6-minute average opacity exhibited during the performance test period must be used to determine whether the affected source is in initial compliance with the standard.
[45CSR34; 40 C.F.R. §63.1348(a)(2)]

3.1.25. **Initial Compliance Requirements for D/F.**

(i) If you are subject to limitations on D/F emissions under 40 C.F.R. §63.1343(e) (condition 4.1.5.(b)), you must demonstrate initial compliance with the D/F emissions standards by using the performance test methods and procedures in 40 C.F.R. §63.1349(b)(3) (condition 3.3.3.(3)). The owner or operator of a kiln with an in-line raw mill must demonstrate initial compliance by conducting separate performance tests while the raw mill is operating and the raw mill is not operating. The D/F concentration must be determined for each run and the arithmetic average of the concentrations measured for the three runs must be calculated to determine compliance.

(ii) If you are subject to a D/F emission limitation under 40 C.F.R. §63.1343(e) (condition 4.1.5.(b)), you must demonstrate initial compliance with the temperature operating limits specified in 40 C.F.R. §63.1346 by using the performance test methods and procedures in 40 C.F.R. §63.1349(b)(3)(ii) through (b)(3)(iv) (conditions 3.3.3.(3)(i) through (iv)). The average of the run temperatures will determine the applicable temperature limit.

[45CSR34; 40 C.F.R. §63.1348(a)(3)]

3.1.26. During periods of startup and shutdown you must meet the requirements listed in (1) through (4) of this condition.

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

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

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

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

[45CSR34; 40 C.F.R. §63.1346(g)]

3.1.27. *Startup and Shutdown Compliance.* All dry sorbent and activated carbon systems that control hazardous air pollutants must be turned on and operating at the time the gas stream at the inlet to the baghouse or ESP reaches 300 degrees Fahrenheit (five minute average) during startup. Temperature of the gas stream is to be measured at the inlet of the baghouse or ESP every minute. Such injection systems can be turned off during shutdown. Particulate control and all remaining devices that control hazardous air pollutants should be operational during startup and shutdown.
[45CSR34; 40 C.F.R. §63.1348(b)(9)]

3.2. Monitoring Requirements

3.2.1. The owner or operator of each portland cement plant shall prepare for each affected source subject to the provisions of 40 C.F.R. Part 63 Subpart LLL, a written operations and maintenance plan. The affected sources are the Raw Material Preparation (EU2), the Pyroprocessing (EU3), the Clinker Handling and Storage (EU4), the Cement Production (EU6), the Shipping (EU7), and the Other Miscellaneous Sources (EU8). The plan shall be submitted to the Administrator for review and approval as part of the application for a part 70 permit and shall include the following information:

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

(2) Corrective actions to be taken when required by Section 3.2.4 [40 C.F.R. §63.1350(f)(3)];

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

Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 C.F.R. §63.1347 is a violation of the standard.

[45CSR34; 40 C.F.R. §§ 63.1347(a) and (b)]

(4) Procedures to be used to periodically monitor affected sources subject to opacity standards under Section 3.1.20 [40 C.F.R. §63.1345]. Such procedures must include the provisions of Section 3.2.1 (4) (i) through (vii) [40 C.F.R. §§ 63.1350(f)(1)(i) through (f)(1)(vii)].

(i) The owner or operator must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to 40 C.F.R part 60 of Chapter I of Title 40. The test must be conducted while the affected source is in operation.

(ii) If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintains that schedule until no visible emissions are observed in six consecutive monthly tests.

(iii) If no visible emissions are observed during the semi-annual test for any affected source, the owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and maintains that schedule until no visible emissions are observed in six consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 test, the owner or operator must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of appendix A to part 60 of Chapter I of Title 40. The Method 9 test must begin within one hour of any observation of visible emissions.

(v) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

(vi) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the portland cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of Section 3.2.1 (4) (i) through (4) (iv) [40 C.F.R. §§ 63.1350(f)(1)(i) through (f)(1)(iv)] for each such conveying system transfer point located within the building, or for the building itself, according to Section 3.2.1 (4) (vii) [40 C.F.R. §63.1350(f)(1)(vii)].

(vii) If visible emissions from a building are monitored, the requirements of Section 3.2.1 (4) (i) through (iv) [40 C.F.R. §§63.1350(f)(1)(i) through (f)(1)(iv)] apply to the monitoring of the building, and you must also test visible emissions from each side, roof and vent of the building for at least 10 minutes.

[45CSR34, 40 C.F.R. §63.1350(f)(1), 45CSR14, R14-0026, B.10., EU2, EU3, EU4, EU6, EU7, EU8]

3.2.2. The PH/PC kiln, clinker cooler, and in-line raw mill vent to a common baghouse; the PH/PC kiln alkali bypass gas vents to its own separate baghouse; and the coal mill also vents to its own baghouse. All three of these baghouses then vent to a common main stack. The common main stack will house all applicable CEM devices.

Continuous Compliance for Opacity
If you are subject to the limitations on opacity under 40 C.F.R. §63.1345 (condition 3.1.19.), you must demonstrate continuous compliance with the opacity emissions standards by using the monitoring methods and procedures in 40 C.F.R. §63.1350(f) based on the maximum 6-minute average opacity exhibited during the performance test period. You must initiate corrective actions within one hour of detecting visible emissions above the applicable limit.

(ii) *COMS.* If you install a COMS in lieu of conducting the daily visible emissions testing, you must demonstrate continuous compliance by operating and maintaining the COMS such that it meets the requirements of 40 C.F.R. §63.1350(f)(4)(i).

If the owner or operator chooses to install a COMS in lieu of conducting the daily visual emissions testing required under paragraph (f)(2) of 40 C.F.R. §63.1350, then the COMS must be installed at the outlet of the PM control device of the raw mill or finish mill and the COMS must be installed, maintained, calibrated, and operated as required by the general provisions in subpart A of 40 C.F.R. part 63 and according to PS–1 of appendix B to 40 C.F.R. part 60.

[45CSR§30-12.7., 45CSR34, 40 C.F.R. §§ 63.1348(b)(3), 63.1348(b)(3)(i) and 63.1350(f)(4)(i), 40 C.F.R. §60.64(b)(4), 45CSR16, 45CSR14, R14-0026, B.10., CD44.09, CD44.12]

3.2.3. Reserved.

3.2.4. 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 particulate matter control devices (PMCD) of these affected sources in accordance with the procedures of Method 22 of appendix A-7 to part 60 of chapter I of Title 40. The duration of the Method 22 test shall be 6 minutes.

(1) Within 24 hours of the end of the Method 22 performance test in which visible emissions were observed, the owner or operator must conduct a follow up Method 22 performance test of each stack from which visible emissions were observed during the previous Method 22 performance test.

(2) If visible emissions are observed during the follow-up Method 22 performance test required by condition 3.2.4.(1) from any stack from which visible emissions were observed during the previous Method 22 performance test required by condition 3.2.4., you must conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 performance test in accordance with Method 9 of appendix A–4 to 40 CFR part 60. The duration of the Method 9 test must be 30 minutes.

Corrective actions. If visible emissions are observed during any Method 22 visible emissions test conducted under paragraphs (f)(1) or (f)(2) of §63.1350, you must initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan provisions in §63.1347.

[45CSR34, 40 C.F.R. § 63.1350(f)(2)(i), (ii), and (iii), §63.1350(f)(3), 40 C.F.R. §60.64(b)(4), 45CSR16, 45CSR14, R14-0026, B.10., EU2 and EU6]

3.2.5. If you are subject to an emissions limitation on D/F emissions, you must comply with the monitoring requirements of paragraphs 3.2.5.(1) through 3.2.5.(5) and paragraphs (m)(1) through (m)(4) of §63.1350 (condition 3.2.17.) to demonstrate continuous compliance with the D/F emissions standard. You must also develop an emissions monitoring plan in accordance with paragraphs (p)(1) through (p)(4) of §63.1350 (condition 3.2.15.).

(1) You must 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, coal mill, and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill, coal mill, and/or alkali bypass PM control devices.

(i) The temperature recorder response range must include zero and 1.5 times the average temperatures established according to the requirements in Section 3.3.3 (3) (iv) [40 C.F.R. § 63.1349 (b) (3) (iv)].

(ii) The calibration reference for the temperature measurement must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

(iii) The calibration of all thermocouples and other temperature sensors must be verified at least once every three months.

(2) You must monitor and continuously record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill, coal mill, and alkali bypass, if applicable, at the inlet to the kiln, in-line kiln/raw mill, coal mill, and/or alkali bypass PMCD.

(3) The required minimum data collection frequency must be one minute.

(4) Each hour, calculate the three-hour average temperature for the previous 3 hours of process operation using all of the one-minute data available (*i.e.*, the CMS is not out-of-control.)

(5) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average temperature must begin anew, without considering previous recordings.

[45CSR34, 40 C.F.R. §63.1350(g), 45CSR14, R14-0026, B.10., EP42.04]

3.2.6. Reserved.

3.2.7. If you are subject to a limitation on opacity under §63.1345 (condition 3.1.20.), you must conduct required emissions monitoring in accordance with the provisions of paragraphs (1)(i) through (1)(vii) of this condition and in accordance with the operation and maintenance plan developed in accordance with §63.1347 (condition 3.2.1.). You must conduct emissions monitoring in accordance with paragraphs (2)(i) through (2)(iii) of this condition and in accordance with the operation and maintenance plan developed in accordance with 40 C.F.R. §63.1347(a) (condition 3.2.1.). You must also develop an opacity emissions monitoring plan in accordance with paragraphs (p)(1) through (p)(4) of 40 C.F.R. §63.1350 (condition 3.2.15.).

(1)(i) You must conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of appendix A–7 to part 60 of Chapter I of Title 40. The performance test must be conducted while the affected source is in operation.

(ii) If no visible emissions are observed in six consecutive monthly tests for any affected source, the owner or operator may decrease the frequency of performance testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, you must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iii) If no visible emissions are observed during the semi-annual test for any affected source, you may decrease the frequency of performance testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual performance test, the owner or operator must resume performance testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(iv) If visible emissions are observed during any Method 22 performance test, of appendix A–7 to part 60 of Chapter I of Title 40, you must conduct five 6-minute averages of opacity in accordance with Method 9 of appendix A–4 to part 60 of Chapter I of Title 40. The Method 9 performance test, of appendix A–4 to part 60 of Chapter I of Title 40, must begin within 1 hour of any observation of visible emissions.

(v) The requirement to conduct Method 22 visible emissions monitoring under this paragraph do not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. “Totally enclosed conveying system transfer point” must mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

(vi) If any partially enclosed or unenclosed conveying system transfer point is located in a building, you must have the option to conduct a Method 22 performance test, of appendix A–7 to part 60 of Chapter I of Title 40, according to the requirements of paragraphs (1)(i) through (1)(iv) of this condition for each such conveying system transfer point located within the building, or for the building itself, according to paragraph (1)(vii) of this condition.

(vii) If visible emissions from a building are monitored, the requirements of paragraphs (i) through (iv) of this condition apply to the monitoring of the building, and you must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

(2)(i) For a raw mill or finish mill, you must monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator particulate matter control devices (PMCD) of these affected sources in accordance with the procedures of Method 22 of appendix A–7 to part 60 of Chapter I of Title 40. The duration of the Method 22 performance test must be 6 minutes.

(ii) Within 24 hours of the end of the Method 22 performance test in which visible emissions were observed, the owner or operator must conduct a follow up Method 22 performance test of each stack from which visible emissions were observed during the previous Method 22 performance test.

(iii) If visible emissions are observed during the follow-up Method 22 performance test required by paragraph (1)(ii) of this condition from any stack from which visible emissions were observed during the previous Method 22 performance test required by paragraph (1)(i) of this condition, you must conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 performance test in accordance with Method 9 of appendix A–4 to part 60 of Chapter I of Title 40. The duration of the Method 9 test must be 30 minutes.

[45CSR34, 40 C.F.R. §§ 63.1350(f)(1)(i) through (vii) and (f)(2)(i) through (iii), 40 C.F.R. §60.64(b)(3), 45CSR16, 45CSR14, R14-0026, B.10., EU2, EU3, EU4, EU6, EU7, CD31.01, CD31.02, CD31.03, CD22.09]

3.2.8. Reserved.

3.2.9. You may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of 40 C.F.R Part 63 Subpart LLL subject to the provisions of Section 3.2.9. (1) through (6) [40 C.F.R. §§ 63.1350(o)(1) through (o)(6)].

(1) The Administrator will not approve averaging periods other than those specified in this section, unless the owner or operator documents, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved during the performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.

(2) If the application to use an alternate monitoring requirement is approved, you must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.

(3) You must submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in Section 3.2.9. (3) (i) through (3) (iii) [40 C.F.R. §§ 63.1350(o) (3) (i) through (o) (3) (iii)]:

(i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach;

(ii) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculated; and

(iii) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.

(4) The Administrator will notify you of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide:

(i) Notice of the information and findings upon which the intended disapproval is based; and

(ii) Notice of opportunity for you to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for you to provide additional supporting information.

(5) You are responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator's failure to approve or disapprove the application relieves you of the responsibility to comply with any provision of 40 C.F.R. Part 63 Subpart LLL.

(6) The Administrator may decide at any time, on a case-by-case basis that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of 40 C.F.R. Part 63 Subpart LLL.

[45CSR34, 40 C.F.R. §63.1350(o), 40 C.F.R. §60.64(b)(4), 45CSR16, EU2, EU3, EU4, EU6, EU7, CD31.01, CD31.02, CD31.03, CD22.09]

3.2.10. The requirements under paragraph (f)(2) of §63.1350 (condition 3.2.7.(2)) to conduct daily Method 22 testing do not apply to any specific raw mill or finish mill equipped with a continuous opacity monitoring system (COMS) or bag leak detection system (BLDS).

(i) If the owner or operator chooses to install a COMS in lieu of conducting the daily visual emissions testing required under paragraph (f)(2) of §63.1350 (condition 3.2.7.(2)), then the COMS must be installed at the outlet of the PM control device of the raw mill or finish mill and the COMS must be installed, maintained, calibrated, and operated as required by the general provisions in 40 CFR 63 subpart A and according to PS–1 of appendix B to 40 CFR part 60.

(ii) If you choose to install a BLDS in lieu of conducting the daily visual emissions testing required under paragraph (f)(2) of §63.1350 (condition 3.2.7.(2)), the requirements in paragraphs (m)(1) through (m)(4), (m)(10) and (m)(11) of 40 CFR §63.1350 apply.

[45CSR34, 40 C.F.R. §63.1350(f)(4), 40 C.F.R. §60.64(b)(4), 45CSR16, 45CSR14, R14-0026, B.10., EU2 and EU6]

3.2.11. Reserved.

3.2.12. The permittee shall conduct monitoring/Record Keeping/reporting as follows. [Not required for open stockpiles, haulroads and emission sources regulated by 40 C.F.R. Part 63 Subpart LLL.]

a. Visible emission observations shall be conducted weekly for fugitive particulate emission activities identified in Section 1.0 by a certified Method 9 observer during periods of normal operation for a sufficient time interval (but no less than 1 minute) to determine if any of the emission units listed above or emission points have visible emissions and if so, the opacity of the emissions. If any of the emission units listed above or emission points have visible emissions exceeding the regulatory limit of twenty percent (20%) opacity, then a 45CSR7A evaluation shall be conducted immediately

after the violation of the regulatory limit unless the permittee can demonstrate a valid reason that the time frame should be extended. A 45CSR7A evaluation shall not be required if the condition resulting in the excess visible emissions is corrected within 24 hours and the units are operated at normal operating conditions.

b. A record of each visible emissions observation shall be maintained, including any data required by 40 C.F.R. 60 Appendix A, Method 22 or 45CSR7A, whichever is appropriate. The record shall include, at a minimum, the date, time, name of the emission unit, the applicable visible emissions requirement, the results of the observation, and the name of the observer. Records shall be maintained on site for a period of no less than five (5) years stating any maintenance or corrective actions taken as a result of the weekly inspections, and the times the fugitive dust control system(s) are inoperable and any corrective actions taken.

[45CSR§30-5.1.c.]

3.2.13. The permittee shall conduct weekly visible emission observations on all dust collectors and the permittee shall maintain instrumentation on all dust collectors for pressure drop observations. The permittee shall maintain records of the maintenance performed on each baghouse. These records shall include all maintenance work performed on each dust collector including the frequency of bag/filter change outs. Records shall state the date and time of each dust collector inspection, the inspection results, and corrective action taken, if any.
[45CSR§30-5.1.c.]

3.2.14. The permittee shall maintain daily records indicating the use of any dust suppressants or any other suitable dust controls measures applied at the facility. The permittee shall also inspect all fugitive dust control systems weekly from May 1 through September 30 and monthly from October 1 through April 30 to ensure that they are operated and maintained in conformance with their designs. The permittee shall maintain records of all scheduled and non-scheduled maintenance and shall state any maintenance or corrective actions taken as a result of the weekly and/or monthly inspections, the times the fugitive dust control system(s) were inoperable and any corrective actions taken.
[45CSR§30-5.1.c.]

3.2.15. ***Development and submittal (upon request) of monitoring plans***. If you demonstrate compliance with any applicable emission limit through performance stack testing or other emissions monitoring, you must develop a site-specific monitoring plan according to the requirements in paragraphs (1) through (4) of this condition. This requirement also applies to you if you petition the EPA Administrator for alternative monitoring parameters under paragraph (n) of 40 C.F.R. §63.1350 and §63.8(f). If you use a BLDS, you must also meet the requirements specified in paragraph (p)(5) of §63.1350.

(1) For each continuous monitoring system (CMS) required in 40 C.F.R. §63.1350, you must develop, and submit to the permitting authority for approval upon request, a site-specific monitoring plan that addresses paragraphs (1)(i) through (iii) of this condition. You must submit this site-specific monitoring plan, if requested, at least 60 days before your initial performance evaluation of your CMS.

(i) Installation of the CMS sampling probe or other interface at a measurement location relative to each affected process unit such that the measurement is representative of control of the exhaust emissions (e.g., on or downstream of the last control device);

(ii) Performance and equipment specifications for the sample interface, the pollutant concentration or parametric signal analyzer, and the data collection and reduction systems; and

(iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations).

(2) In your site-specific monitoring plan, you must also address paragraphs (2)(i) through (iii) of this condition.

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of 40 C.F.R. §§63.8(c)(1), (c)(3), and (c)(4)(ii);

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of 40 C.F.R. §63.8(d); and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 C.F.R. §§63.10(c), (e)(1), and (e)(2)(i).

(3) You must conduct a performance evaluation of each CMS in accordance with your site-specific monitoring plan.

(4) You must operate and maintain the CMS in continuous operation according to the site-specific monitoring plan.

Note: Refer to Appendix A for the Site Specific Monitoring Plan.

[40 C.F.R. §§63.1350(p)(1) through (4); 45CSR34; 40 C.F.R. §60.64(b)(4); 45CSR16]

3.2.16. ***Continuous emissions rate monitoring system***. You must install, operate, calibrate, and maintain instruments, according to the requirements in paragraphs (1) and (2) of this condition, for continuously measuring and recording the pollutant per mass flow rate to the atmosphere from sources subject to an emissions limitation that has a pounds per ton of clinker unit.

(1) You must install each sensor of the flow rate monitoring system in a location that provides representative measurement of the exhaust gas flow rate at the sampling location of the mercury or PM CEMS, taking into account the manufacturer's recommendations. The flow rate sensor is that portion of the system that senses the volumetric flow rate and generates an output proportional to that flow rate.

(2) The flow rate monitoring system must be designed to measure the exhaust flow rate over a range that extends from a value of at least 20 percent less than the lowest expected exhaust flow rate to a value of at least 20 percent greater than the highest expected exhaust flow rate.

(3) The flow rate monitoring system must have a minimum accuracy of 5 percent of the flow rate or greater.

(4) The flow rate monitoring system must be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in paragraph (1) of this condition.

(5) The signal conditioner, wiring, power supply, and data acquisition and recording system for the flow rate monitoring system must be compatible with the output signal of the flow rate sensors used in the monitoring system.

(6) The flow rate monitoring system must be designed to complete a minimum of one cycle of operation for each successive 15-minute period.

(7) The flow rate sensor must have provisions to determine the daily zero and upscale calibration drift (CD) (*see* sections 3.1 and 8.3 of Performance Specification 2 in appendix B to 40 CFR Part 60 for a discussion of CD).

(i) Conduct the CD tests at two reference signal levels, zero (e.g., 0 to 20 percent of span) and upscale (e.g., 50 to 70 percent of span).

(ii) The absolute value of the difference between the flow monitor response and the reference signal must be equal to or less than 3 percent of the flow monitor span.

(8) You must perform an initial relative accuracy test of the flow rate monitoring system according to Section 8.2 of Performance Specification 6 of appendix B to 40 CFR Part 60 with the exceptions in paragraphs (8)(i) and (8)(ii) of this condition.

(i) The relative accuracy test is to evaluate the flow rate monitoring system alone rather than a continuous emission rate monitoring system.

(ii) The relative accuracy of the flow rate monitoring system shall be no greater than 10 percent of the mean value of the reference method data.

(9) You must verify the accuracy of the flow rate monitoring system at least once per year by repeating the relative accuracy test specified in paragraph (8) of this condition.

(10) You must operate the flow rate monitoring system and record data during all periods of operation of the affected facility including periods of startup, shutdown, and malfunction, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments).

[40 C.F.R. §§63.1350(n)(1) through (10); 45CSR34]

3.2.17. ***Parameter monitoring requirements***. If you have an operating limit that requires the use of a CMS, you must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the procedures in paragraphs (m)(1) through (4) of 40 C.F.R. §63.1350 by the compliance date specified in 40 C.F.R. §63.1351. You must also meet the applicable specific parameter monitoring requirements in 40 C.F.R. §§63.1350(m)(5) through (m)(11) that are applicable to you.

(1) The CMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data.

(2) You must conduct all monitoring in continuous operation at all times that the unit is operating.

(3) Determine the 3-hour block average of all recorded readings.

(4) Record the results of each inspection, calibration, and validation check.

[40 C.F.R. §§63.1350(m)(1) through (4); 45CSR34; 40 C.F.R. §60.64(b)(4); 45CSR16]

3.3. Testing Requirements

3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary or his duly authorized representative may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted

in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:

a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.

b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.

c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.

d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

1. The permit or rule evaluated, with the citation number and language.

2. The result of the test for each permit or rule condition.

3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(14-15) and 45CSR13]

3.3.2. Performance test results must be documented in complete test reports that contain the information required by paragraphs (1) through (10) of this condition, as well as all other relevant information. As described in 40 C.F.R. §63.7(c)(2)(i), the site-specific plan to be followed during performance testing must be made available to the Administrator prior to testing, if requested.

(1) A brief description of the process and the air pollution control system;

(2) Sampling location description(s);

(3) A description of sampling and analytical procedures and any modifications to standard procedures;

(4) Test results;

(5) Quality assurance procedures and results;

(6) Records of operating conditions during the test, preparation of standards, and calibration procedures;

(7) Raw data sheets for field sampling and field and laboratory analyses;

(8) Documentation of calculations;

(9) All data recorded and used to establish parameters for monitoring; and

(10) Any other information required by the performance test method.

[45CSR34, 40 C.F.R. §63.1349(a), 45CSR14, R14-0026, B.10., EU2, EU3, EU4, EU6, EU7, CD31.01, CD31.02, CD31.03, CD22.09]

3.3.3. (1) The owner or operator of a kiln and clinker cooler subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test using Method 5 or Method 5I at appendix A-3 to part 60 of this chapter. You must also monitor continuous performance through use of a PM continuous parametric monitoring system (PM CPMS). Compliance must be demonstrated as specified in Section 3.3.3 (1) (i) through (1) (ix) [40 C.F.R. §§ 63.1349 (b) (1) (i) through (b) (1) (ix)].

(i) For your PM CPMS, you will establish a site-specific operating limit. If your PM performance test demonstrates your PM emission levels to be below 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test, the milliamp or digital equivalent of zero output from your PM CPMS, and the average PM result of your compliance test to establish your operating limit. If your PM compliance test demonstrates your PM emission levels to be at or above 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test to establish your operating limit. You will use the PM CPMS to demonstrate continuous compliance with your operating limit. You must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(A) Your PM CPMS must provide a 4-20 milliamp or digital signal output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps or the monitors digital equivalent.

(B) Your PM CPMS operating range must be capable of reading PM concentrations from zero to a level equivalent to three times your allowable emission limit. If your PM CPMS is an auto-ranging instrument capable of multiple scales, the primary range of the instrument must be capable of reading PM concentration from zero to a level equivalent to three times your allowable emission limit.

(C) During the initial performance test or any such subsequent performance test that demonstrates compliance with the PM limit, record and average all milliamp or digital output values from the PM CPMS for the periods corresponding to the compliance test runs (*e.g.*, average all your PM CPMS output values for three corresponding Method 5I test runs).

(ii) Determine your operating limit as specified in paragraphs (b)(1)(iii) through (iv) of this section. If your PM performance test demonstrates your PM emission levels to be below 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test, the milliamp or digital equivalent of zero output from your PM CPMS, and the average PM result of your compliance test to establish your operating limit.

If your PM compliance test demonstrates your PM emission levels to be at or above 75 percent of your emission limit you will use the average PM CPMS value recorded during the PM compliance test to establish your operating limit. You must verify an existing or establish a new operating limit after each repeated performance test. You must repeat the performance test at least annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

(iii) If the average of your three Method 5 or 5I compliance test runs is below 75 percent of your PM emission limit, you must calculate an operating limit by establishing a relationship of PM CPMS signal to PM concentration using the PM CPMS instrument zero, the average PM CPMS values corresponding to the three compliance test runs, and the average PM concentration from the Method 5 or 5I compliance test with the procedures in (b)(1)(iii)(A) through (D) of this section.

(A) Determine your PM CPMS instrument zero output with one of the following procedures:

(1) Zero point data for in-situ instruments should be obtained by removing the instrument from the stack and monitoring ambient air on a test bench.

(*2*) Zero point data for extractive instruments should be obtained by removing the extractive probe from the stack and drawing in clean ambient air.

(3) The zero point may also be established by performing manual reference method measurements when the flue gas is free of PM emissions or contains very low PM concentrations (*e.g.*, when your process is not operating, but the fans are operating or your source is combusting only natural gas) and plotting these with the compliance data to find the zero intercept.

(4) If none of the steps in paragraphs (b)(1)(iii)(A)(*1*) through (*3*) of this section are possible, you must use a zero output value provided by the manufacturer.

(B) Determine your PM CPMS instrument average in milliamps or digital equivalent, and the average of your corresponding three PM compliance test runs, using equation 3.

$$\bar{x} = \frac{1}{n}\sum_{i=1}^{n} X_1 \,, \bar{y} = \frac{1}{n}\sum_{i=1}^{n} Y_1 \qquad \text{(Eq. 3)}$$

Where:

X_1 = The PM CPMS data points for the three runs constituting the performance test.

Y_1 = The PM concentration value for the three runs constituting the performance test.

n = The number of data points.

(C) With your instrument zero expressed in milliamps or a digital value, your three run average PM CPMS milliamp or digital signal value, and your three run PM compliance test average, determine a relationship of lb/ton-clinker per milliamp or digital signal value with Equation 4.

$$R = \frac{Y_1}{(X_1 - z)} \qquad \text{(Eq. 4)}$$

Where:

R = The relative lb/ton-clinker per milliamp or digital equivalent for your PM CPMS.

Y_1 = The three run average lb/ton-clinker PM concentration.

X_1 = The three run average milliamp or digital equivalent output from your PM CPMS.

z = The milliamp or digital equivalent of your instrument zero determined from (b)(1)(iii)(A).

(D) Determine your source specific 30-day rolling average operating limit using the lb/ton-clinker per milliamp or digital signal value from Equation 4 in Equation 5, below. This sets your operating limit at the PM CPMS output value corresponding to 75 percent of your emission limit.

$$O_1 = z + \frac{0.75(L)}{R} \qquad \text{(Eq. 5)}$$

Where:

O_l = The operating limit for your PM CPMS on a 30-day rolling average, in milliamps or the digital equivalent.

L = Your source emission limit expressed in lb/ton clinker.

z = Your instrument zero in milliamps, or digital equivalent, determined from (b)(1)(iii)(A).

R = The relative lb/ton-clinker per milliamp, or digital equivalent, for your PM CPMS, from Equation 4.

(iv) If the average of your three PM compliance test runs is at or above 75 percent of your PM emission limit you must determine your operating limit by averaging the PM CPMS milliamp or digital equivalent output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using Equation 6.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_i \qquad \text{(Eq. 6)}$$

Where:

X_i = The PM CPMS data points for all runs i.

n = The number of data points.

O_h = Your site specific operating limit, in milliamps or the digital equivalent.

(v) To determine continuous operating compliance, you must record the PM CPMS output data for all periods when the process is operating, and use all the PM CPMS data for

calculations when the source is not out-of-control. You must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps or the digital equivalent) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 7 to determine the 30 kiln operating day average.

$$30 kiln\ operating\ day = \frac{\sum_{i=1}^{n} Hpv_i}{n} \qquad \text{(Eq. 7)}$$

Where:

H_{pvi} = The hourly parameter value for hour i.

n = The number of valid hourly parameter values collected over 30 kiln operating days.

(vi) For each performance test, conduct at least three separate test runs each while the mill is on and the mill is off, under the conditions that exist when the affected source is operating at the level reasonably expected to occur. Conduct each test run to collect a minimum sample volume of 2 dscm for determining compliance with a new source limit and 1 dscm for determining compliance with an existing source limit. Calculate the time weighted average of the results from three consecutive runs, including applicable sources as required by (b)(1)(viii), to determine compliance. You need not determine the particulate matter collected in the impingers ("back half") of the Method 5 or Method 5I particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes.

(vii) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp value or digital equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digital equivalent signals corresponding to each PM compliance test run.

(viii) When there is an alkali bypass and/or an inline coal mill with a separate stack associated with a kiln, the main exhaust and alkali bypass and/or inline coal mill must be tested simultaneously and the combined emission rate of PM from the kiln and alkali bypass and/or inline coal mill must be computed for each run using Equation 8 of this section.

$$E_{Cm} = \frac{E_K + E_B + E_C}{P} \qquad \text{(Eq. 8)}$$

Where:

E_{Cm} = Combined hourly emission rate of PM from the kiln and bypass stack and/or inline coal mill, lb/ton of kiln clinker production.

E_K = Hourly emissions of PM emissions from the kiln, lb.

E_B = Hourly PM emissions from the alkali bypass stack, lb.

E_C = Hourly PM emissions from the inline coal mill stack, lb.

P = Hourly clinker production, tons.

(ix) The owner or operator of a kiln with an in-line raw mill and subject to limitations on PM emissions shall demonstrate initial compliance by conducting separate performance tests while the raw mill is under normal operating conditions and while the raw mill is not operating, and calculate the time weighted average emissions. The operating limit will then be determined using 63.1349(b)(1)(i) of this section.

(2) *Opacity tests.* If you are subject to limitations on opacity under 40 C.F.R. 63 Subpart LLL, you must conduct opacity tests in accordance with Method 9 of appendix A–4 to part 60 of Chapter I of Title 40. The duration of the Method 9 performance test must be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of paragraphs (2)(i) through (2)(ii) of this condition. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.

(i) There are no individual readings greater than 10 percent opacity;

(ii) There are no more than three readings of 10 percent for the first 1-hour period.

(3) *D/F emissions tests.* If you are subject to limitations on D/F emissions under 40 C.F.R. 63 Subpart LLL, you must conduct a performance test using Method 23 of appendix A–7 to part 60 of Chapter I of Title 40. The owner or operator of a kiln or in-line kiln/raw mill equipped with an alkali bypass must conduct simultaneous performance tests of the kiln or in-line kiln/raw mill exhaust and the alkali bypass. However, the owner or operator of an in-line kiln/raw mill may conduct a performance test of the alkali bypass exhaust when the raw mill of the in-line kiln/raw mill is operating or not operating.

(i) Each performance test must consist of three separate runs conducted under representative conditions. The duration of each run must be at least 3 hours, and the sample volume for each run must be at least 2.5 dscm (90 dscf).

(ii) The temperature at the inlet to the kiln or in-line kiln/raw mill PMCD, and where applicable, the temperature at the inlet to the alkali bypass PMCD, must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report.

(iii) Average temperatures must be calculated for each run of the performance test.

(iv) The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with 40 C.F.R. §63.1346(b).

(4) *THC emissions tests.* If you are subject to limitations on THC emissions, you must operate a CEMS in accordance with the requirements in §63.1350(i). For the purposes of conducting the accuracy and quality assurance evaluations for CEMS, the THC span value (as propane) is 50 ppmvw and the reference method (RM) is Method 25A of appendix A to part 60 of this chapter.

(5) *Mercury Emissions Tests.* If you are subject to limitations on mercury emissions, you must operate a mercury CEMS or a sorbent trap monitoring system in accordance with the requirements of §63.1350(k). The initial compliance test must be based on the first 30 kiln operating days in which the affected source operates using a mercury CEMS or a sorbent trap monitoring system after the compliance date of the rule. See §63.1348(a).

(i) If you are using a mercury CEMS or a sorbent trap monitoring system, you must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the exhaust gas flow rate to the atmosphere according to the requirements in §63.1350(k)(5).

(ii) Calculate the emission rate using Equation 10 of this section:

$$E_{30D} = k\frac{\sum_{i=1}^{n} C_i Q_i}{P} \qquad \text{(Eq. 10)}$$

Where:

E_{30D} = 30-day rolling emission rate of mercury, lb/MM tons clinker.

C_i = Concentration of mercury for operating hour i, µg/scm.

Q_i = Volumetric flow rate of effluent gas for operating hour i, where C_i and Q_i are on the same basis (either wet or dry), scm/hr.

k = Conversion factor, 1 lb/454,000,000 µg.

n = Number of kiln operating hours in the previous 30 kiln operating day period where both C and Qi qualified data are available.

P = Total runs from the previous 30 days of clinker production during the same time period as the mercury emissions measured, million tons.

(6) *HCl emissions tests.* For a source subject to limitations on HCl emissions you must conduct performance testing by one of the following methods:

(i)(A) If the source is equipped with a wet scrubber, tray tower or dry scrubber, you must conduct performance testing using Method 321 of appendix A to this part unless you have installed a CEMS that meets the requirements §63.1350(l)(1). For kilns with inline raw mills, testing should be conducted for the raw mill on and raw mill off conditions.

(B) You must establish site specific parameter limits by using the CPMS required in §63.1350(l)(1). For a wet scrubber or tray tower, measure and record the pressure drop across the scrubber and/or liquid flow rate and pH in intervals of no more than 15 minutes during the HCl test. Compute and record the 24-hour average pressure drop, pH, and average scrubber water flow rate for each sampling run in which the applicable emissions limit is met. For a dry scrubber, measure and record the sorbent injection rate in intervals of no more than 15 minutes during the HCl test. Compute and record the 24-hour average sorbent injection rate and average sorbent injection rate for each sampling run in which the applicable emissions limit is met.

(7) *Total Organic HAP Emissions Tests.* Instead of conducting the performance test specified in paragraph (b)(4) of this section, you may conduct a performance test to determine emissions of total organic HAP by following the procedures in paragraphs (b)(7)(i) through (v) of §63.1349.

[45CSR34, 40 C.F.R. §§ 63.1349(b)(1), (2), (3)(i) – (iv), (4), (5), (6)(i), and (7), 45CSR14, R14-0026, B.10., 45CSR16, EU2, EU3, EU4, EU6, EU7, CD31.01, CD31.02, CD31.03, CD22.09]

3.3.4. Reserved.

3.3.5. *Performance test frequency.* Except as provided in §63.1348(b), performance tests are required at regular intervals for affected sources that are subject to a dioxin, organic HAP or HCl emissions limit. Performance tests required every 30 months must be completed no more than 31 calendar months after the previous performance test except where that specific pollutant is monitored using CEMS; performance tests required every 12 months must be completed no more than 13 calendar months after the previous performance test. **[45CSR34, 40 C.F.R. §63.1349(c), EP42.04]**

3.3.6. (1) If you plan to undertake a change in operations that may adversely affect compliance with an applicable standard, operating limit, or parametric monitoring value under 40 C.F.R. 63 Subpart LLL, the source must conduct a performance test as specified in §63.1349(b) (condition 3.3.3.).

(2) In preparation for and while conducting a performance test required in §63.1349(b) (condition 3.3.3.), you may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in (2)(i) through (2)(iv) of this condition are met. You must submit temperature and other monitoring data that are recorded during the pretest operations.

(i) You must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under 40 C.F.R. Part 63 Subpart LLL for any source, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under Section 3.3.6.(2) (i) [40 C.F.R. § 63.1348(c)(2)(i)] must include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under Section 3.3.6. (1) [40 C.F.R. §63.1348(c)(1)], including when the planned operational change period would begin.

(ii) The performance test results must be documented in a test report according to Section 3.3.2 [40 C.F.R. §63.1349(a)].

(iii) A test plan must be made available to the Administrator prior to testing, if requested.

(iv) The performance test must be completed within 360 hours after the planned operational change period begins.

[45CSR34, 40 C.F.R. § 63.1348(c)]

3.3.7. *Performance Test Reporting Requirements.*

(1) You must submit the information specified in paragraphs (1) and (2) of this condition no later than 60 days following the initial performance test. All reports must be signed by a responsible official.

i. The initial performance test data as recorded under paragraph (b) of §63.1349.

ii. The values for the site-specific operating limits or parameters established pursuant to paragraphs (b)(1), (3), (6), (7), and (8) of §63.1349, as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test.

(2) As of December 31, 2011 and within 60 days after the date of completing each performance evaluation or test, as defined in §63.2, conducted to demonstrate compliance with any standard covered by this subpart, you must submit the relative accuracy test audit data and performance test data, except opacity data, to the EPA by successfully submitting the data electronically to the EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool(ERT)
(see http://www.epa.gov/ttn/chief/ert/ert_tool.html/).

[40 C.F.R. §63.1349(d); 45CSR34]

3.3.8. *Conditions of performance tests.* Conduct performance tests under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.
[40 C.F.R. §63.1349(e); 45CSR34]

3.4. Recordkeeping Requirements

3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:

a. The date, place as defined in this permit and time of sampling or measurements;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A.]

3.4.2. **Retention of records.** 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 monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
[45CSR§30-5.1.c.2.B.]

3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken.
[45CSR§30-5.1.c. State-Enforceable only.]

3.4.4. The owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 C.F.R. § 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.
[45CSR34, 40 C.F.R. § 63.1355(a)]

3.4.5. The owner or operator shall maintain records for each affected source as required by 40 C.F.R. §§ 63.10(b)(2) and (b)(3); and

(1) All documentation supporting initial notifications and notifications of compliance status under 40 C.F.R. § 63.9;

(2) All records of applicability determination, including supporting analyses; and

(3) If the owner or operator has been granted a waiver under 40 C.F.R. § 63.8 (f) (6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

[45CSR34, 40 C.F.R. § 63.1355(b)]

3.4.6. In addition to the recordkeeping requirements in Section 3.4.5 [40 C.F.R. § 63.1355 (b)], the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by 40 C.F.R. § 63.10 (c).
[45CSR34, 40 C.F.R. § 63.1355(c)]

3.4.7. You must keep records of the daily clinker production rates and kiln feed rates.
[45CSR34, 40 C.F.R. § 63.1355(e)]

3.4.8. You must keep records of the date, time and duration of each startup or shutdown period for any affected source that is subject to a standard during startup or shutdown that differs from the standard applicable at other times, and the quantity of feed and fuel used during the startup or shutdown period.
[45CSR34, 40 C.F.R. § 63.1355(f)]

3.4.9. (1) You must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.

(2) You must keep records of actions taken during periods of malfunction to minimize emissions in accordance with §63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[45CSR34, 40 C.F.R. § 63.1355(g)]

3.4.10. For each exceedance from an emissions standard or established operating parameter limit, you must keep records of the date, duration and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions and repeat performance tests and the results of those actions.
[45CSR34, 40 C.F.R. § 63.1355(h)]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.
[45CSR§§30-4.4. *and* 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3 pursuant to the limitations and procedures of West Virginia Code § 22-5-10 and 45CSR31.
[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual compliance certification and semi-annual monitoring reports to the DAQ and USEPA as required in 3.5.5 and 3.5.6 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, or mailed first class or by private carrier with postage prepaid to the address(es), or submitted in electronic format by e-mail as set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

DAQ:

Director
WVDEP
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

US EPA:

Associate Director
Office of Air Enforcement and Compliance Assistance (3AP20)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

DAQ Compliance and Enforcement[1]:
DEPAirQualityReports@wv.gov

[1]For all self-monitoring reports (MACT, GACT, NSPS, etc.), stack tests and protocols, Notice of Compliance Status reports, Initial Notifications, etc.

3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. **[45CSR§30-8.]**

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification. The annual certification shall be submitted in electronic format by e-mail to the following addresses:

DAQ:
DEPAirQualityReports@wv.gov

US EPA:
R3_APD_Permits@epa.gov

[45CSR§30-5.3.e.]

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4. The semi-annual monitoring reports shall be submitted in electronic format by e-mail to the following address:

DAQ:
DEPAirQualityReports@wv.gov

[45CSR§30-5.1.c.3.A.]

3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.

3.5.8. **Deviations.**

a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:

1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.

2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.

3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.

4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.
[45CSR§30-5.1.c.3.B.]

3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.
[45CSR§30-4.3.h.1.B.]

3.5.10. Each owner or operator subject to the requirements of 40 C.F.R. Part 63 Subpart LLL shall comply with the notification requirements in 40 C.F.R § 63.9 as follows:

(1) Initial notifications as required by 40 C.F.R. §§ 63.9 (b) through (d). For the purposes of 40 C.F.R. Part 63 Subpart LLL, a Title V or 40 CFR part 70 permit application may be used in lieu of the initial notification required under 40 C.F.R. § 63.9 (b), provided the same information is contained in the permit application as required by 40 C.F.R. § 63.9 (b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of Chapter I of Title 40 and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification.

(2) Notification of performance tests, as required by 40 C.F.R. §§ 63.7 and 63.9 (e).

(3) Notification of opacity and visible emission observations required by 40 C.F.R. § 63.1349 in accordance with 40 C.F.R. §§ 63.6 (h) (5) and 63.9 (f).

(4) As required by 40 C.F.R. § 63.9 (g), notification of the date that the continuous emission monitor performance evaluation required by 40 C.F.R.§ 63.8 (e) is scheduled to begin.

(5) Notification of compliance status, as required by 40 C.F.R. § 63.9(h).

(6) Within 48 hours of an exceedance that triggers retesting to establish compliance and new operating limits, notify the appropriate permitting agency of the planned performance tests. The notification requirements of §§63.7(b) and 63.9(e) do not apply to retesting required for exceedances under this subpart.

[45CSR34, 40 C.F.R. § 63.1353 (b)]

3.5.11. The owner or operator of an affected source shall comply with the reporting requirements specified in 40 C.F.R. § 63.10 of the general provisions of 40 C.F.R. Part 63 Subpart A as follows:

(1) As required by 40 C.F.R. § 63.10 (d) (2), the owner or operator shall report the results of performance tests as part of the notification of compliance status.

(2) As required by 40 C.F.R. § 63.10 (d) (3), the owner or operator of an affected source shall report the opacity results from tests required by 40 C.F.R. § 63.1349.

(3) As required by 40 C.F.R. § 63.10 (d) (4), the owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 C.F.R. § 63.6 (i) shall submit such reports by the dates specified in the written extension of compliance.

(4) Reserved.

(5) Reserved.

(6) As required by 40 C.F.R § 63.10 (e) (2), the owner or operator shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by 40 C.F.R § 63.8 (e). The owner or operator shall submit the report simultaneously with the results of the performance test.

(7) As required by 40 C.F.R § 63.10 (e) (2), the owner or operator of an affected source using a continuous opacity monitoring system to determine opacity compliance during any performance test required under 40 C.F.R § 63.7 and described in 40 C.F.R § 63.6 (d) (6) shall report the results of the continuous opacity monitoring system performance evaluation conducted under 40 C.F.R § 63.8 (e).

(8) As required by 40 C.F.R § 63.10 (e) (3), the owner or operator of an affected source equipped with a continuous emission monitor shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit.

(9) The owner or operator shall submit a summary report semiannually to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*).) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI. The reports must be submitted by the deadline specified in this subpart, regardless of the method in which the reports are submitted. The report must contain the information specified in §63.10(e)(3)(vi). In addition, the summary report shall include:

(i) All exceedences of maximum control device inlet gas temperature limits specified in Sections 4.1.6., and 4.1.7. [40 C.F.R §§63.1346(a) and (b)];

(ii) Notification of any failure to calibrate thermocouples and other temperature sensors as required under Section 3.2.5(1)(iii) [40 C.F.R §63.1350(g)(1)(iii)]; and

(iv) Notification of failure to conduct any combustion system component inspections conducted within the reporting period as required under Section 3.2.1.(3) [40 C.F.R §63.1347(a)(3)].

(v) Any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1347(a).

(vi) For each PM CPMS, HCl, Hg, and THC CEMS, D/F temperature monitoring system, or Hg sorbent trap monitoring system, within 60 days after the reporting periods, you must report all of the calculated 30-operating day rolling average values derived from the CPMS, CEMS, CMS, or Hg sorbent trap monitoring systems.

(vii) In response to each violation of an emissions standard or established operating parameter limit, the date, duration and description of each violation and the specific actions taken for each violation including inspections, corrective actions and repeat performance tests and the results of those actions.

(viii) Within 60 days after the date of completing each CEMS performance evaluation test as defined in §63.2, you must submit relative accuracy test audit (RATA) data to the EPA's CDX by using CEDRI in accordance with paragraph (b)(9) of this section. Only RATA pollutants that can be documented with the ERT (as listed on the ERT Web site) are subject to this requirement. For any performance evaluations with no corresponding RATA pollutants listed on the ERT Web site, you must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13.

(ix) For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.

(x) All reports required by this subpart not subject to the requirements in paragraphs (b)(9) introductory text and (b)(9)(viii) of this section must be sent to the Administrator at the appropriate address listed in §63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (*e.g.*, by commonly used electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraph (b)(9) introductory text and (b)(9)(viii) of this section in paper format.

(10) If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is ten percent or greater of the total operating time for the reporting period, the owner or operator shall submit an excess emissions and continuous monitoring system performance report along with the summary report.

[45CSR34, 40 C.F.R. § 63.1354(b)]

3.5.12. Reporting a failure to meet a standard due to a malfunction. For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, you must report the failure in the semi-annual compliance report required by §63.1354(b)(9) (condition 3.5.11.(9)). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.1348(d) (condition 3.1.23.), including actions taken to correct a malfunction.
[45CSR34, 40 C.F.R. § 63.1354(c)]

3.6. Compliance Plan

3.6.1. Reserved.

3.7. Permit Shield

3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.

3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

40 C.F.R. Part 60 Subpart LL (August 24, 1982)	Standards of Performance for Metallic Mineral Processing do not apply because lime or limestone is not a metallic mineral.
40 C.F.R. Part 60 Subpart UUU (April 23, 1986)	Standards of Performance for Calciners and Dryers in Mineral Industries do not apply because lime or limestone is not listed as a mineral processed or produced in a mineral processing plant.
40 C.F.R. Part 72 (01/11/93)	Acid Rain Program General Provisions does not apply to the permittee because it is not considered a Title IV (Acid Rain) Source.
40 C.F.R. Part 64 – *Compliance Assurance Monitoring (CAM)*.	The first rule applicability criterion at 40 C.F.R. §64.2(a)(1) states that "*The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section;*" 40 C.F.R. §64.2(b)(1)(i) grants an exemption from CAM, on a pollutant-specific basis, to emission units that are subject to "*Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act.*" According to Attachment H of the renewal application, all emission units at the plant are subject to one of the following federal regulations: NSPS Subpart OOO, NSPS Subpart Y, NSPS Subpart F, and NESHAP MACT Subpart LLL. Since these regulations were proposed after November 15, 1990, all of the emission units qualify for the exemption at 40 C.F.R. §64.2(b)(1)(i) and are therefore not subject to requirements of 40 C.F.R. Part 64 for their respective emissions of particulate matter and HAPs. The permittee's SO_2 scrubber is an air pollution control device. The SO_2 scrubber is part of the kiln system which is regulated by 40 C.F.R. 63 Subpart LLL, and therefore, according to the permittee's renewal application, is exempt from 40 C.F.R. Part 64. However, this is not a correct conclusion because it overlooks the fact that CAM applies to a *Pollutant-specific emissions unit,* which means an emissions unit is considered separately with respect to each regulated air pollutant (cf. §64.1). Thus, specific pollutants regulated by MACT Subpart LLL are exempt from CAM, but not necessarily other pollutants emitted from the same source that may meet the applicability criteria under §§64.2(a)(1) through (3). Emissions of SO_2 from the kiln system meet all three applicability criteria at §§64.2(a)(1) through (3). However, the kiln system exhausts to the Main Stack which is equipped with a Continuous Emission Monitor (CEM) for monitoring SO_2, NO_x, CO, and THC. Operation of the CEM for these pollutants is required by underlying permit R14-0026M, condition B.11., which is already specified in the current Title V permit as condition 4.2.4. Therefore, the exemption criterion at 40 C.F.R. §64.2(b)(1)(vi) is met for SO_2, NO_x, CO, and THC and the kiln system is exempt from CAM on a pollutant-specific basis for these pollutants. While the permittee's PH/PC kiln has potential VOC emissions over 100 tons per year, and it has a VOC limit (permit # R14-0026M, condition A.17.), it does not use a control device to meet the limitation. According to technical correspondence (8/30/2010 email from permittee), it was outlined in Section 4 (Control Technology Analyses) of the September 2009 application for NSR Permit, that the best available control technology for VOC was determined to be good combustion practices. Further, according to the definition of *Control device* at 40 C.F.R. §64.1, "For purposes of this part, a control device does not include … the use of combustion or other process design features or characteristics". Without a control device the applicability criterion at 40 C.F.R. §64.2(a)(2) is not met and CAM does not apply on a pollutant-specific basis to VOC emitted from the PH/PC kiln.

40 C.F.R. 97 Subparts AAAAA, BBBBB, and CCCCC – Transport Rule (TR)	The Martinsburg Plant is not subject to 40 CFR 97 Subparts AAAAA, BBBBB, or CCCCC as it does not meet the definition of an affected source under any of the subparts. An affected source is defined as a "stationary, fossil-fuel-fired boiler or stationary, fossil-fuel-fired combustion turbine serving at any time, on or after January 1, 2005, a generator with nameplate capacity of more than 25 MWe producing electricity for sale."

4.0. Source-Specific Requirements [Modern Preheater-Precalciner Kiln System and related Equipment (EU1 through EU8)]

4.1. Limitations and Standards

PLANT AREAS

The existing and modified parts of the plant is categorized into the following groups:

Group 1: Quarry and Crushing --- EU1
Group 2: Raw Material Preparation --- EU2
Group 3: Pyroprocessing --- EU3
Group 4: Clinker Handling and Storage --- EU4
Group 5: Fuel Handling --- EU5
Group 6: Cement Production --- EU6
Group 7: Shipping --- EU7
Group 8: Other Miscellaneous Sources --- EU8

Facility Wide Requirements

4.1.1. Clinker production from the facility shall not exceed 2,212,890 short tons per year. Compliance with the annual production limit shall be determined using a 12 month rolling total. A 12 month rolling total shall mean the sum of the clinker production at any given time for the previous twelve (12) consecutive calendar months.
[45CSR14, R14-0026, A.1., Preheater-Precalciner Kiln (EP42.04)]

4.1.2. Emissions from the facility shall not exceed the following based on a rolling yearly total. A rolling yearly total shall mean the sum of the emissions at any given time for the previous twelve-(12) consecutive calendar months.

Pollutant	Allowable Emissions (TPY)
$PM_{2.5}$	222.~~30~~65[1]
PM_{10}	5~~84.65~~85.00[1]
TSP	9~~27.69~~28.04[1]
SO_2	4,51~~5.50~~7.63[1]
NO_x (as NO_2)	4,0~~31.75~~41.69[1]
CO	4,4~~58.50~~64.54[1]
VOC	15~~8.78~~9.88[1]
Fluorides	1.02
Lead	0.08

[1]Includes emissions from operation of two worst case mobile crushers.
[45CSR14, R14-0026, A.2.]

4.1.3. During periods of startup, shutdown and malfunctions, the source shall follow the procedures found in the site specific Operations and Maintenance Plan as required by 40 C.F.R. Part 63 Subpart LLL.
[45CSR34, 40 C.F.R. §63.6(e), 45CSR14, R14-0026, A.3., See Section 3.2.1.]

4.1.4. The permittee shall maintain a water truck on site and in good operating condition, and shall utilize same to apply water, or a mixture of water and an environmentally acceptable dust control additive, hereinafter referred to as solution, as often as is necessary in order to minimize the atmospheric entrainment of fugitive particulate emissions that may be generated from haulroads and other work areas where mobile equipment is used. The spraybar shall be equipped with commercially available spray nozzles, of sufficient size and number, so as to provide adequate coverage to the area being treated.

The pump delivering the water, or solution, shall be of sufficient size and capacity so as to be capable of delivering to the spray nozzle(s) an adequate quantity of water, or solution, and at a sufficient pressure, so as to assure that the treatment process will minimize the atmospheric entrainment of fugitive particulate emissions generated from the haulroads and work areas where mobile equipment is used.

[45CSR14, R14-0026, A.4.]

4.1.5. Reserved.

4.1.6. The owner or operator of a kiln subject to a D/F emission limitation under 40 C.F.R. § 63.1343 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 Section 4.1.7. The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under Section 3.1.22. [40 C.F.R. §§ 63.1343 (a) and (b)] must operate the in-line kiln/raw mill, such that:

(1) 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 Section 4.1.7. and established during the performance test when the raw mill was operating is not exceeded, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent.

(2) 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 Section 4.1.7. and established during the performance test when the raw mill was not operating, is not exceeded, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent.

(3) If the in-line kiln/raw mill is equipped with an alkali bypass, the applicable temperature limit for the alkali bypass specified in Section 4.1.7. and established during the performance test, with or without the raw mill operating, is not exceeded, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent.

[45CSR34, 40 C.F.R. §63.1346(a), 45CSR14, R14-0026, B.10.]

4.1.7. The temperature limit for affected sources meeting the limits of Section 4.1.6. or Section 4.1.6.(1) through (3) is determined in accordance with Section 3.3.3 (3) (iv) [40 C.F.R. § 63.1349 (b) (3) (iv)].
[45CSR34, 40 C.F.R. §63.1346(b), 45CSR14, R14-0026, B.10.]

4.1.8. The permitted facility shall be constructed and operated in accordance with information filed in Permit Application R14-0026 and any amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.
[45CSR14, R14-0026, C.3.]

Group 1 - Quarry and Crushing Requirements - - - EU1

4.1.9. Emissions from the Group 1 point sources shall not exceed the following:

Identification Number	Description	Outlet Loading (gr/dscf)	Existing Or New
CD37.03	New Primary Crusher D\C	0.01	New
CD37.04	Crushing System Transfer Tower D\C	0.01	New
CD37.06	Premix Conveying D\C	0.01	New
CD38.01	Premix Storage Feeding D\C	0.01	New

Emissions from the Group 1 fugitive sources shall not exceed the following:

Emission Point Identification Number	Emission Point Description	TSP (TPY)	PM_{10} (TPY)
EP0X.01	Quarry Drilling	0.28	0.13
EP0X.02	Quarry Blasting	0.28	0.13
EP0X.03.01	Loader to truck (good rock)	8.07	3.82
EP0X.03.02	Loader to truck (waste rock)	0.40	0.19
EP0X.03.03	Truck to waste pile	0.40	0.19
EP37.06	Limestone Crusher Feed Pile (for Finish Mills)	0.13	0.06
EP37.07	Limestone Crusher Feed Pile Reclaim	0.12	0.06
EP37.08	Limestone/Clinker Storage Pile (Quarry)	0.08	0.04
EP37.09	Limestone/Clinker Reclaim from Quarry Storage Pile	0.25	0.12
EP37.10	Truck Dump to Craneway Storage PIle	0.22	0.10
EP37.11	Limestone/Clinker Storage Pile (Outside Craneway)	0.04	0.02
EP37.12	Limestone/Clinker Transfer to Craneway Storage Bldg	0.22	0.10
EP37.13	Clinker Transfer from Craneway to Truck	0.77	0.37
EP37.14	Limestone Dump to Mobile Crushers[1]	1.73	0.82
EP37.15	Mobile Limestone Crushers Operations[1]	1.54	1.20
EP37.02.01	Truck to large bin	7.79	3.68
EP37.02.02	Large bin to conveyor	2.60	1.23
EP37.05	Split to surge pile	1.04	0.49

[1]Fugitive emissions from operation of two worst case mobile crushers.

Additionally, emissions from the combined above sources (both point and fugitive) shall not exceed 37.35 tons per year of TSP nor 22.43 tons per year of PM10 based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by the more stringent requirements of Section 4.1.9.

[45CSR14, R14-0026, A.5.]

4.1.10. On and after the date on which the performance test required to be conducted by 40 C.F.R. § 60.8 is completed, no owner or operator subject to the provisions of 40 C.F.R. Part 60 Subpart OOO shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions which:

(1) Contain particulate matter in excess of 0.05 g/dscm (0.022 gr/dscf); and

(2) Exhibit greater than 7 percent opacity.

[45CSR16, 40 C.F.R. §60.672 (a); 45CSR14, R14-0026, B.8. (EU1, EU2, EU8)]

4.1.11. No owner or operator subject to the provisions of 40 C.F.R. Part 60 Subpart OOO shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity (7 percent opacity for units that were constructed after April 22, 2008).
[45CSR16, 40 C.F.R. § 60.672 (b), 45CSR14, R14-0026, B.8. (EU1, EU2, EU8, EP37.15)]

4.1.12. No owner or operator shall cause to be discharged into the atmosphere from any crusher, at which a capture system is not used, fugitive emissions which exhibit greater than 15 percent opacity (12 percent opacity for units that were constructed after April 22, 2008).
[45CSR16, 40 C.F.R. § 60.672(b), 45CSR14, R14-0026, B.1. (EU1, EU2, EU8, EP37.15)]

Group 2 - Raw Material Preparation Requirements - - - EU2

4.1.13. Emissions from the following sources shall not exceed the following:

CD Identification Number	CD Description	Outlet Loading (gr/dscf)	Existing Or New
CD38.02	Premix Storage Discharge D\C	0.01	New
CD39.05	Additive Delivery System D\C	0.01	New
CD39.01	Additive Feeding System D\C	0.01	New
CD39.02	Limestone Bin D\C	0.01	New
CD39.03	Raw Material Discharge D\C1	0.01	New
CD39.04	Raw Material Discharge D\C2	0.01	New
CD39.06	Raw Mill Feeding D\C	0.01	New
CD40.01	New Raw Mill High Zone D\C	0.01	New
CD40.02	New Raw Mill Low Zone D\C	0.01	New
CD40.05	New Raw Meal Air Slide D\C	0.01	New
CD40.06	New Homo Silo Feeding D\C	0.01	New
CD40.07	New Homo Silo Discharge D\C	0.01	New
CD40.08	Top of Homo Silo D\C	0.01	New

Emissions from the Group 2 fugitive sources shall not exceed the following:

Emission Point Identification Number	Emission Point Description	TSP (TPY)	PM_{10} (TPY)
EP39.14	Additives dump to pile in Additives Storage Building	0.07	0.03
EP39.15	Additives Storage Building (4 piles)	0.15	0.08
EP39.16	Reclaim from additives pile	0.07	0.03
EP40.03	Split to surge pile	0.00	0.00
EP39.07.04	Inert Raw Material Hauling to Quarry (Paved)	0.09	0.02
EP39.07.05	Inert Raw Material Hauling to Quarry (Unpaved)	13.70	4.04
EP39.08	Inert Raw Material Truck Dump to Pile	0.10	0.05
EP39.09	Inert Raw Material Storage Pile (Within Mines)	0.17	0.08
EP39.10	Inert Raw Material Pile Reclaim	0.10	0.05
EP39.11	Inert Raw Material Dump to Primary Crusher	0.10	0.05
EP39.12.01	Hauling to Additives Unloading Bin (Paved)	0.05	0.01
EP39.12.02	Hauling to Additives Unloading Bin (Unpaved)	2.06	0.61

Additionally, emissions from the combined above sources (both point and fugitive) shall not exceed 48.06 tons per year of TSP nor 31.73 tons per year of PM10 based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by the more stringent requirements of Section 4.1.13.

[45CSR14, R14-0026, A.9.; 45CSR§7-4.1.]

Group 3 - Pyroprocessing Requirements - - - EU3

4.1.14. Reserved.

4.1.15. The new preheater-precalciner kiln may combust any combination of the following fuels: coal, coal fines, coke, and on site generated petroleum contaminated soils (as outlined in Section 4.1.18.). If the permittee wishes to use alternative fuels including but not limited to tires, wood, paper cardboard, non-PVC plastics, automobile fluff, carpets, non-hazardous liquids/solids, and refuse derived fuels the permittee shall notify the Director in writing of the fuel to be used within thirty (30) days of the use of the fuel. Use of the alternative fuel shall only commence upon the granting of the written consent of the Director.
[45CSR14, R14-0026, A.10., Preheater-Precalciner Kiln (EP42.04)]

4.1.16. The permittee may combust spent carbon, tires and/or roofing shingles in the new preheater-precalciner kiln provided that the permittee shall first conduct or have conducted EPA approved stack tests to determine compliance with the VOC and PM emission limits as set forth in Section 4.1.22. while combusting the fuel in question. Until compliance with the VOC and PM emission limits are verified and written approval is granted by the Director, the permittee may initially only combust the amount of fuel needed to perform the stack test. A stack test protocol and the anticipated test date shall be submitted to this office at least 7 days prior to the date of the stack test. Results of the stack test shall be reported to this office within 30 days of performance of stack test. The changes in fuel, however, will not be subject to NSR/PSD review since the fuel can be accommodated in the new preheater-precalciner kiln and the Permittee has accounted for the criteria pollutant emissions' potential changes in this PSD (R14-0026 Application).
[45CSR14, R14-0026, A.11., Preheater-Precalciner Kiln (EP42.04)]

4.1.17. The new preheater-precalciner kiln may combust fuel oil during startup. Additionally the kiln may combust fuel oil during periods of primary fuel system maintenance or breakdown so long as no emission limits contained in this permit or any applicable rule are exceeded.
[45CSR14, R14-0026, A.12., Preheater-Precalciner Kiln (EP42.04)]

4.1.18. When combusting onsite generated petroleum hydrocarbon contaminated soils the following provisions shall apply:

(a) The petroleum hydrocarbon contaminated soils shall be introduced into the new preheater-precalciner kiln at a maximum rate of 0.25% by weight of the raw material feed to the kilns. Certified records of the amounts (tonnage) of contaminated soil and raw materials utilized per month shall be maintained in accordance with Section 4.1.18 (c).

(b) The new preheater-precalciner kiln~~s~~ shall provide at least a 99.0% destruction efficiency for the petroleum hydrocarbon constituents.

(c) The new preheater-precalciner kiln~~s~~ shall combust only onsite generated petroleum contaminated soils containing fuel oil, gasoline, kerosene, motor oil, hydraulic fluid, lubricants, and/or diesel fuel. The total petroleum hydrocarbon (TPH) concentration of contaminated soil shall not exceed 50,000 mg/kg (ppm by weight) as determined by USEPA Methods 8015 (TPH) and 8020 (BTEX) tests set forth in Third Edition of "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Office of Solid Waste Publication SW-846. The permittee shall sample and analyze the soil prior to utilization in the new preheater-precalciner kiln~~s~~. Each certified test record shall contain, as a minimum, a description of the soil origin at the plant site, soil quantity, date, TPH concentration, and verification of sampling and analytical method. The aforementioned tests shall be performed at least once for each batch of petroleum contaminated soils burned.

(d) No chlorinated or fluorinated hydrocarbon contaminated soils shall be combusted.

(e) No material defined as hazardous wastes under 47CSR35 or 45CSR25 shall be combusted. Results of TCLP tests and analyses required in Section 4.1.18 (c) shall be submitted to the Director of the Division of Air Quality prior to utilizing the soil in the new preheater-precalciner kiln.

(f) The new preheater-precalciner kiln~~s~~ may combust a maximum of 3,825 tons of petroleum contaminated soil per year based on a 12 month rolling total.

(g) Only petroleum contaminated soils from the permittee's Martinsburg plant property shall be introduced to the new preheater-precalciner kiln.

[45CSR14, R14-0026, A.13., Preheater-Precalciner Kiln (EP42.04)]

4.1.19. Clinker production from the new preheater-precalciner kiln shall not exceed 2,212,890 short tons per year.
[45CSR14, R14-0026, A.15., Preheater-Precalciner Kiln (EP42.04)]

4.1.20. The permittee shall install, operate and maintain a scrubber to reduce SO_2 emissions from the new preheater-precalciner kiln as necessary to meet the emission limits set in condition 4.1.22. of this permit.
[45CSR14, R14-0026, A.14., Preheater-Precalciner Kiln (EP42.04)]

4.1.21. Operation of the existing Kilns 7 and 8 system shall permanently cease after the preheater-precalciner kiln system achieves full production or within 180 days after the preheater-precalciner kiln system first becomes operational whichever comes first. Operation of the existing Kiln 9 system shall permanently cease after the preheater-precalciner kiln system achieves full production or within 180 days after the preheater-precalciner kiln system first becomes operational or before the BART compliance deadline (approximately 2013) whichever comes first.
[45CSR14, R14-0026, A.16., Kilns #7, #8 and #9 (EP10.01, EP11.01 and EP12.01)]

4.1.22. Emissions from the main stack which consists of emissions from the new preheater-precalciner kiln, in-line raw mill, clinker cooler, coal mill and bypass (PH/PC Kiln System) shall not exceed the following:

Source	Pollutant	Allowable	Compliance Method	Averaging Time
PH/PC Kiln System	NOx	3983.2 TPY	CEM	TPY, 12 month rolling total
PH/PC Kiln System	NOx	1745.0 LB/hr	CEM	30-day average (LB/hr)
PH/PC Kiln System	NOx	2.15 lb/ton clinker	CEM/production data	30-day rolling average
PH/PC Kiln System	CO	3960.0 LB/hr	CEM	24-hr average (LB/hr)
PH/PC Kiln System	CO	4425.8 TPY	CEM	TPY, 12 month rolling total
PH/PC Kiln System	VOC	38.7 LB/hr	Stack Test	3-hr average (LB/hr)
PH/PC Kiln System	VOC	154.9 TPY	Stack Test/production data	TPY, 12 month rolling total
PH/PC Kiln System	VOC	0.14 LB/ton clinker	Stack Test /production data	12 month rolling average
PH/PC Kiln System	SO2	3,230.8 TPY	CEM	TPY, 12 month rolling total
PH/PC Kiln System	SO2	2111.3 LB/hr	CEM	3-hr average (LB/hr)
PH/PC Kiln System	SO2	1.50 lb/ton clinker	CEM/production data	30-day rolling average
PH/PC Kiln System	TSP	268.1 TPY	Stack Test / production data	TPY, 12 month rolling total
PH/PC Kiln System	PM_{10}	225.2 TPY	Stack Test / production data	TPY, 12 month rolling total
PH/PC Kiln System	TSP	69.8 LB/hr	Stack Test	Average (3) 1-hr tests
PH/PC Kiln System	PM_{10}	58.6 LB/hr	Stack Test	Average (3) 1-hr tests
PH/PC Kiln System	PM (filterable)	0.07 lb/ton clinker	CPMS[1]	30-day rolling average
PH/PC Kiln System	HCl[3]	3.0 ppmvd at 7% Oxygen	CEM	30-day rolling average
PH/PC Kiln System	THC	24.0 ppmvd at 7% Oxygen[2]	CEM	30-day rolling average

Source	Pollutant	Allowable	Compliance Method	Averaging Time
PH/PC Kiln System	Hg[3]	55.0 lbs/MMton clinker	CEM	30-day rolling average
PH/PC Kiln System	Pb	0.08 TPY	Production data	TPY, 12 month rolling total
PH/PC Kiln System	Fluorides	1.0 TPY	Production data	TPY, 12 month rolling total

[1]Filterable Particulate Matter shall be parametrically monitored with a Continuous Parametric Monitoring System (CPMS) per 40 CFR 63.1350(b). The CPMS will be used to establish a site specific operating limit corresponding to the results of the most recent annual Method 5 or 5I performance test demonstrating compliance with the PM limit. Compliance shall be demonstrated by not exceeding this site-specific operating limit on a 30-kiln operating day CPMS rolling average basis. Any exceedance of the site-specific operating limit requires the Plant to comply with the requirements of 40 CFR 63.1350(b)(ii), including conducting a new PM emissions compliance test within 30 days of the exceedance to verify or re-establish the site specific operating limit. PM exceedances leading to more than four required emissions compliance tests within a 12-month rolling period will constitute a presumptive violation of the PM limit.

[2] In lieu of complying with the THC emissions limit of 24.0 ppmvd corrected to 7 percent oxygen on a 30-day rolling average; the Plant may elect to comply with an alternative limit of 12.0 ppmvd for total organic HAP (O-HAP). O-HAP shall be parametrically monitored with a THC CEMS per 40 CFR 63.1350(j). The THC CEMS will be used to establish a site-specific operating limit corresponding to the most recent O-HAP performance test demonstrating compliance the O-HAP limit.

[3]Per a 1-year extension granted on July 1, 2015 by WV DEP, the Plant must demonstrate compliance with the HCl and Hg emission limits and CEM monitoring requirements by September 9, 2016. Semi-annual reports are required to be submitted documenting the status and timing for meeting the extended compliance date.

[45CSR14, R14-0026, A.17., Preheater-Precalciner Kiln (EP42.04)]

4.1.23. Reserved.

4.1.24. Emissions from the Group 3 point sources shall not exceed the following:

CD Identification Number	CD Description	Outlet Loading (gr/dscf)	Existing Or New
CD41.04	Alternative Fuel Feeding System D\C	0.01	New
CD41.05	Alternative Fuel Dosing System D\C	0.01	New
CD42.04	Inline Raw Mill PH-PC Kiln/Clinker Cooler & Bypass & Coal Mill D\Cs	0.01	New
CD42.02	Kiln Feeding Bucket Elevator D\C	0.01	New
CD42.03	Kiln Feeding D\C1	0.01	New
CD42.05	Kiln Feeding D\C2	0.01	New
CD42.01	Cement Fringe Bin D\C	0.01	New
CD42.06	Lime Storage D\C	0.01	New
CD42.07	Bypass Truck Spout Dedusting	0.01	New

Additionally, emissions from the combined above sources shall not exceed 278.97 tons per year of TSP nor 234.44 tons per year of PM_{10} based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by the more stringent requirements of Section 4.1.24.

[45CSR14, R14-0026, A.18.; 45CSR§7-4.1.]

4.1.25. The preheater section of the new PH/PC kiln will be equipped with low-NO_x burners. The precalciner section of the new PH/PC kiln will be designed with low-NO_x and CO technology. The PH/PC kiln shall be equipped with an SNCR NO_x control system in order to comply with a future NO_x limit to be determined by USEPA.
[45CSR14, R14-0026, A.19.]

4.1.26. No person shall cause, suffer, allow or permit emission of particulate matter into the open air from any fugitive dust control system which is twenty percent (20%) opacity or greater.
[45CSR§5-3.4., 45CSR14, R14-0026, B.2., Coal Handling Operations, EU5]

4.1.27. No person shall cause, suffer, allow or permit a coal preparation plant or handling operation to operate that is not equipped with a fugitive dust control system. This system shall be operated and maintained in such a manner as to minimize the emission of particulate matter into the open air.
[45CSR§5-6.1., 45CSR14, R14-0026, B.2., Coal Handling Operations, EU5]

4.1.28. The owner or operator of a coal preparation plant or handling operation shall maintain dust control of the premises and owned, leased or controlled access roads by paving, or other suitable measures. Good operating practices shall be observed in relation to stockpiling, car loading, breaking, screening and general maintenance to minimize dust generation and atmospheric entrainment.
[45CSR§5-6.2., 45CSR14, R14-0026, B.2., Coal Handling Operations, EU5]

4.1.29. No owner or operator subject to the provisions of 45CSR10 shall build, erect, install, modify or use any article, machine, equipment or process, the use of which purposely conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
[45CSR§10-11.1., 45CSR14, R14-0026, B.5.]

4.1.30. Reserved.

4.1.31. Due to unavoidable malfunction of equipment or inadvertent fuel shortages, emissions exceeding those provided for in 45CSR10 may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the equipment malfunction or fuel shortage. In cases of major equipment failure or extended shortages of conforming fuels, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.
[45CSR§10-9.1, 45CSR14, R14-0026, B.5., and Preheater-Precalciner Kiln (EP42.04)]

4.1.32. Standard requirements.

Effective May 1, 2009, an owner or operator of any Portland cement kiln subject to 45CSR§40-10 must not operate the kiln during May 1 through September 30 unless the kiln has installed and operates during May 1 to September 30 with low-NO_X burners, mid-kiln firing or alternative control techniques, subject to approval by the Secretary, that achieve at least the same emissions decreases as low-NO_X burners or mid-kiln firing.

[45CSR§40-10.1., Preheater-Precalciner Kiln (EP42.04)]

4.1.33. Mineral acids shall not be released from any type source operation or duplicate source operation or from any air pollution control equipment installed on any type source operation or duplicate source operation in excess of the quantity given in Table 45-7B of 45CSR7. Following table lists the equipment with their allowable stack emission rates for Hydrogen Chloride (HCl) and Sulfuric Acid (H_2SO_4).

Kiln	Pollutant	Allowable Stack Emission Rate Milligrams Per Dry Cubic Meter
Precalciner Kiln	HCl Mist and/or Vapor	210
	Sulfuric Acid Mist	35

[45CSR§7-4.2., 45CSR14, R14-0026, B.3., Preheater-Precalciner Kiln (EP42.04)]

4.1.34. No person shall cause, suffer, allow, or permit the emission into open air from any source operation an in-stack sulfur dioxide concentration exceeding 2000 ppmv by volume from existing source operations, except as provided in 45CSR§10-4.1.

e. Any owner or operator of a manufacturing process source operation(s) which has the potential to emit less than 500 pounds per year of sulfur oxides.

[45CSR§§10-4.1. and 4.1.e., 45CSR14, R14-0026, B.5., EP42.04, EP44.09, EP44.12, EP19.02, EP44.16, EP37.15, EP45.16]

4.1.35. Compliance with the allowable sulfur dioxide concentration limitations from manufacturing process source operation(s) set forth in 45CSR10 shall be based on a block three-(3) hour averaging time.
[45CSR§10-4.2., 45CSR14, R14-0026, B.5., EP42.04, EP44.09, EP44.12, EP19.02]

4.1.36. Where more than one source operation or combinations thereof, which are part of a duplicate source operation, are vented through separate stacks, the allowable stack emission rates for the separate stacks shall be determined by the following formula:

$$\mathbf{R_s = R_t\ (W_s\ /\ W_t)}$$

Where,

R_s is the allowable stack emission rate for the separate stack venting the source operation(s) in question;

R_t is the total allowable emission rate for the duplicate source operation;

W_s is the operating process weight rate for the source operation(s) vented through the separate stack; and

W_t is the total operating process weight rate for the duplicate source operation.

[45CSR§7-4.8., Preheater-Precalciner Kiln (EP42.04)]

4.1.37. Reserved.

4.1.38. Reserved.

Group 4 - Clinker Handling and Storage Requirements --- EU4

4.1.39. Emissions from the Group 4 point sources shall not exceed the following:

CD Identification Number	CD Description	Outlet Loading (gr/dscf)	Existing Or New
CD43.03	Clinker Storage Feeding D\C	0.01	New
CD43.04	Small Clinker Storage Feeding D\C	0.01	New
CD43.06	Small Clinker Storage Discharge D\C	0.01	New
CD43.07	Clinker Storage Discharge D\C	0.01	New
CD43.08	Finish Mill Conveying D\C1	0.01	New
CD43.09	Finish Mill Conveying D\C2	0.01	New
CD43.13	Finish Mill Conveying D\C3	0.01	New
CD43.19	Top of LA Clinker Silo	0.01	New
CD43.20	Normal Clinker Bin at Pan Conv. 73	0.01	New
CD43.21	Top of Normal Clinker Silo	0.01	New

There shall be no Group 4 fugitive sources.

Additionally, emissions from the above point sources shall not exceed 13.25 tons per year of TSP nor 11.25 tons per year of PM_{10} based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by more the stringent requirements of Section 4.1.39.

[45CSR14, R14-0026, A.20.]

Group 5 - Fuel Handling Requirements - - - EU5

4.1.40. There shall be no Group 5 point sources.

Emissions from the Group 5 fugitive sources shall not exceed the following:

Emission Point Identification Number	Emission Point Description	TSP (TPY)	PM_{10} (TPY)
EP15.01.01	Rail unloading to Petcoke hopper	0.01	0.01
EP15.01.02	Petcoke Hopper to feeders	0.00	0.00
EP41.01.01	Petcoke feeders to conveyor	0.01	0.00
EP41.01.02	Petcoke Conveyor to split to conveyor	0.01	0.00
EP41.01.03	Petcoke Conveyor to CSH Fuel Bins or Pile	0.01	0.00
EP41.01.04	Coal Truck Unloading to Storage Hall	0.03	0.01
EP41.01.05	Clam Bucket to Coal Pile	0.03	0.01
EP41.01.06	Pile to Clam Bucket	0.05	0.02
EP41.01.07	Clam Bucket to CSH Fuel Bins	0.05	0.02
EP41.02.01	CSH fuel bins to feeders	0.04	0.02
EP41.02.02	Feeders to conveyor	0.08	0.04
EP41.02.03	Conveyor to Split to Conveyor	0.08	0.04

Additionally, emissions from the above fugitive sources shall not exceed 0.39 tons per year of TSP nor 0.18 tons per year of PM_{10} based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by more the stringent requirements of Section 4.1.40.

[45CSR14, R14-0026, A.22.; 45CSR§7-4.1.]

4.1.41. 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 equipment in a manner consistent with good air pollution control practice for minimizing emissions.
[45CSR16, 40 C.F.R. § 60.11 (d), 45CSR14, R14-0026, B.8.]

4.1.42. On and after the date on which the performance test required to be conducted by 40 C.F.R. § 60.8 is completed, an owner or operator subject to the provisions of 40 C.F.R. Part 60 Subpart Y shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified on or before April 28, 2008, gases which exhibit 20 percent opacity or greater.
[45CSR16, 40 C.F.R. §60.254(a), 45CSR14, R14-0026, B.8., Fuel Handling System EU5 (except EP41.02.04, EP15.04.03, and EP15.04.04)]

Group 6 - Cement Production Requirements - - - EU6

4.1.43. Emissions from the Group 6 point sources shall not exceed the following:

CD Identification Number	CD Description	Outlet Loading (gr/dscf)	Existing Or New
CD43.14	Finish Mill 1 & 2 Hoppers D\C	0.01	New
CD43.16	Finish Mill 3 Hopper D\C	0.01	New
CD43.17	Normal Clinker Bin-Bin Vent D\C	0.01	New
CD44.01	Finish Mill 2 Feeding D\C1	0.01	New
CD44.02	Finish Mill 1 Feeding D\C1	0.01	New
CD44.03	Finish Mill 2 Feeding D\C2	0.01	New
CD44.04	Finish Mill 2 Feeding D\C3	0.01	New
CD44.05	Finish Mill 1 Feeding D\C2	0.01	New
CD44.06	Finish Mill 1 Conveying D\C	0.01	New
CD44.07	Finish Mill 1 High Zone D\C	0.01	New
CD44.08	Finish Mill 1 Low Zone D\C	0.01	New
CD44.09	Finish Mill 1 D\C	0.01	New
CD44.13	Finish Mill 1 Discharge D\C	0.01	New
CD44.14	Finish Mill 2 D\C	0.01	New
CD44.10	Finish Mill 2 High Zone D\C	0.01	New
CD44.11	Finish Mill 2 Low Zone D\C	0.01	New
CD44.12	Finish Mill 2 D\C	0.01	New
CD44.15	Finish Mill 2 Discharge D\C	0.01	New
CD44.17	Finish Mills Reject Bin D\C	0.01	New
CD44.18	Finish Mill 1 Reject Elevator High Zone	0.01	New
CD44.19	Finish Mill 2 Reject Elevator High Zone	0.01	New
CD19.02	Finish Mill 3 Baghouse D\C	0.02	Existing

CD Identification Number	CD Description	Outlet Loading (gr/dscf)	Existing Or New
CD19.01	Finish Mill 3 Norblo D\C	0.02	Existing

Emissions from the Group 6 fugitive sources shall not exceed the following:

Emission Point Identification Number	Emission Point Description	TSP (TPY)	PM_{10} (TPY)
EP26.06.03	Gypsum/Synthetic Gypsum Truck unloading to storage hall	0.07	0.03
EP26.06.04	Clam Bucket to Gypsum/Synthetic Gypsum Pile	0.02	0.01
EP26.06.05	Gypsum/Synthetic Gypsum Pile to Clam Bucket	0.02	0.01
EP26.06.06	Clam bucket to gypsum/synthetic gypsum bin (FM 1/2/3)	0.02	0.01
EP26.07.01	Limestone Pile to Clam Bucket	0.11	0.05
EP26.07.02	Clam Bucket to Limestone Bin (FM1/2/3)	0.11	0.05
EP27.01	Conveyor to clinker Hopper	2.21	1.04
EP27.02	Clinker Hopper to Crane	2.21	1.04
EP27.03	Crane to Clinker pile	2.21	1.04
EP27.04	Clinker pile to Crane	2.21	1.04
EP27.05	Crane to Clinker Bins (FM 1/2/3)	2.21	1.04
EP27.06	Transfer to Outdoor Clinker Storage Pile	0.65	0.31
EP27.07	Outdoor Clinker Storage Pile - Tarped	0.76	0.38
EP27.08	Outdoor Clinker Storage Pile Reclaim	0.65	0.31

Additionally, emissions from the combined above sources (both point and fugitive) shall not exceed 156.87 tons per year of TSP nor 128.30 tons per year of PM_{10} based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by more the stringent requirements of Section 4.1.43.
[45CSR14, R14-0026, A.24.; 45CSR§7-4.1.]

4.1.44. Emissions from the new Finish Mill 1 & 2 air heater shall not exceed the following:

Pollutant	LB/hr	TPY
CO	1.6	7.2
NO_x	2.8	12.4
TSP	0.5	2.0
SO_2	10.1	44.1
VOC	0.11	0.5
Fluorides	0.005	0.023

[45CSR14, R14-0026, A.26.]

4.1.45. Reserved.

4.1.46. Finish Mill 1 and 2 air heater shall only combust fuel oil, propane or natural gas. Additionally, the Finish Mills 1 and 2 air heater shall not exceed 19.84 MMBTU/hr MDHI.
[45CSR14, R14-0026, A.27.]

Group - 7 Shipping Requirements - - - EU7

4.1.47. Emissions from the Group 7 point sources shall not exceed the following:

CD Identification Number	CD Description	Outlet Loading (gr/dscf)	Existing Or New
CD45.01	Finish Mill 1 Airslides D\C	0.01	New
CD45.02	Finish Mill 2 Airslides D\C	0.01	New
CD45.03	Cement Silos Feeding D\C1	0.01	New
CD45.04	Cement Silos Feeding D\C2	0.01	New
CD45.05	Cement Silo A1 & A2 D\C	0.01	New
CD45.06	Cement Silo B1 & B2 D\C	0.01	New
CD45.07	Cement Silo C1 & C2 D\C	0.01	New
CD45.08	Truck Loadout 1 D\C	0.01	New
CD45.09	Truck Loadout 2 D\C	0.01	New
CD45.10	Truck Loadout 3 D\C	0.01	New
CD45.11	Truck Loadout 4 D\C	0.01	New
CD45.14	Cement Analyzer D\C	0.01	New
CD45.15	Transfer Airslide D\C at the Multi Cell	0.01	New
CD46.01	Truck Loadout Silo 1 D\C	0.01	Modified
CD46.02	Truck Loadout Silo 2 D\C	0.02	Existing
CD46.03	Truck Loadout Silo 3 D\C	0.01	Modified
CD46.04	Truck Loadout Silo 4 D\C	0.01	Modified
CD46.05	Truck Loadout Silo 5 D\C	0.01	Modified
CD46.06	Truck Loadout 5 D\C	0.02	Existing
CD46.07	Truck Loadout 6 D\C	0.02	Existing
CD20.04	East Bank Silos 1 DC	0.01	Modified
CD20.05	East Bank Silos 2 DC	0.01	Modified
CD20.06	East Bank Silos 3 DC	0.01	Modified
CD21.05	Middle Bank Silos 1D\C	0.01	Modified
CD21.06	Middle Bank Silos 2D\C	0.01	Modified
CD21.07	Middle Bank Silos 3D\C	0.01	Modified
CD21.08	Middle Bank Silos 4D\C	0.01	Modified
CD21.09	Middle Bank Silos 5D\C	0.01	Modified
CD21.10	Middle Bank Vent 1 D\C	0.01	New
CD21.11	Middle Bank Vent 2 D\C	0.01	New
CD21.12	Middle Bank Vent 3 D\C	0.01	New
CD21.13	Middle Bank Vent 4 D\C	0.01	New
CD22.05	West Bank Silos #70/71 D\C	0.01	Modified
CD22.06	West Bank Silos #72 D\C	0.01	Modified
CD22.07	West Bank Silos #84~~2~~ D\C	0.01	Modified
CD22.08	West Bank Silos Loadout Spout D\C	0.01	Modified

CD Identification Number	CD Description	Outlet Loading (gr/dscf)	Existing Or New
CD23.01	N.E. Packer D\C	0.02	Existing
CD45.12	Rail Loadout 1 D\C	0.01	New
CD45.13	Rail Loadout 2 D\C	0.01	New
CD48.01	Packhouse D\C	0.01	Modified
CD45.16	Rail Transloader D\C	0.02	New

There shall be no Group 7 fugitive sources.

Additionally, emissions from the above Point sources shall not exceed 68.41 tons per year of TSP nor 58.18 tons per year of PM_{10} based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by the more stringent requirements of Section 4.1.47.
[45CSR14, R14-0026, A.28.; 45CSR§7-4.1.]

4.1.48. Diesel fuel usage by the rail transloader engine shall not exceed 14,560 gallons per year.
[45CSR14, R14-0026, A.30.]

4.1.49. Emissions from the rail transloader engine shall not exceed the following:

	lb/hr	tpy
CO	0.54	0.97
NO_x	2.47	4.50
PM	0.18	0.32
PM_{10}	0.18	0.32
$PM_{2.5}$	0.18	0.32
SO_2	0.17	0.30
VOC	0.20	0.36

[45CSR14, R14-0026, A.31.]

4.1.50. Owners and operators of 2007 model year and later non-emergency stationary compression ignition (CI) internal combustion engine (ICE) with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in 40 C.F.R. §60.4201(a) for their 2007 model year and later stationary CI ICE, as applicable.
[40 C.F.R. §§ 60.4204(b) and 60.4201(a); 45CSR16; 40 C.F.R. §63.6590(c)(7); 45CSR14, R14-0026, B.1.] (Rail Transloader Engine and EP37.15)

4.1.51. Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 C.F.R. §60.4204(b) (permit condition 4.1.50.) over the entire life of the engine.
[40 C.F.R. § 60.4206; 45CSR16; 45CSR34; 40 C.F.R. §63.6590(c)(7); 45CSR14, R14-0026, B.1.] (Rail Transloader Engine and EP37.15)

4.1.52. Beginning October 1, 2010, owners and operators of stationary CI ICE subject to 40 C.F.R. 60 Subpart IIII with a displacement of less than 30 liters per cylinder that use diesel fuel must purchase diesel fuel that meets the requirements of 40 C.F.R. §80.510(b) for nonroad diesel fuel, which are:

(1) Sulfur content.

(i) 15 ppm maximum for nonroad (NR) diesel fuel

(2) Cetane index or aromatic content, as follows:

(i) A minimum cetane index of 40; or

(ii) A maximum aromatic content of 35 volume percent.

[40 C.F.R. § 60.4207(b); 45CSR16; 45CSR34; 40 C.F.R. §63.6590(c)(7); 45CSR14, R14-0026, A.7 and B.1.] (Rail Transloader Engine and EP37.15)

4.1.53. If you are an owner or operator and must comply with the emission standards specified in 40 C.F.R. 60 Subpart IIII, you must do all of the following, except as permitted under paragraph (g) of 40 C.F.R. §60.4211 (permit condition 4.1.55.):

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 C.F.R. Part 89 (permit condition 4.1.50.).

[40 C.F.R. §§ 60.4211(a)(1)-(3); 45CSR16; 45CSR34; 40 C.F.R. §63.6590(c)(7); 45CSR14, R14-0026, A.6 and B.1.] (Rail Transloader Engine and EP37.15)

4.1.54. If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in 40 C.F.R. § 60.4204(b) (permit condition 4.1.50.), you must comply by purchasing an engine certified to the emission standards in 40 C.F.R. § 60.4204(b), for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of 40 C.F.R. §60.4211 (condition 4.1.55.).
[40 C.F.R. § 60.4211(c); 45CSR16; 45CSR34; 40 C.F.R. §63.6590(c)(7); 45CSR14, R14-0026, B.1.] (Rail Transloader Engine and EP37.15)

4.1.55. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

[40 C.F.R. §§ 60.4211(g) and 60.4211(g)(1) and (g)(2); 45CSR16; 45CSR34; 40 C.F.R. §63.6590(c)(7); 45CSR14, R14-0026, B.1.] (Rail Transloader Engine and EP37.15)

Group - 8 Miscellaneous Sources Requirements - - - EU8

4.1.56. Emissions from the Group 8 point sources shall not exceed the following:

CD Identification Number	CD Description	Outlet Loading (gr/dscf)	Existing Or New
CD31.01	Flyash Tank No. 1 D\C	0.01	Modified
CD31.02	Bypass Dust Tank D\C	0.01	Modified
CD31.03	Bypass Dust Loadout D\C	0.01	Modified
CD22.09	Dry Flyash Bin D\C	0.01	New

Emissions from the Group 8 fugitive sources shall not exceed the following:

Emission Point Identification Number	Emission Point Description	TSP (TPY)	PM_{10} (TPY)
EP0B.01	Administrative Boiler 1	0.05	0.05
EP0B.02	Administrative Boiler 2	0.05	0.05
EP0G.01	Emergency Generator	0.23	0.19
EP0X.05	Quarry waste pile	0.07	1.04
EP0X.06	New Crusher Feed Pile	1.00	0.50
EP03.01	Storage Bays - 5 Piles	0.35	0.18
EP26.05	Gypsum/synthetic gypsum storage pile (Craneway)	0.05	0.03
EP26.08	Limestone Storage Pile (Craneway)	0.05	0.03
EP15.04.03	Coal storage Pile (Craneway)	0.03	0.01
EP15.04.04	Petcoke Storage Pile (Craneway)	0.03	0.01
EP14.08	Clinker Stockpile (Craneway)	0.02	0.01
EP25.01	Quarry haul roads (New Crusher)	203.90	60.18
EP25.03	Quarry haul roads (waste)	15.10	4.46

Emission Point Identification Number	Emission Point Description	TSP (TPY)	PM_{10} (TPY)
EP25.05.01	Additive trucks (unpaved)	0.00	0.00
EP25.05.02	Additive trucks (paved)	0.42	0.08
EP25.14	Gypsum/Synthetic Gypsum Haul Road (Unpaved)	14.86	4.39
EP25.12	Gypsum/Synthetic Gypsum Haul Road (paved)	0.25	0.05
EP25.15	Alternative Fuel Trucks (paved)	~~0.16~~ 0.28	~~0.03~~ 0.05
EP25.16	Hauling Clinker to Primary Crusher (paved)	0.18	0.04
EP25.17	Hauling Clinker to Primary Crusher (unpaved)	6.17	1.82
EP25.18	Hauling Limestone/clinker from Quarry to Craneway (Unpaved)	12.33	3.64
EP25.19	Hauling Limestone/clinker from Quarry to Craneway (paved)	0.41	0.08
EP25.04.02	Cement Shipments (paved)	7.47	1.46
EP25.06.01	Fuel deliveries (unpaved)	0.00	0.00
EP25.06.02	Fuel deliveries (paved)	0.67	0.13
EP25.09.01	Dry Flyash trucks (for Cement, unpaved)	0.98	0.29
EP25.09.02	Dry Flyash trucks (for Cement, paved)	0.61	0.12
EP25.09.03	Dry Flyash trucks (for Calciner, unpaved)	14.39	4.25
EP25.09.04	Dry Flyash trucks (for Calciner, paved)	0.48	0.09
EP25.10.01	Waste dust customer trucks (unpaved)	3.43	1.01
EP25.10.02	Waste dust customer trucks (paved)	0.21	0.04
EP25.08	Misc. plant vehicles (unpaved)	6.90	2.04
EP25.07	Waste Dust Trucks (unpaved)	30.63	9.04
EP42.06.01	Lime Deliveries (unpaved)	0.00	0.00
EP42.06.02	Lime Deliveries (paved)	0.35	0.07

Additionally, emissions from the combined above sources (both point and fugitive) shall not exceed 324.39 tons per year of TSP nor 98.13 tons per year of PM_{10} based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by more the stringent requirements of Section 4.1.48.

[45CSR14, R14-0026, A.32.; 45CSR§7-4.1.]

4.1.57. **Compliance Date.** If you have an existing boiler or process heater, you must comply with 40 C.F.R. 63 Subpart DDDDD no later than January 31, 2016, except as provided in §63.6(i).
[40 C.F.R. §63.7495(b); 45CSR34] (EP0B.01, EP0B.02)

4.1.58. **Initial and Periodic Tune-ups.** If your unit is a new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to 5 million Btu per hour in the unit designed to burn gas 1 subcategory, you must conduct a tune-up of the boiler or process heater every 5 years as specified in §63.7540.

(i) As applicable, inspect the burner, and clean or replace any components of the burner as necessary (you may delay the burner inspection until the next scheduled unit shutdown). At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment;

(ii) Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

(iii) Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown).

(iv) Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject;

(v) Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer; and

(vi) Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (vi)(A) and (B) of this condition.

(A) The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;

(B) A description of any corrective actions taken as a part of the tune-up.

- Each 5-year tune-up specified in §63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up.

- If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

[40 C.F.R. §§ 63.7500(a), Table 3 – Work Practice Standards, Item #1; 40 C.F.R. §63.7500(e); 40 C.F.R. §§ 63.7540(a)(12), 63.7540(a)(10)(i) through (vi), 63.7515(d), 63.7540(a)(13), 63.7515(g), 63.7505(a); 45CSR34] (EP0B.01, EP0B.02)

4.1.59. **One-time Energy Assessment**. If your unit is an existing boiler or process heater located at a major source facility, you must have a one-time energy assessment performed by a qualified energy assessor. An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. A facility that operated under an energy management program developed according to the ENERGY STAR guidelines for energy management or compatible with ISO 50001 for at least one year between January 1, 2008 and the compliance date specified in §63.7495 that includes the affected units also satisfies the energy assessment requirement. The energy assessment must include the following with extent of the evaluation for items a. to e. appropriate for the on-site technical hours listed in §63.7575:

a. A visual inspection of the boiler or process heater system.

b. An evaluation of operating characteristics of the boiler or process heater systems, specifications of energy using systems, operating and maintenance procedures, and unusual operating constraints.

c. An inventory of major energy use systems consuming energy from affected boilers and process heaters and which are under the control of the boiler/process heater owner/operator.

d. A review of available architectural and engineering plans, facility operation and maintenance procedures and logs, and fuel usage.

e. A review of the facility's energy management program and provide recommendations for improvements consistent with the definition of energy management program, if identified.

f. A list of cost-effective energy conservation measures that are within the facility's control.

g. A list of the energy savings potential of the energy conservation measures identified.

h. A comprehensive report detailing the ways to improve efficiency, the cost of specific improvements, benefits, and the time frame for recouping those investments.

[40 C.F.R. §63.7500(a)(1), Table 3, Item 4; 40 C.F.R. §63.7505(a); 45CSR34] (EP0B.01, EP0B.02)

4.1.60. At all times, you must operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.
[40 C.F.R. §63.7500(a)(3); 45CSR34] (EP0B.01, EP0B.02)

4.1.61. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.
[45CSR§2-3.1.] (EP0B.01, EP0B.02)

4.1.62. Compliance with the visible emission requirements of 45CSR§2-3.1 (condition 4.1.61.) shall be determined in accordance with 40 CFR Part 60, Appendix A, Method 9 or by using measurements from continuous opacity monitoring systems approved by the Director. The Director may require the installation, calibration, maintenance and operation of continuous opacity monitoring systems and may establish policies for the evaluation of continuous opacity monitoring results and the determination of compliance with the visible emission requirements of 45CSR§2-3.1. Continuous opacity monitors shall not be required on fuel burning units which employ wet scrubbing systems for emission control.
[45CSR§2-3.2.] (EP0B.01, EP0B.02)

4.1.63. If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (3) of §63.6640. In order for the engine to be considered an emergency stationary RICE under 40 C.F.R. 63 Subpart ZZZZ, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (3) of §63.6640, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (3) of §63.6640, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.
[40 C.F.R. §§ 63.6640(f), (f)(1), (f)(2), and (f)(3); 45CSR34] (EP0G.01)

4.1.64. Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(2) of §60.4202. For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.
[40 C.F.R. §§ 60.4200(a)(2)(i), 60.4205(b), 60.4202(a)(2); 45CSR34] (EP0G.01)

4.2. Monitoring Requirements

Facility Wide Requirements

4.2.1. See Section 3.2.

4.2.2. At the request of the Director the owner and/or operator of a source shall install such stack gas monitoring devices as the Director deems necessary to determine compliance with the provisions of 45CSR§10-8.2.a. The data from such devices shall be readily available at the source location or such other reasonable location that the Director may specify. At the request of the Director, or his or her duly authorized representative, such data shall be made available for inspection or copying. Failure to promptly provide such data shall constitute a violation of 45CSR10.
[45CSR§10-8.2.a., EP42.04]

Quarry and Crushing and Raw Material Preparation - - - EU1 and EU2

4.2.3. No additional requirements.

Pyroprocessing - - - EU3

4.2.4. A continuous emission monitoring system (CEMS) shall be installed, operated, and maintained to measure the emissions of SO_2, NO_x, THC and CO from the preheater-precalciner kiln system exhaust stack. The CEMS shall be installed within 180 days of startup of the pyroprocessing line, and operated in compliance with the USEPA Part 60, Appendix B, Performance Specification 2 (NO_x and SO_2) and Performance Specification 4, 4a or 4b (CO) as appropriate.
[45CSR14, R14-0026, B.11.]

4.2.5. The permittee shall maintain daily and monthly records of the amount of clinker transferred to the outdoor clinker storage piles. Such records shall be retained on-site by the permittee for at least five (5) years and shall be certified and made available to the Director or his duly authorized representative upon request.
[45CSR14, R14-0026, B.12.]

4.2.6. Monitoring requirements.

a. Any owner or operator of an kiln subject to 45CSR§40-10 must complete an initial performance test and subsequent annual testing consistent with the requirements of 40 CFR Part 60, appendix A, method 7, 7A, 7C, 7D or 7E;

[45CSR§40-10.4.a., Preheater-Precalciner Kiln, (EP42.04)]

4.2.7. The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with 45CSR§§10-3, 4 and 5 (Sections 4.1.34. and 4.1.35.) by testing and /or monitoring in accordance with one or more of the following: 40 C.F.R. Part 60, Appendix A, Method 6, Method 15, continuous emissions monitoring systems (CEMS) or fuel sampling and analysis as set forth in an approved monitoring plan for each emission unit.
[45CSR§10-8.2.c, 45CSR14, R14-0026, B.5., Preheater-Precalciner Kiln, (EP42.04), Finish Mills (EP44.09, EP44.12, and EP19.02)]

Clinker Handling and Storage - - - EU4

4.2.8. Weekly USEPA Method 22 Visible Emissions observations shall be conducted on each emission point listed in Section 4.1.39, during periods when the equipment is operating and processing clinker. The Method 22 opacity observations shall be conducted each week, at a frequency not to exceed ten (10) days between consecutive observations, using a certified reader. If a positive emission is observed during the weekly USEPA Method 22 observations, a corrective action as listed in the facility's Operating and Maintenance Plan must be initiated within one hour. Additionally, within one hour a certified USEPA Method 9 observer must conduct a USEPA Method 9 opacity measurement (6-minutes) on the affected source. Records of the Method 22 observations and any necessary Method 9 observation shall be retained on-site for at least five (5) years. Upon request, the records shall be certified and made available to the Directory or his/her duly authorized representative.
[Consent Order No. CO-R7-E-2016-6, Order for Compliance, Item 4]

Fuel Handling - - - EU5

4.2.9. See Section 3.2.

4.2.10. Compliance with opacity standards shall be determined by conducting observations in accordance with Reference Method 9 in appendix A of 40 C.F.R. 60. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).
[45CSR16, 40 C.F.R. § 60.11(b), 45CSR14, R14-0026, B.8.]

Cement Production - - - EU6

4.2.11. See Section 3.2.

4.2.12. The requirements under Section 3.2.4 [40 C.F.R. § 63.1350(f)(2)(i) through (iii)] to conduct daily Method 22 testing do not apply to any specific raw mill or finish mill equipped with a continuous opacity monitoring system (COMS) or bag leak detection system (BLDS). If the owner or operator chooses to install a (COMS) in lieu of conducting the daily visual emissions testing required under Section 3.2.4 [40 C.F.R. §63.1350(f)(2)(i) through (iii)], then the (COMS) must be installed at the outlet of the PM control device of the raw mill or finish mill, and the (COMS) must be installed, maintained, calibrated, and operated as required by the general provisions in 40 C.F.R. Part 63 Subpart A and according to PS–1 of appendix B to 40 C.F.R. Part 60. If you choose to install a BLDS in lieu of conducting the daily visual emissions testing required under Section 3.2.4 [40 C.F.R. § 63.1350(f)(2)(i) through (iii)], the requirements in 40 C.F.R. § 63.1350 (m)(1) through (4), (m)(10) and (m)(11) apply.
[45CSR34, 40 C.F.R. §§ 63.1350(f)(4)(i) and (ii), 40 C.F.R. §60.64(b)(4); 45CSR16, 45CSR14, R14-0026, B.10.]

Shipping - - - EU7

4.2.13. See Section 3.2.

4.2.14. In order to determine compliance with conditions 4.1.48. and 4.1.49. of this permit, the permittee shall maintain monthly records of the amount of fuel used by the rail transloader engine.

Compliance with the fuel usage limitation in 4.1.48., and the annual emission limits in 4.1.49., shall be demonstrated on a 12-month rolling total.

[45CSR14, R14-0026, B.18.; 45CSR§30-5.1.c.]

Other Miscellaneous Sources - - - EU8

4.2.15. See Section 3.2.

4.3. Testing Requirements

Facility Wide Requirements

4.3.1. See Section 3.3.

Quarry and Crushing and Raw Material Preparation - - - EU1 and EU2

4.3.2. The permittee shall perform 10-minute monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Sections 4.1.9. ~~and 4.1.13. If any emissions are observed in accordance with the Method 22 testing the permittee shall, within 24 hours, perform a Method 9 test in accordance with 40 CFR Part 60, Appendix A. If six (6) consecutive monthly inspections reveal no visible emissions, then the observer shall take the readings semi-annually. If there are no emissions observed in the semi-annual inspection, then the readings shall be annual. If, at any time a visible emission is observed, the inspections shall revert back to monthly, until (6) consecutive monthly readings have no visible emissions observed. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.~~ that is an affected source subject to an opacity limit under 40 CFR 63 Subpart LLL. All monthly monitoring shall be conducted per the requirements of 40 CFR§63.1350(f)(1)(i) through (vii) (condition 3.2.1(4)).
[45CSR14, R14-0026, A.8.]

4.3.3. (1) In determining compliance with the particulate matter standards in Sections 4.1.11. and 4.1.12. [40 C.F.R. § 60.672 (b)], the owner or operator shall use Method 9 and the procedures in 40 C.F.R. §60.11, with the following additions:

(i) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(ii) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9, Section 2.1) must be followed.

(iii) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.

(3) When determining compliance with the fugitive emissions standard for any affected facility described under §60.672(b) [Sections 4.1.11. and 4.1.12.] or §60.672(e)(1) of 40 C.F.R. 60 Subpart OOO, the duration of the Method 9 (40 CFR part 60, Appendix A–4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of 40 C.F.R. 60 Subpart OOO must be based on the average of the five 6-minute averages.

The permittee must demonstrate compliance with sections 4.1.11 and 4.1.12 by conducting an initial performance test. A repeat performance test within 5 years from the previous performance test for fugitive emissions from affected facilities without water sprays is required for affected facilities that commence construction, modification, or reconstruction on or after April 22, 2008.

[45CSR16, 40 C.F.R. §§ 60.675 (c) (1), and (3) and Table 3 of 40 C.F.R. 60, Subpart OOO, 45CSR14, R14-0026, B.8. (EU1, EU2, EU8, EP37.15)]

4.3.4. The owner or operator shall determine compliance with the particulate matter standards in Section 4.1.10. [40 C.F.R. § 60.672 (a)] as follows:

(1) Method 5 or Method 17 shall be used to determine the particulate matter concentration. The sample volume shall be at least 1.70 dscm (60 dscf). For Method 5, if the gas stream being sampled is at ambient temperature, the sampling probe and filter may be operated without heaters. If the gas stream is above ambient temperature, the sampling probe and filter may be operated at a temperature high enough, but no higher than 121 °C (250 °F), to prevent water condensation on the filter.

(2) Method 9 and the procedures in 40 C.F.R. § 60.11 shall be used to determine opacity.

[45CSR16, 40 C.F.R. §60.675 (b); 45CSR14, R14-0026, B.1. (EU1, EU2, EU8)]

4.3.5. Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this condition.

a. The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

b. Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

c. Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

NTE Requirement for Each Pollutant = (1.25) x (STD)

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

d. Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

e. Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c)

[40 C.F.R. § 60.4212; 45CSR16; 45CSR34; 40 C.F.R. §63.6590(c)(7); 45CSR14, R14-0026, B.1] (EP37.15)

Pyroprocessing - - - EU3

4.3.6. Prior to the installation of calibrated stack gas monitoring devices, sulfur dioxide emission rates shall be calculated on an equivalent fuel sulfur content basis.
[45CSR§10-8.2.b., Preheater-Precalciner Kiln, (EP42.04)]

4.3.7. At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted tests to determine the compliance of such source(s) with the emission limitations of 45CSR§§10-3, 4 or 5 (Sections 4.1.34. and 4.1.35.). Such tests shall be conducted in accordance with the appropriate test method set forth in 40 C.F.R. Part 60, Appendix A, Method 6, Method 15 or other equivalent EPA testing method approved by the Director. The Director, or his or her duly authorized representative, may at his or her option witness or conduct such tests. Should the Director exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices.
[45CSR§10-8.1.a., 45CSR14, R14-0026, B.5., Preheater-Precalciner Kiln (EP42.04), Finish Mills (EP44.09, EP44.12 and EP19.02)]

4.3.8. Reserved.

4.3.9. In order to determine compliance with the hourly VOC, TSP, and PM_{10} emissions limits set forth in Section 4.1.22. and the particulate loading limit set forth in Section 4.1.24., the permittee shall perform EPA approved stack tests on the preheater-precalciner kiln system exhaust stack as outlined in the following table. The initial compliance test must be performed within 180 days of startup of the pyroprocessing system. Said stack tests shall be used to determine a "LB of pollutant per ton of clinker produced" emission factor. This emission factor along with clinker production records shall be used to determine compliance with the annual VOC and PM emission limits set forth in Section 4.1.22.

Test	Test Results	Testing Frequency
Initial	≤50% of VOC, TSP, PM_{10} limits	Once/5 years
Initial	Between 50% and 90% of VOC, TSP, PM_{10} limits	Once/3 years
Initial	≥90% of VOC, TSP, PM_{10} limits	Annual
Annual	After two successive tests indicate emission rates ≤50% of VOC, TSP, PM_{10} limits	Once/5 years
Annual	After two successive tests indicate emission rates <90% of VOC, TSP, PM_{10} limits	Once/3 years
Annual	≥90% of VOC, TSP, PM_{10} limits	Annual
Once/3 years	After two successive tests indicate emission rates ≤50% of VOC, TSP, PM_{10} limits	Once/5 years
Once/3 years	< 90% of VOC, TSP, PM_{10} limits	Once/3 years
Once/3 years	≥90% of VOC, TSP, PM_{10} limits	Annual
Once/5 years	≤50% of VOC, TSP, PM_{10} limits	Once/5 years
Once/5 years	< 90% of VOC, TSP, PM_{10} limits	Once/3 years
Once/5 years	≥90% of VOC, TSP, PM_{10} limits	Annual

[45CSR14, R14-0026, B.13., Preheater-Precalciner (EP42.04)]

4.3.10. Reserved.

4.3.11. Within 180 days of startup of the new PH/PC kiln the permittee will perform tests using EPA Method 202 or an alternative test method approved by the Director to determine the emission rate of Condensable Particulate Matter (CPM) emitted by the new PH/PC kiln.
[45CSR14, R14-0026, B.17., Preheater-Precalciner Kiln, (EP42.04)]

Clinker Handling and Storage - - - EU4

4.3.12. The permittee shall perform 10-minute monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Section~~s~~ 4.1.39~~. If any emissions are observed in accordance with the Method 22 testing the permittee shall, within 24 hours, perform a Method 9 test in accordance with 40 CFR Part 60, Appendix A. If six (6) consecutive monthly inspections reveal no visible emissions, then the observer shall take the readings semi-annually. If there are no emissions observed in the semi-annual inspection, then the readings shall be annual. If, at any time a visible emission is observed, the inspections shall revert back to monthly, until (6) consecutive monthly readings have no visible emissions observed. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.~~ that is an affected source subject to an opacity limit under 40 CFR 63 Subpart LLL. All monthly monitoring shall be conducted per the requirements of 40 CFR§63.1350(f)(1)(i) through (vii) (condition 3.2.1.(4)).
[45CSR14, R14-0026, A.21.]

Fuel Handling - - - EU5

4.3.13. The permittee shall perform 10-minute monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Section~~s~~ 4.1.40~~. If any emissions are observed in accordance with the Method 22 testing the permittee shall, within 24 hours, perform a Method 9 test in accordance with 40 CFR Part 60, Appendix A. If six (6) consecutive monthly inspections reveal no visible emissions, then the observer shall take the readings semi-annually. If there are no emissions observed in the semi-annual inspection, then the readings shall be annual. If, at any time a visible emission is observed, the inspections shall revert back to monthly, until (6) consecutive monthly readings have no visible emissions observed. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.~~ that is an affected source subject to an opacity limit under 40 CFR 63 Subpart LLL. All monthly monitoring shall be conducted per the requirements of 40 CFR§63.1350(f)(1)(i) through (vii) (condition 3.2.1.(4)).

[45CSR14, R14-0026, A.23.]

4.3.14. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, the owner or operator of such facility shall conduct performance test(s) to determine compliance with emission limitations set forth in §60.254(a) and furnish a written report of the results of such performance test(s).
[45CSR16, 40 C.F.R. §60.8 (a), 40 C.F.R. §60.255(a), 45CSR14, R14-0026, B.8.]

4.3.15. The owner or operator must determine compliance with the applicable opacity standards in Section 4.1.42. [40 C.F.R. §60.254(a)] as follows: as specified in paragraphs (1) through (3) of this permit condition.

(1) Method 9 of appendix A–4 of 40 C.F.R. part 60 and the procedures in §60.11 must be used to determine opacity, with the exceptions specified in paragraphs (1)(i) and (ii) of this permit condition.

(i) The duration of the Method 9 of appendix A–4 of this part performance test shall be 1 hour (ten 6-minute averages).
(ii) If, during the initial 30 minutes of the observation of a Method 9 of appendix A–4 of 40 C.F.R. part 60 performance test, all of the 6-minute average opacity readings are less than or equal to half the applicable opacity limit, then the observation period may be reduced from 1 hour to 30 minutes.

(2) To determine opacity for fugitive coal dust emissions sources, the additional requirements specified in paragraphs (2)(i) through (iii) of this permit condition must be used

(i) The minimum distance between the observer and the emission source shall be 5.0 meters (16 feet), and the sun shall be oriented in the 140-degree sector of the back.
(ii) The observer shall select a position that minimizes interference from other fugitive coal dust emissions sources and make observations such that the line of vision is approximately perpendicular to the plume and wind direction.
(iii) The observer shall make opacity observations at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Water vapor is not considered a visible emission.

(3) A visible emissions observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions specified in paragraphs (3)(i) through (iii) of this permit condition are met.

(i) No more than three emissions points may be read concurrently.
(ii) All three emissions points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.

(iii) If an opacity reading for any one of the three emissions points is within 5 percent opacity from the applicable standard (excluding readings of zero opacity), then the observer must stop taking readings for the other two points and continue reading just that single point.

[45CSR16, 40 C.F.R. §§60.257(a)(1) through (3), 45CSR14, R14-0026, B.8. Fuel Handling System EU5 (except EP41.02.04, EP15.04.03, and EP15.04.04)]

Cement Production - - - EU6

4.3.16. The permittee shall perform 10-minute monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Section~~s~~ 4.1.43~~. If any emissions are observed in accordance with the Method 22 testing the permittee shall, within 24 hours, perform a Method 9 test in accordance with 40 CFR Part 60, Appendix A. If six (6) consecutive monthly inspections reveal no visible emissions, then the observer shall take the readings semi-annually. If there are no emissions observed in the semi-annual inspection, then the readings shall be annual. If, at any time a visible emission is observed, the inspections shall revert back to monthly, until (6) consecutive monthly readings have no visible emissions observed. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.~~ that is an affected source subject to an opacity limit under 40 CFR 63 Subpart LLL. All monthly monitoring shall be conducted per the requirements of 40 CFR§63.1350(f)(1)(i) through (vii) (condition 3.2.1.(4)).
[45CSR14, R14-0026, A.25.]

Shipping - - - EU7

4.3.17. The permittee shall perform 10-minute monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Section~~s~~ 4.1.47~~. If any emissions are observed in accordance with the Method 22 testing the permittee shall, within 24 hours, perform a Method 9 test in accordance with 40 CFR Part 60, Appendix A. If six (6) consecutive monthly inspections reveal no visible emissions, then the observer shall take the readings semi-annually. If there are no emissions observed in the semi-annual inspection, then the readings shall be annual. If, at any time a visible emission is observed, the inspections shall revert back to monthly, until (6) consecutive monthly readings have no visible emissions observed. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.~~ that is an affected source subject to an opacity limit under 40 CFR 63 Subpart LLL. All monthly monitoring shall be conducted per the requirements of 40 CFR§63.1350(f)(1)(i) through (vii) (condition 3.2.1.(4)).
[45CSR14, R14-0026, A.29.]

Other Miscellaneous Sources - - - EU8

4.3.18. The permittee shall perform 10-minute monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Section~~s~~ 4.1.56~~. If any emissions are observed in accordance with the Method 22 testing the permittee shall, within 24 hours, perform a Method 9 test in accordance with 40 CFR Part 60, Appendix A. If six (6) consecutive monthly inspections reveal no visible emissions, then the observer shall take the readings semi-annually. If there are no emissions observed in the semi-annual inspection, then the readings shall be annual. If, at any time a visible emission is observed, the inspections shall revert back to monthly, until (6) consecutive monthly readings have no visible emissions observed. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.~~ that is an affected source subject to an opacity limit under 40 CFR 63 Subpart LLL. All monthly monitoring shall be conducted per the requirements of 40 CFR§63.1350(f)(1)(i) through (vii) (condition 3.2.1.(4)).
[45CSR14, R14-0026, A.33.]

4.4. Recordkeeping Requirements

Facility Wide Requirements

4.4.1. See Section 3.4.

4.4.2. For the purpose of determining compliance with production limits set forth in Sections 4.1.1., and 4.1.19., the permittee shall maintain daily and monthly records of the amount of clinker produced in the new preheater-precalciner kiln. Such records shall be retained on-site by the permittee for at least five (5) years and shall be certified and made available to the Director or his duly authorized representative upon request. **[45CSR14, R14-0026, B.15.]**

4.4.3. The permittee shall maintain monthly hours of operation for the major processing operations at the facility. Such records shall be retained on-site by the permittee for at least five (5) years and shall be certified and made available to the Director or his duly authorized representative upon request. **[45CSR14, R14-0026, B.16.]**

Quarry and Crushing and Raw Material Preparation - - - EU1 and EU2

4.4.4. See Section 3.4.

4.4.5. Any owner or operator subject to the provisions of 40 C.F.R. Part 60 shall furnish the Administrator written notification or, if acceptable to both the Administrator and the owner or operator of a source, electronic notification, as follows:

(1) A notification of the date construction (or reconstruction as defined under 40 C.F.R. § 60.15) of an affected facility is commenced postmarked no later than 30 days after such date.

(2) A notification of the anticipated date of initial startup of an affected facility postmarked not more than 60 days not less than 30 days prior to such date.

(3) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date.

[45CSR16, 40 C.F.R. § 60.7 (a) (1), (2), (3), 45CSR14, R14-0026, B.8.]

Pyroprocessing - - - EU3

4.4.6. See Section 3.4.

4.4.7. Recordkeeping requirements. -- Any owner or operator of a kiln subject to 45CSR§40-10 must produce and maintain records, which include, but are not limited to:

a. The emissions, in pounds of NO_X per ton of clinker produced from each affected Portland cement kiln;

b. The type of control used for each affected Portland cement kiln;

c. The date, time and duration of any startup, shutdown or malfunction in the operation of any of the cement kilns or the emissions monitoring equipment;

d. The results of any performance testing;

e. Daily cement kiln production records; and

f. All records required to be produced or maintained will be retained on site for a minimum of 5 years and be made available to the Secretary or Administrator upon request.

[45CSR§40-10.5., Preheater-Precalciner Kiln, (EP42.04)]

4.4.8. The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to 45CSR§§10-3, 4 or 5 (Sections 4.1.34. and 4.1.35.) shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to 45CSR§10-8.2.c. Such records shall be made available to the Director or his duly authorized representative upon request. Such records shall be retained on-site for a minimum of five years.
[45CSR§10-8.3.a, 45CSR14, R14-0026, B.5., Preheater-Precalciner Kiln EP42.04, EP44.09, EP44.12, EP19.02]

4.4.9. The owner or operator of a fuel burning unit(s) or a combustion source(s) shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each unit in a manner specified by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request.
[45CSR§10-8.3.c, 45CSR14, R14-0026, B.5., Preheater-Precalciner Kiln, (EP42.04)]

Clinker Handling and Storage - - - EU4

4.4.10. See Section 3.4.

Fuel Handling - - - EU5

4.4.11. See Section 3.4.

Cement Production - - - EU6

4.4.12. See Section 3.4.

Shipping - - - EU7

4.4.13. See Section 3.4.

Other Miscellaneous Sources - - - EU8

4.4.14. See Section 3.4.

4.4.15. You must keep records according to paragraphs (1) and (2) of this condition.

(1) A copy of each notification and report that you submitted to comply with 40 C.F.R. 63 Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual* compliance report that you submitted, according to the requirements in 40 C.F.R. §63.10(b)(2)(xiv).

** Note – Compliance reports are required once every 5 years for the Administrative Boilers EP0B.01 and EP0B.02 pursuant to 40 C.F.R. §63.7550(b) in permit condition 4.5.15.*

(2) Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in 40 C.F.R. §63.10(b)(2)(viii).

[40 C.F.R. §63.7555(a); 45CSR34] (EP0B.01, EP0B.02)

4.4.16. Format and Retention of Records for 40 C.F.R. 63 Subpart DDDDD.

(a) Your records must be in a form suitable and readily available for expeditious review, according to 40 C.F.R. §63.§(b)(1).

(b) As specified in 40 C.F.R. §63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site, or they must be accessible from on site (for example, through a computer network), for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 C.F.R. §63.10(b)(1). You can keep the records off site for the remaining 3 years.

[40 C.F.R. §§63.7560(a), (b), and (c); 45CSR34] (EP0B.01, EP0B.02)

4.5. Reporting Requirements

Facility Wide Requirements

4.5.1. See Section 3.5.

Quarry and Crushing and Raw Material Preparation - - - EU1 and EU2

4.5.2. See Section 3.5.

4.5.3. The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in Sections 4.1.10. and 4.1.12. [40 C.F.R. §60.672], including reports of opacity observations made using Method 9 to demonstrate compliance with Sections 4.1.11. and 4.1.12. [40 C.F.R. §60.672 (b)], and 40 C.F.R. §60.672 (f).
[45CSR16, 40 C.F.R. §60.676 (f), 45CSR14, R14-0026, B.8. (EU1, EU2, EU8, EP37.15)]

Pyroprocessing - - - EU3

4.5.4. See Section 3.5.

4.5.5. Reporting requirements. -- Any owner or operator subject to the requirements of 45CSR§40-10.1. (condition 4.1.32.) must comply with the following reporting requirements:

Submit a report documenting for that kiln the total NO_X emissions from May 1 through September 30 of each year to the Secretary and Administrator by October 31 of each year, beginning in 2009.

[45CSR§40-10.3.b., Preheater-Precalciner Kiln, (EP42.04)]

4.5.6. The owner or operator shall submit a periodic exception report to the Director, in a manner specified by the Director. Such an exception report shall provide details of all excursions outside the range of measured emissions or monitored parameters established in an approved monitoring plan and shall include, but not be limited to, the time of the excursion, the magnitude of the excursion, the duration of the excursion, the cause

of the excursion and the corrective action taken.
[45CSR§10-8.3.b, Preheater-Precalciner Kiln, (EP42.04)]

Clinker Handling and Storage - - - EU4

4.5.7. See Section 3.5.

Fuel Handling - - - EU5

4.5.8. See Section 3.5.

4.5.9. The owner or operator of an affected facility shall submit the results of initial performance tests to the Administrator or delegated authority, consistent with the provisions of section §60.8. The owner or operator who elects to comply with the reduced performance testing provisions of sections §§60.255(c) or (d) shall include in the performance test report identification of each affected facility that will be subject to the reduced testing. The owner or operator electing to comply with section §60.255(d) shall also include information which demonstrates that the control devices are identical.
[40 C.F.R. §60.258(c); 45CSR16]

Cement Production - - - EU6

4.5.10. See Section 3.5.

Shipping - - - EU7

4.5.11. See Section 3.5.

Other Miscellaneous Sources - - - EU8

4.5.12. See Section 3.5.

4.5.13. You must report each instance in which you did not meet the work practice standard in Table 3 to Subpart DDDDD (permit condition 4.1.58.). These instances are deviations from the work practice standards, in this subpart. These deviations must be reported according to the requirements in §63.7550 (permit condition 4.5.14.).
[40 C.F.R. §63.7540(b); 45CSR34] (EP0B.01, EP0B.02)

4.5.14. **Compliance Report**. You must submit a Compliance report for 40 C.F.R. 63 Subpart DDDDD containing:

a. The information in §63.7550(c)(5)(i) through (iii), (xiv), and (xvii) which is:

(i) Company and Facility name and address.

(ii) Process unit information, emissions limitations, and operating parameter limitations.

(iii) Date of report and beginning and ending dates of the reporting period.

(xiv) Include the date of the most recent tune-up for each unit subject to only the requirement to conduct a 5-year tune-up according to 40 C.F.R. §63.7540(a)(12). Include the date of the most recent burner inspection if it was not done on a 5-year period and was delayed until the next scheduled or unscheduled unit shutdown.

(xvii) Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

b. If there are no deviations from the requirements for work practice standards in Table 3 to 40 C.F.R. 63 Subpart DDDDD that apply to you (condition 4.1.58.), a statement that there were no deviations from the work practice standards during the reporting period.

You must submit the report every 5 years according to the requirements in 40 C.F.R. §63.7550(b), which are:

(1) The first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 C.F.R. §63.7495 and ending on December 31 within 5 years after the compliance date that is specified for your source in 40 C.F.R. §63.7495.

(2) The first 5-year compliance report must be postmarked or submitted no later than January 31.

(3) Each subsequent 5-year compliance report must cover the 5-year periods from January 1 to December 31.

(4) Each subsequent 5-year compliance report must be postmarked or submitted no later than January 31.

(5) You may submit the first and subsequent compliance reports according to the dates established in permit condition 3.5.6. instead of according to the dates in paragraphs (1) through (4) of this condition.

You must submit all reports required by Table 9 of this subpart electronically to the EPA via the CEDRI. (CEDRI can be accessed through the EPA's CDX.) You must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, you may submit an alternate electronic file consistent with the XML schema listed on the CEDRI Web site (*http://www.epa.gov/ttn/chief/cedri/index.html*), once the XML schema is available. If the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in §63.13. You must begin submitting reports via CEDRI no later than 90 days after the form becomes available in CEDRI.

[40 C.F.R. §63.7550(a), Table 9, Items # 1.a. and # 1.b.; 40 C.F.R. §§63.7550(b), (c)(1), and (c)(5)(i) through (iii), (xiv), and (xvii); 40 C.F.R. §63.7550(h)(3); 45CSR34] (EP0B.01, EP0B.02)

4.5.15. **Initial Notification**. If you are required to submit an Initial Notification but are otherwise not affected by the requirements of 40 C.F.R. 63 Subpart ZZZZ, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).
[40 C.F.R. §63.6645(f); 45CSR34] (EP0G.01)

Quarry and Crushing - - - EU1

4.5.16. The permittee shall maintain daily and monthly records of the amount of limestone delivered to pile EP37.06. Such records shall be retained on-site by the permittee for at least five (5) years and shall be certified and made available to the Director or his duly authorized representative upon request.

[45CSR14, R14-0026, B.19.]

4.5.17. Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a) and (b) of this condition.

a. Submit an initial notification as required in §60.7(a)(1). The notification must include the following information:

1. Name and address of the owner or operator;

2. The address of the affected source;

3. Engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement;

4. Emission control equipment; and

5. Fuel used.

b. Keep records of the following information:

1. All notifications submitted to comply with this subpart and all documentation supporting any notification.

2. Maintenance conducted on the engine.

3. If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

4. If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

[40 C.F.R. § 60.4214(a); 45CSR16; 40 C.F.R. §63.6590(c)(7); 45CSR34] (EP37.15)

4.6. Compliance Plan

4.6.1. No compliance plan is required since all sources listed in the renewal application Attachments F have passed their respective performance testing requirements.

5.0 Air Compressor Engine [emission unit ID(s): EP0G.02]

5.1. Limitations and Standards

5.1.1. Emissions from the Air Compressor engine (EP0G.02) shall not exceed the following:

Pollutant	lb/hr	TPY
CO	3.45	6.04
NO_x	5.68	9.94
PM	0.20	0.35
PM_{10}	0.20	0.35
$PM_{2.5}$	0.20	0.35
SO_2	1.22	2.13
VOC	0.63	1.10

[45CSR14, R14-0026, A.34.]

5.1.2. Air Compressor engine (EP0G.02) shall not operate more than 3,500 hours per year. Compliance with this limit shall be based on a rolling twelve-month total. A rolling twelve-month total shall be the sum of the operating hours of the previous twelve calendar months. In order to determine compliance with this condition, the permittee shall monitor and record the number of operating hours each month.
[45CSR14, R14-0026, A.35.]

5.1.3. The permittee must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	**The permittee must meet the following emission limitation, except during periods of startup . . .**	**During periods of startup the permittee must . . .**
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[40CFR§63.6600(b) and Table 2a of 40CFR63, Subpart ZZZZ; 45CSR34; 45CSR14, R14-0026, B.20.]

5.1.4. The permittee must comply with the following operating limitations:

For each . . .	**The permittee must meet the following operating limitation, except during periods of startup . . .**
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

[40CFR§63.6600(b) and Table 2b of 40CFR63, Subpart ZZZZ; 45CSR34; 45CSR14, R14-0026, B.20.]

5.1.5. The permittee must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies according to Table 5 of 40CFR63, Subpart ZZZZ, and during the initial performance test, the permittee must establish each operating limitation in Table 2b of 40CFR63, Subpart ZZZZ that applies.

For each . . .	**Complying with the requirement to . . .**	**The permittee has demonstrated initial compliance if . . .**
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and not using oxidation catalyst	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. The permittee has installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. The permittee has recorded the approved operating parameters (if any) during the initial performance test.
4. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and not using oxidation catalyst	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and ii. The permittee has installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. The permittee has recorded the approved operating parameters (if any) during the initial performance test.

For each . . .	Complying with the requirement to . . .	The permittee has demonstrated initial compliance if . . .
5. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions, and using a CEMS	i. The permittee has installed a CEMS to continuously monitor CO and either O_2 or CO_2 at both the inlet and outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. The permittee has conducted a performance evaluation of the CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average reduction of CO calculated using §63.6620 equals or exceeds the required percent reduction. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average percent reduction achieved during the 4-hour period.
6. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, and using a CEMS	i. The permittee has installed a CEMS to continuously monitor CO and either O_2 or CO_2 at the outlet of the oxidation catalyst according to the requirements in §63.6625(a); and ii. The permittee has conducted a performance evaluation of the CEMS using PS 3 and 4A of 40 CFR part 60, appendix B; and iii. The average concentration of CO calculated using §63.6620 is less than or equal to the CO emission limitation. The initial test comprises the first 4-hour period after successful validation of the CEMS. Compliance is based on the average concentration measured during the 4-hour period.
10. New or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP	a. Limit the concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	i. The average formaldehyde concentration, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde emission limitation; and ii. The permittee has installed a CPMS to continuously monitor operating parameters approved by the Administrator (if any) according to the requirements in §63.6625(b); and iii. The permittee has recorded the approved operating parameters (if any) during the initial performance test.

For each . . .	**The permittee must meet the following emission limitation, except during periods of startup . . .**	**During periods of startup the permittee must . . .**
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O2	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.6(g) for alternative work practices.

[40CFR§§63.6630(a) and (b) and Tables 2b and 5 of 40CFR63, Subpart ZZZZ; 45CSR34]

5.1.6. The permittee must comply with the following general compliance requirements from 40CFR63, Subpart ZZZZ:

a. The permittee must be in compliance with the emission limitations, operating limitations, and other requirements in 40CFR63, Subpart ZZZZ that apply at all times.

b. At all times the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40CFR§63.6605; 45CSR34]

5.1.7. For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40CFR40 CFR 94.11(a).
[40CFR§63.6640(d); 45CSR34]

5.1.8. The permittee must comply with the applicable general provisions of 40CFR63, Subpart ZZZZ.
[40CFR§63.6665 and Table 8 to 40CFR63, Subpart ZZZZ; 45CSR34]

5.2. Monitoring Requirements

5.2.1. The permittee must comply with the following monitoring and operating requirements:

a. If the permittee elects to install a CEMS as specified in Table 5 of 40CFR63, Subpart ZZZZ, the permittee must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this condition. If the permittee is meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If the permittee meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

1. Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

2. The permittee must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in 40CFR§63.8 and according to the applicable performance specifications of 40 CFR part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

3. As specified in 40CFR§63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. The permittee must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

4. The CEMS data must be reduced as specified in 40CFR§63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

b. If the permittee is required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of 40CFR63, Subpart ZZZZ, the permittee must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this condition.

1. The permittee must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this condition and in 40CFR§63.8(d). As specified in 40CFR§63.8(f)(4), the permittee may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this condition in the site-specific monitoring plan.

   i. The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

   ii. Sampling interface (e.g., thermocouple) location such that the monitoring system will provide representative measurements;

   iii. Equipment performance evaluations, system accuracy audits, or other audit procedures;

   iv. Ongoing operation and maintenance procedures in accordance with provisions in 40CFR§§63.8(c)(1)(ii) and (c)(3); and

   v. Ongoing reporting and recordkeeping procedures in accordance with provisions in 40CFR§§63.10(c), (e)(1), and (e)(2)(i).

2. The permittee must install, operate, and maintain each CPMS in continuous operation according to the procedures in the site-specific monitoring plan.

3. The CPMS must collect data at least once every 15 minutes (see also 40CFR§63.6635).

4. For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

5. The permittee must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in the site-specific monitoring plan at least annually.

6. The permittee must conduct a performance evaluation of each CPMS in accordance with the site-specific monitoring plan.

c. If the permittee operates a new, reconstructed, or existing stationary engine, the permittee must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to 40CFR63, Subpart ZZZZ.

[40CFR§§63.6625(a), (b), and (h); 45CSR34]

5.2.2. The permittee must comply with the following monitoring requirements to demonstrate continuous compliance:

a. If the permittee must comply with emission and operating limitations, the permittee must monitor and collect data according to this section.

b. Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, the permittee must monitor continuously at all times that the stationary RICE is operating. 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.

c. The permittee may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. The permittee must, however, use all the valid data collected during all other periods.

[40CFR§63.6635; 45CSR34]

5.3. Testing Requirements

5.3.1. If the permittee owns or operates a stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions the permittee is subject to the requirements of this section.

a. The permittee must conduct the initial performance test or other initial compliance demonstrations in Table 4 to 40CFR63, Subpart ZZZZ that apply within 180 days after the compliance date that is specified for the stationary RICE in 40CFR§63.6595 and according to the provisions in 40CFR§63.7(a)(2).

For each . . .	Complying with the requirement to . . .	The permittee must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. reduce CO emissions	i. Select the sampling port location and the number/location of traverse points at the inlet and outlet of the control device; and		(a) For CO and O_2 measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A-1, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A-4.
		ii. Measure the O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(b) Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.
		iii. Measure the CO at the inlet and the outlet of the control device	(1) ASTM D6522-00 (Reapproved 2005)[ab] (heated probe not necessary) or Method 10 of 40 CFR part 60, appendix A-4	(c) The CO concentration must be at 15 percent O_2, dry basis.
3. Stationary RICE	a. limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and		(a) For formaldehyde, CO, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter and the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.

For each . . .	Complying with the requirement to . . .	The permittee must . . .	Using . . .	According to the following requirements . . .
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)[a], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

[a]The permittee may also use Methods 3A and 10 as options to ASTM-D6522-00 (2005). The permittee may obtain a copy of ASTM-D6522-00 (2005) from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[b]The permittee may obtain a copy of ASTM-D6348-03 from at least one of the following addresses: American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106.

[40CFR§63.6610(a) and Table 4 of 40CFR63, Subpart ZZZZ; 45CSR34; 45CSR14, R14-0026, B.20.]

5.3.2. If the permittee must comply with the emission limitations and operating limitations, the permittee must conduct subsequent performance tests as specified in Table 3 of 40CFR63, Subpart ZZZZ.

For each . . .	**Complying with the requirement to . . .**	**The permittee must . . .**
1. New or reconstructed 2SLB stationary RICE >500 HP located at major sources; new or reconstructed 4SLB stationary RICE ≥250 HP located at major sources; and new or reconstructed CI stationary RICE >500 HP located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE >500 HP located at major sources and new or reconstructed 4SLB stationary RICE 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]

[1]After the permittee has demonstrated compliance for two consecutive tests, the permittee may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or the permittee deviates from any operating limitations, the permittee must resume semiannual performance tests.

[40CFR§63.6615 and Table 3 of 40CFR63, Subpart ZZZZ; 45CSR34; 45CSR14, R14-0026, B.20.]

5.3.3. The permittee must perform the following performance tests and other procedures:

a. The permittee must conduct each applicable performance test in Tables 3 and 4 of 40CFR63, Subpart ZZZZ.

b. Each performance test must be conducted according to the requirements that 40CFR63, Subpart ZZZZ specifies in Table 4 of 40CFR63, Subpart ZZZZ. If the permittee owns or operates a non-operational stationary RICE that is subject to performance testing, the permittee does not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE.

c. The permittee must conduct three separate test runs for each performance test required in this section, as specified in 40CFR§63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in 40CFR63, Subpart ZZZZ.

d. The permittee must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} x\, 100 = R\ (Eq.1)$$

Where:

C_i = concentration of carbon monoxide (CO), total hydrocarbons (THC), or formaldehyde at the control device inlet,

C_o = concentration of CO, THC, or formaldehyde at the control device outlet, and

R = percent reduction of CO, THC, or formaldehyde emissions.

e. The permittee must normalize the CO, THC, or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO_2). If pollutant concentrations are to be corrected to 15 percent oxygen and CO_2 concentration is measured in lieu of oxygen concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (e)(1) through (3) of this condition.

1. Calculate the fuel-specific F_o value for the fuel burned during the test using values obtained from Method 19, Section 5.2, and the following equation:

$$F_o = \frac{0.209\ F_d}{F_c} \quad (Eq.2)$$

Where:

F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu)

2. Calculate the CO_2 correction factor for correcting measurement data to 15 percent O_2, as follows:

$$X_{CO2} = \frac{5.9}{F_o} \quad (Eq.3)$$

Where:

X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent O_2—15 percent O_2, the defined O_2 correction value, percent.

3. Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO2}}{\%CO_2} \quad (Eq.4)$$

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

$\%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

f. If the permittee complies with the emission limitation to reduce CO and is not using an oxidation catalyst, if the permittee complies with the emission limitation to reduce formaldehyde and is not using NSCR, or if the permittee complies with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and is not using an oxidation catalyst or NSCR, the permittee must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. The permittee must not conduct the initial performance test until after the petition has been approved by the Administrator.

g. If the permittee petitions the Administrator for approval of operating limitations, the petition must include the following information:

1. Identification of the specific parameters the permittee proposes to use as operating limitations;

2. A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

3. A discussion of how the permittee will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;

4. A discussion identifying the methods the permittee will use to measure and the instruments the permittee will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and

5. A discussion identifying the frequency and methods for recalibrating the instruments the permittee will use for monitoring these parameters.

h. If the permittee petitions the Administrator for approval of no operating limitations, the petition must include the following information:

1. Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (e.g., operator adjustment, automatic controller adjustment, etc.) or unintentionally (e.g., wear and tear, error, etc.) on a routine basis or over time;

2. A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

3. For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

4. For the parameters which could change in such a way as to increase HAP emissions, a discussion of how the permittee could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

5. For the parameters, a discussion identifying the methods the permittee could use to measure them and the instruments the permittee could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

6. For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments the permittee could use to monitor them; and

7. A discussion of why, from the permittee's point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

i. The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[40CFR§63.6620; 45CSR34; 45CSR14, R14-0026, B.20.]

5.3.4. The permittee must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to 40CFR63, Subpart ZZZZ that apply according to methods specified in Table 6 to 40CFR63, Subpart ZZZZ.

For each . . .	**Complying with the requirement to . . .**	**The permittee must demonstrate continuous compliance by . . .**
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
3. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, new or reconstructed non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP	a. Reduce CO emissions or limit the concentration of CO in the stationary RICE exhaust, and using a CEMS	i. Collecting the monitoring data according to §63.6625(a), reducing the measurements to 1-hour averages, calculating the percent reduction or concentration of CO emissions according to §63.6620; and ii. Demonstrating that the catalyst achieves the required percent reduction of CO emissions over the 4-hour averaging period, or that the emission remain at or below the CO concentration limit; and iii. Conducting an annual RATA of the CEMS using PS 3 and 4A of 40 CFR part 60, appendix B, as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.
8. New or reconstructed non-	a. Limit the	i. Conducting semiannual performance tests for

For each . . .	**Complying with the requirement to . . .**	**The permittee must demonstrate continuous compliance by . . .**
emergency stationary RICE >500 HP located at a major source of HAP and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	concentration of formaldehyde in the stationary RICE exhaust and not using oxidation catalyst or NSCR	formaldehyde to demonstrate that emissions remain at or below the formaldehyde concentration limit[a]; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE	a. Reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust, and not using oxidation catalyst	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that emissions remain at or below the CO or formaldehyde concentration limit; and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

[a]After the permittee has demonstrated compliance for two consecutive tests, the permittee may reduce the frequency of subsequent performance tests to annually. If the results of any subsequent annual performance test indicate the stationary RICE is not in compliance with the CO or formaldehyde emission limitation, or the permittee deviated from any operating limitations, the permittee must resume semiannual performance tests.

[40CFR§63.6640(a) and Table 6 of 40CFR63, Subpart ZZZZ; 45CSR34]

5.4. Recordkeeping Requirements

5.4.1. The permittee must keep the following records:

a. If the permittee must comply with the emission and operating limitations, the permittee must keep the records described in paragraphs (a)(1) through (a)(5) and (b)(1) through (b)(3) of this condition.

1. A copy of each notification and report that the permittee submitted to comply with 40CFR63, Subpart ZZZZ, including all documentation supporting any Initial Notification or Notification of Compliance Status that the permittee submitted, according to the requirement in 40CFR§63.10(b)(2)(xiv).

2. Records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.

3. Records of performance tests and performance evaluations as required in 40CFR§63.10(b)(2)(viii).

4. Records of all required maintenance performed on the air pollution control and monitoring equipment.

5. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40CFR§63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

b. For each CEMS or CPMS, the permittee must keep the records listed in paragraphs (b)(1) through (3) of this condition.

1. Records described in 40CFR§§63.10(b)(2)(vi) through (xi).

2. Previous (i.e., superseded) versions of the performance evaluation plan as required in 40CFR §63.8(d)(3).

3. Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in 40CFR §63.8(f)(6)(i), if applicable.

c. The permittee must keep the records required in Table 6 of 40CFR63, Subpart ZZZZ (condition 5.3.4) to show continuous compliance with each applicable emission or operating limitation.

[40CFR§§63.6655(a), (b), and (d); 45CSR34]

5.4.2. The permittee must keep records in the following form and duration:

a. Records must be in a form suitable and readily available for expeditious review according to 40CFR§63.10(b)(1).

b. As specified in 40CFR§63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

c. The permittee must keep each record readily accessible in hard copy or electronic form for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40CFR§63.10(b)(1).

[40CFR§63.6660; 45CSR34]

5.5. Reporting Requirements

5.5.1. The permittee must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40CFR§63.6645.
[40CFR§63.6630(c); 45CSR34]

5.5.2. The permittee must report each instance in which the permittee did not meet each emission limitation, operating limitation, or other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, Table 2d and Table 8 to 40CFR63, Subpart ZZZZ that apply. These instances are deviations from the emission and operating limitations in 40CFR63, Subpart ZZZZ. These deviations must be reported according to the requirements in 40CFR§63.6650.
[40CFR§§63.6640(b) and (e); 45CSR34]

5.5.3. The permittee must submit the following notifications:

a. The permittee must submit all of the notifications in 40CFR§§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply by the dates specified.

b. If the permittee starts up a new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, the permittee must submit an Initial Notification not later than 120 days after becoming subject to 40CFR63, Subpart ZZZZ.

c. If the permittee is required to conduct a performance test, the permittee must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40CFR§63.7(b)(1).

d. If the permittee is required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to 40CFR63, Subpart ZZZZ, the permittee must submit a Notification of Compliance Status according to 40CFR§63.9(h)(2)(ii).

1. For each initial compliance demonstration required in Table 5 to 40CFR63, Subpart ZZZZ that does not include a performance test, the permittee must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

2. For each initial compliance demonstration required in Table 5 to 40CFR63, Subpart ZZZZ that includes a performance test conducted according to the requirements in Table 3 to 40CFR63, Subpart ZZZZ, the permittee must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to 40CFR§63.10(d)(2).

[40CFR§§63.6645(a), (c), (g), and (h); 45CSR34]

5.5.4. The permittee must submit the following reports:

a. The permittee must submit each applicable report in Table 7 of 40CFR63, Subpart ZZZZ.

For each . . .	The permittee must submit a . . .	The report must contain . . .	The permittee must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in 40CFR§63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in 40CFR§§63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in 40CFR§§63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		b. If the permittee had a deviation from any emission limitation or operating limitation during the reporting period, the information in 40CFR §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in 40CFR§63.8(c)(7), the information in 40CFR§63.6650(e); or	i. Semiannually according to the requirements in 40CFR§63.6650(b).
		c. If the permittee had a malfunction during the reporting period, the information in §63.6650(c)(4).	i. Semiannually according to the requirements in 40CFR§63.6650(b).

b. Unless the Administrator has approved a different schedule for submission of reports under 40CFR§63.10(a), the permittee must submit each report by the date in Table 7 of 40CFR63, Subpart ZZZZ and according to the following requirements:

1. For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for the affected source in 40CFR§63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for the source in 40CFR§63.6595.

2. For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for the affected source in 40CFR§63.6595.

3. For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

4. For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

5. For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40CFR§70.6(a)(3)(iii)(A) or 40CFR§71.6(a)(3)(iii)(A), the permittee may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this condition.

6. For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for the affected source in 40CFR§63.6595 and ending on December 31.

7. For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for the affected source in 40CFR§63.6595.

8. For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

9. For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

c. The Compliance report must contain the following information:

1. Company name and address.

2. Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.

3. Date of report and beginning and ending dates of the reporting period.

4. If the permittee has a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40CFR§63.6605(b), including actions taken to correct a malfunction.

5. If there are no deviations from any emission or operating limitations that apply, a statement that there were no deviations from the emission or operating limitations during the reporting period.

6. If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in 40CFR§63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

d. For each deviation from an emission or operating limitation that occurs for a stationary RICE where the permittee is not using a CMS to comply with the emission or operating limitations in 40CFR63, Subpart ZZZZ, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this condition and the following information:

1. The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

2. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

e. For each deviation from an emission or operating limitation occurring for a stationary RICE where the permittee is using a CMS to comply with the emission and operating limitations in 40CFR63, Subpart ZZZZ, the permittee must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this condition.

1. The date and time that each malfunction started and stopped.

2. The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.

3. The date, time, and duration that each CMS was out-of-control, including the information in 40CFR§63.8(c)(8).

4. The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.

5. A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

6. A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

7. A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

8. An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

9. A brief description of the stationary RICE.

10. A brief description of the CMS.

11. The date of the latest CMS certification or audit.

12. A description of any changes in CMS, processes, or controls since the last reporting period.

f. Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in 40CFR63, Subpart ZZZZ in the semiannual monitoring report required by 40CFR§70.6(a)(3)(iii)(A) or 40CFR§71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of 40CFR63, Subpart ZZZZ along with, or as part of, the semiannual monitoring report required by 40CFR§70.6(a)(3)(iii)(A) or 40CFR§71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in 40CFR63, Subpart ZZZZ, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

[40CFR§§63.6650(a)-(f); 45CSR34]

5.6. Compliance Plan

5.6.1. N/A

APPENDIX A

40 C.F.R. 63 Subpart LLL
Portland Cement Manufacturing MACT
Site Specific Monitoring Plan

Prepared for:

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Table of Contents

1.0 OVERVIEW **1**
1.1 INTRODUCTION 1
1.2 DEFINITION OF A CONTINUOUS MONITORING SYSTEM 1
1.3 REGULATORY REQUIREMENTS FOR A PC MACT SITE SPECIFIC MONITORING PLAN 1
1.4 PC MACT REQUIRED CMS'S BEING OPERATED AT THE PLANT 2

2.0 CMS INSTALLATION, PERFORMANCE AND EQUIPMENT SPECIFICATIONS, AND DATA COLLECTION AND REDUCTION (40 CFR 1350(P)(1)(I) AND (II) AND (P)(2)(II)) **4**
2.1 CMS INSTALLATION (40 CFR 1350(P)(1)(I)) 4
2.2 CMS PERFORMANCE AND EQUIPMENT SPECIFICATIONS (40 CFR 1350(P)(1)(II)) 5
2.3 CMS DATA COLLECTION AND REDUCTION (40 CFR 1350(P)(2)(II)) 5
2.3.1 Programmable Logic Controller (PLC) and Data Acquisition and Handling System (DAHS) *5*
2.3.2 VIM Technologies, Inc. CEMLink 6 ..... *5*
2.3.3 Manual Opacity Monitoring *7*

3.0 ONGOING OPERATION AND MAINTENANCE PLANS AND PROCEDURES (40 CFR 63.1350(P)(2)(I)) **8**
3.1 GENERAL 8
3.2 CEMS QA/QC PLANS 8
3.3 MONITORING PROCEDURES 10

4.0 QUALITY CONTROL (QC) ACTIVITIES (40 CFR 1350(P)(1)(III) AND(P)(4)) **13**
4.1 GENERAL 13
4.2 ROUTINE PERFORMANCE EVALUATIONS ((40 CFR 1350(P)(1)(III)) 13
4.2.1 Daily Calibration Checks *13*
4.2.2 Systems Checks *14*
4.2.3 Routine Preventative Maintenance *14*

5.0 QUALITY ASSURANCE ACTIVITIES (40 CFR 63.1350(P)(2)(II)) **15**
5.1 ONGOING QA ACTIVITIES 15
5.2 QUALITY ASSURANCE PROCEDURES 15
5.3 RELATIVE ACCURACY TEST AUDIT (RATA) 15
5.3.1 RATA Testing Prerequisites *16*
5.3.2 RATA Testing Procedures *16*
5.3.3 RATA Data Reduction and Analysis *16*
5.4 RELATIVE ACCURACY CALCULATIONS 16
5.5 CALIBRATION GAS AUDIT 17

6.0 PERFORMANCE EVALUATIONS (40 CFR 63.1350(P)(3)) **18**
6.1 GENERAL 18
6.2 REPORT EMISSION TEST REQUIREMENTS 18
6.3 PERFORMANCE TEST NOTIFICATION AND REPORTING 18
6.4 PERFORMANCE TEST FREQUENCY 18
6.5 CONDITIONS OF PERFORMANCE TESTS 19

7.0 RECORDKEEPING AND REPORTING (40 CFR 63.1350(P)(2)(III)) **20**
7.1 GENERAL 20
7.2 PERFORMANCE TEST REPORT OUTLINE 20
7.3 PERFORMANCE TEST REPORTING REQUIREMENTS 21

8.0 OPERATION AND MAINTENANCE OF THE CMS'S (40 CFR 1350(P)(4)) 22
ATTACHMENT A: OPACITY MONITORING PLAN 23

1.0 Overview

1.1 Introduction

The United States Environmental Protection Agency (U.S. EPA) on February 12, 2013 promulgated revised Maximum Available Control Technology (MACT) National Emission Standards for Hazardous Air Pollutants (NESHAPs) for the Portland Cement Manufacturing Industry (i.e., the PC MACT Rule). This regulation is found in 40 CFR 63 Subpart LLL. The Martinsburg Plant (Plant) is a Portland cement plant as defined in 40 CFR 63.1341, and is therefore subject to the PC MACT Rule. 40 CFR 63.1350(p) requires the development of a PC MACT Site Specific Monitoring Plan (Plan) if a Portland cement plant demonstrates compliance with any PC MACT emission limits through performance evaluations (i.e., testing) or emissions monitoring. This Plan also includes the Plant Opacity Monitoring Plan which is presented in Attachment A.

1.2 Definition of a Continuous Monitoring System

40 CFR 63.1350(p)(1) through (4) references a Continuous Monitoring System (CMS). As defined by 40 CFR 63.2, a CMS is "*a comprehensive term that may include, but is not limited to, continuous emission monitoring systems, continuous opacity monitoring systems, continuous parameter monitoring systems, or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation.*"

1.3 Regulatory Requirements for a PC MACT Site Specific Monitoring Plan

A summary of the regulatory requirements specified in 40 CFR 63.1350(p)(1) through (4) are as follows.

(p) Develop and submit, upon request, monitoring plans.

If the Plant demonstrates compliance with any applicable emissions limit through performance stack testing or other emissions monitoring, the Plant needs to develop a site-specific monitoring plan according to the requirements specified in 40 CFR 63.1350 (p)(1) through 40 CFR 63.1350 (p)(4). This requirement would also apply if the Plant petitions the EPA for allowing use of alternative monitoring parameters provided in 40 CFR 63.1350(o) and 40 CFR 63.8(f). Also, if the Plant uses or plans to use a Bag Leak Detection System (BLDS), the Plant needs to meet the requirements specified in 40 CFR 63 1350(p)(5).

(1) For each CMS required, the Plant needs to develop, and submit to the West Virginia Department of Environmental Protection (WV DEP) for approval if requested by WV DEP, a Plan that addresses paragraphs 40 CFR 63.1350(p)(1)(i) through 40 CFR 63.1350(p)(1)(iii). The Plant needs to submit the Plan, if requested by WV DEP, at least 30 days before the conduct of the initial performance evaluation of each Plant CMS.

(i) Install each CMS sampling probe or other interface at a measurement location relative to each affected process unit so that that the measurement is representative of the control of the exhaust emissions (e.g., on or downstream of the last control device),

(ii) Develop and maintain performance and equipment specifications for all sample interfaces, the pollutant concentrations or parametric signal analyzers, and the data collection and reduction systems, and

(iii) Perform evaluation procedures and acceptance criteria (e.g., RATA's, calibrations, etc).

(2) In the Plan, the Plant needs to also address 40 CFR 63.1350 (p)(2)(i) through 40 CFR 63.1350 (p)(2)(iii) and provide the following:

(i) Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR 63.8(c)(1), (c)(3), and 40 CFR 68(c)(4)(ii),

(ii) Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR 63.8(d), and

(iii) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR 63.10(c), (e)(1), and 40 CFR 63(e)(2)(i).

(3) The Plant needs to conduct a performance evaluation of each CMS in accordance with the Plan.

(4) The Plant needs to operate and maintain the CMS in continuous operation according to the Plan.

1.4 PC MACT Required CMS's Being Operated at the Plant

The Plant operates the following PC MACT required CMS's as provided below. Also included are the PC MACT regulatory monitoring requirements as noted in the parenthesis.

- Total Hydrocarbon (THC) Continuous Emissions Monitoring System (CEMS) located on the Main Stack *(40 CFR 63.1350(i))*,
- Mercury (Hg) CEMS located on the Main Stack *(40 CFR 63.1350(k))*,
- Hydrogen Chloride (HCl) CEMS located on the Main Stack *(40 CFR 63.1350(l))*,
- Particulate Matter (PM) Continuous Parametric Monitoring System (CPMS) located on the Main Stack *(40 CFR 63.1350(b))*,

- Dioxin/Furan (D/F) CPMS (i.e., inlet baghouse temperature) located at the inlet to the Kiln and Alkali Removal System (ARS) Baghouses *(40 CFR 63.1350(g))*,
- Hourly clinker production monitoring for the PH/PC Kiln System *(40 CFR 63.1350(d))*,
- Opacity monitoring using Method 22/Method 9 at all applicable PC MACT affected sources except for Finish Mill #1 and Finish Mill #2 which use a Continuous Opacity Monitoring System (COMS) to measure opacity *(40 CFR 63.1350(f))*,
- Continuous flowrate monitor located on the Main Stack *(40 CFR 63.1350(n))*,
- O_2 monitor located on the Main Stack *(40 CFR 63.1343)*, and
- Site-specific moisture monitoring per EPA Test Method 4 or moisture monitor located on the Main Stack *(40 CFR 63.1343)*.

3

2.0 CMS Installation, Performance and Equipment Specifications, and Data Collection and Reduction (40 CFR 1350(p)(1)(i) and (ii) and (p)(2)(ii))

2.1 CMS Installation (40 CFR 1350(p)(1)(i))

Continuous monitoring using the CMS sampling probes is performed by the Plant at locations which are representative of the control of the exhaust emissions for those air pollutants regulated by PC MACT. Specifically, this continuous monitoring includes installation and operation at the Plant of HCl, THC, and Hg CEMS (i.e., CMS sampling probes), which are located on the Plant's Main Stack. The continuous monitoring data from the HCl and Hg CEMS is used for demonstrating compliance with the PC MACT HCl and Hg kiln emission limits. The continuous monitoring data from the THC CEMS is used parametrically for demonstrating compliance with the PC MACT Organic HAP (O-HAP) kiln emission limit.

In addition, particulate matter (PM) and dioxin furan (D/F) CPMS are operated by the Plant to demonstrate compliance parametrically with the applicable PC MACT PM and D/F existing kiln emission limits. For the PM CPMS, filterable PM is parametrically monitored by a PM CPMS located on the Main Stack. The analog or digital output signal from the PM CPMS is correlated annually to corresponding Method 5 filterable PM stack test data to establish a parametric PM emission limit for the PH/PC Kiln system. For the D/F CPMS, a temperature probe is installed and operated at the inlet to the Kiln and ARS Baghouses to parametrically monitor the baghouse inlet temperatures. The Kiln and ARS Baghouse inlet temperatures are correlated to corresponding D/F stack test data to parametrically represent D/F emissions for demonstrating compliance with the PC MACT D/F kiln emission limit. The Main Stack volumetric stack flowrate is continuously monitored and the volumetric stack flowrate data is used in conjunction with the Hg CEMS concentration data and the measured hourly Plant clinker production data from the PH/PC Kiln system to determine the PH/PC Kiln system Hg emission rate which is expressed as pounds/million (MM) tons clinker.

Manual monitoring (i.e., Method 22 and Method 9) is used to demonstrate compliance with the opacity limit for all applicable PC MACT affected sources, except for Finish Mill #1 and Finish Mill #2, so no installation is required. For Finish Mill #1 and Finish Mill #2, COMS are installed on each finish mill stack to measure opacity.

For determining hourly clinker production from the PH/PC Kiln system, the Plant has installed, calibrated, maintains, and operates a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of kiln feed provided to the PH/PC Kiln system. The system of measuring kiln feed to the PH/PC Kiln system is maintained within ± 5 percent accuracy and is checked quarterly. To implement this clinker production monitoring, the Plant has developed a procedure which specifies how the hourly clinker production rate from the PH/PC Kiln system is calculated.

Percent Oxygen (O_2) is continuously monitored from an O_2 sensor located on the Main Stack. The percent O_2 data is used in determining the THC and HCl emission rates since these emission

4

rates need to be corrected to 7 percent oxygen per the requirements specified in 40 CFR 63.1343(a). D/F emissions testing is conducted periodically per 40 CFR 63.1349(c) and the results are also corrected for 7% O_2.

The moisture content contained in the Main Stack is determined by measuring moisture using a ABB ACT-NT rack mounted FTIR analyzer located on the Main Stack, or alternatively, by using site specific stack moisture content data taken from past Plant stack tests which utilized U. S. EPA Test Method 4, "Determination of Moisture Content in Stack Gases" (40 CFR 60 Appendix A-3) per the requirements specified in 40 CFR 63.1343(a).

2.2 CMS Performance and Equipment Specifications (40 CFR 1350(p)(1)(ii))

The Plant utilizes the CMS's described in Section 2.1 to meet PC MACT continuous monitoring requirements. Specific information regarding the THC, Hg, HCl, PM, D/F, O_2, Moisture, Opacity (COMS), and flowrate CMS's associated with each CMS performance and equipment specification is provided in the THC, Hg, and HCl CEMS PC MACT QA/QC Plans, PC MACT PM CPMS QA/QC Plan, COMS QA/QC Plan, and in vendor supplied equipment information for the other cited PC MACT regulated pollutants and parameters. Manual monitoring (i.e., Method 22 and Method 9) is used to demonstrate compliance with the opacity limit for all applicable PC MACT affected sources, except for Finish Mill #1 and Finish Mill #2 which use COMS to monitor opacity; performance and equipment specifications are not applicable for manual monitoring.

2.3 CMS Data Collection and Reduction (40 CFR 1350(p)(2)(ii))

2.3.1 Programmable Logic Controller (PLC) and Data Acquisition and Handling System (DAHS)

The Plant utilizes a state-of-the-art Programmable Logic Controller (PLC). The PLC is an industrial computer control system that continuously monitors the state of input devices and makes decisions based upon a custom program to control the state of output devices. The PLC serves as the gateway for communications between the CEMS, CPMS, COMS, other analyzers (O_2 and flowrate), and the Data Acquisition and Handling System (DAHS) and is located on a Plant dedicated personal computer (PC). Specifically, the PLC provides control and monitoring of digital and analog input and output signals to and from the CEMS, CPMS, and COMS systems.

For calculating hourly clinker production, the PLC receives electrical signals (e.g., milliamps) from the kiln feed weigh scale system. The PLC is programmed to only utilize an electrical signal which corresponds to a kiln feed rate which is greater than or equal to 10 tons/hour. This prevents the PLC from using an electrical signal representing "electronic noise" as a valid data during those times when there is no kiln feed going across the weigh scale.

2.3.2 VIM Technologies, Inc. CEMLink 6

The DAHS software used at the Plant is the VIM Technologies, Inc. CEMLink 6. This software provides the following functions:

- **CEMS System Control:**
  - Calibrations auto/manual/corrections
  - Probe purging/back flush
  - Determine/establish alarm limits
  - Initiate maintenance operations

- **DCS and Process Critical Data:**
  - Gateway between DAHS PC and Plant Information
  - Logs data during DAHS PC downtimes
  - Computes values based on plant inputs and outputs them as required

- **Data Availability:**
  - Processes 1-minute analyzer data
  - Up to 7-days of raw data storage
  - Automatic upload of stored data following periods of DAHS PC non-availability
  - Computes emission rates based on CEMS input/output (I/O)

- **Operator Interfaces/Touch Screen Panels:**
  - Monitor real time values
  - Acknowledge alarms
  - Initiate calibrations
  - Initiate calibration gas audit (CGA) and analyzer maintenance modes

The CEMLink 6 Data Supervisor is a database program that organizes reports and stores the CEMS, CPMS, and COMS data. All system information including analyzer readings, corrected averages, limited parameters, monitoring codes, process codes, calibration data, regulatory data, alarms and events are logged in the Data Supervisor. Reports can be viewed on the screen, sent to any network or dedicated printer, exported to another application for customization or rolled up into a PDF format. Available reports include:

- Monthly Hourly Averages
- Monthly 24-Hour Averages
- Monthly Calibration Logs
- 40 CFR 60.7 Summary Reports
- 12-Month Rolling Report
- CEMS Downtime Report
- Excess Emissions Report
- Process Status Report (monthly, quarterly, or bi-annually)
- 40 CFR 60 Edit Log (monthly, quarterly, or bi-annually)

For compliance reporting calculations, CEMLink 6 processes 1-minute average emission data as measured by the CEMS into 1-hour average emission data. The 1-hour average emission data are then used to calculate a 30-day rolling average emission rate. For Hg, CEMLink 6 will also use hourly clinker production data to calculate the 30-day Hg emission rates in the units of Lbs Hg/MM tons clinker.

6

2.3.3 Manual Opacity Monitoring

Results of manual opacity monitoring will be recorded on paper forms or will be recorded using electronic devices and stored on electronic media. Records will be maintained in the Plant Environmental Manager's office.

3.0 Ongoing Operation and Maintenance Plans and Procedures (40 CFR 63.1350(p)(2)(i))

3.1 General

The Plant has developed and maintains a number of specific operation and maintenance plans and procedures related to site-specific monitoring that is being conducted in order to meet the applicable PC MACT requirements. These operation and maintenance plans and procedures are referenced throughout this Plan. Provided below is a listing and overview of each operation and maintenance plan and procedure. Additional details can be found in each specific operation and maintenance plan and procedure which is maintained by the Plant.

3.2 CEMS QA/QC Plans

- **Hg CEMS QA/QC Plan**

The Plant uses a Tekran Hg CEMS, consisting of a 2537A Hg Mercury Analyzer, 3310 Hg Calibrator, 3315 Hg Ionic Calibrator, 3320 Sample Conditioner, 3340 Dilution Probe Controller, 3342 Non-Inertial Probe, and a 3305 CEMS controller located on the Main Stack. The Tekran Hg CEMS is an extractive sampling unit that measures Hg by cold vapor atomic fluorescence detection. The Tekran Hg CEMS also utilizes a pure gold cartridge which is immune to memory effects and will not degrade over time. The Tekran Hg CEMS in compliance with 40 CFR 63.1350(k) requirements and the Hg CEMS data is used to demonstrate compliance with the PC MACT Hg emission limit of 55 pounds/MM tons clinker (40 CFR 63.1343(b), Table 1).

The PC MACT Hg CEMS QA/QC Plan describes in detail the Tekran Hg CEMS which serves as the basis for assessing and maintaining the quality of continuous Hg emission monitoring data. The objective of the PC MACT Hg CEMS QA/QC Plan is to provide documentation for the collection of Hg emission data of known and acceptable quality, and in sufficient quantity, in order to demonstrate compliance with the PC MACT monitoring requirements applicable to the Plant.

The PC MACT Hg CEMS QA/QC Plan also address other necessary support services and activities, such as manual methods source testing, data reduction, spare parts inventory control, and report preparation and submittal; all of which are required in order to maintain data quality.

- **HCl CEMS QA/QC Plan**

The Plant uses an ABB ACF5000 multi-component Fourier Transfer Infrared (FTIR) analyzer located on the Main Stack for the measurement of HCl. The ABB ACF5000 multi-component FTIR is based on the principle of using FTIR spectroscopy which absorbs HCl in the infrared region to determine HCl emissions. The ABB ACF5000 multi-component FTIR HCl CEMS is in compliance with 40 CFR 63.1350(l) requirements and the HCl CEMS data is used to

demonstrate compliance with the PC MACT HCl emission limit of 3.0 ppmvd (40 CFR 63.1343(b), Table 1).

The PC MACT HCl CEMS QA/QC Plan describes in detail the ABB ACF5000 multi-component FTIR which serves as the basis for assessing and maintaining the quality of continuous HCl emission monitoring data. The objective of the PC MACT HCl CEMS QA/QC Plan is to provide documentation for the collection of HCl emission data of known and acceptable quality and in sufficient quantity in order to demonstrate compliance with the air pollution emission and air monitoring regulations applicable to the Plant.

The PC MACT HCl CEMS QA/QC Plan also address other necessary support services and activities, such as manual methods source testing, data reduction, spare parts inventory control, and report preparation and submittal; all of which are required in order to maintain data quality.

- **THC CEMS QA/QC Plan**

The Plant uses an ABB Multi- flame ionization detector (FID) 14 analyzer which uses a FID for the measurement of THC and is located on the Main Stack. The PC MACT THC CEMS QA/QC Plan describes in detail this analyzer which serves as the basis for assessing and maintaining the quality of continuous THC emission monitoring data. The THC CEMS is in compliance with 40 CFR 63.1350(j) requirements and the THC CEMS data from the Main Stack is used to parametrically demonstrate compliance with the PC MACT Total Organic HAP limit of 12 ppmvd (40 CFR 63.1343(b), Table 1, Footnote 4).

The objective of the PC MACT THC CEMS QA/QC Plan is to provide documentation for the collection of THC emission data of known and acceptable quality and in sufficient quantity in order to parametrically demonstrate compliance with the PC MACT monitoring requirements applicable to the Plant.

The PC MACT THC CEMS QA/QC Plan also address other necessary support services and activities, such as manual methods source testing, data reduction, spare parts inventory control, and report preparation and submittal; all of which are required in order to maintain data quality.

- **PM CPMS QA/QC Plan**

The Plant uses a SICK DUSTHUNTER SP100 analyzer for the parametric measurement of particulate matter (PM) located on the Main Stack. The SICK DUSTHUNTER SP100 PM analyzer is a certified scattered light dust monitor for detecting low to medium concentrations of dust contained in dry flue gas and process gas. The SICK DUSTHUNTER SP100 CPMS is in compliance with 40 CFR 63.1350(b) requirements and the parametric PM CPMS data (i.e., analog or digital output signal) is used to demonstrate compliance with the parametric PC MACT PM emission limit established by the Plant which cannot be exceeded more than four times in a calendar year (40 CFR 63.1350(b)(iv)).

The PC MACT PM CPMS QA/QC Plan describes in detail this analyzer which serves as the basis for assessing and maintaining the quality of continuous parametric PM emission monitoring data. The objective of the PC MACT PM CPMS QA/QC Plan is to provide

documentation for the collection of PM emission data of known and acceptable quality and in sufficient quantity in order to demonstrate compliance with the PC MACT monitoring requirements applicable to the Plant.

The PC MACT PM CPMS QA/QC Plan also address other necessary support services and activities, such as manual methods source testing, data reduction, spare parts inventory control, and report preparation and submittal; all of which are required in order to maintain data quality.

- **COMS QA/QC Plan**

The COMS QA/QC Plan describes in detail the COMS analyzers used and presents the U.S. EPA established requirements for quality assurance, quality control, monitoring, record keeping, and reporting opacity levels in flue gases emitted from affected units. The COMS are governed by the regulations established under 40 CFR Part 60, Appendix B, Performance Specification 1 and 40 CFR Part 60 Appendix F, Quality Assurance Procedures, which include general requirements for the installation, certification, operation, and maintenance of the COMS.

- **Plant Operations and Maintenance (O&M) Plan**

Per the PC MACT Rule (40 CFR 63 Subpart LLL), the Plant is required to have established procedures for the proper operation and maintenance of all PC MACT Rule affected sources and air pollution control devices in order to meet PC MACT emissions limits and operating limits, including any applicable fugitive dust control measures for any open clinker piles located at the Plant per 40 CFR 63.1342 through 40 CFR 63.1348.

The O&M Plan is also required to address periods of Plant startup and shutdown. The O&M Plan satisfies the requirements of 40 CFR 63.1347(a).

- **Plant Opacity Monitoring Plan**

Per the PC MACT Rule, specifically 40 CFR 63.1350(f), the Plant is required to develop an Opacity Monitoring Plan in accordance with 40 CFR 63.1350(p)(1) through (4) and 40 CFR 63.1350(f)(1)(i) through (vii). The Plant Opacity Monitoring Plan is provided as Attachment A to this Plan and describes in detail the opacity limits, monitoring, recordkeeping, and reporting requirements for all applicable Plant PC MACT affected sources subject to an opacity limit.

3.3 Monitoring Procedures

- **Plant Procedure for Monitoring Using a Weigh Scale System**

This Plant procedure addresses 40 CFR 63.1350(d) requirements where the Plant is required to have installed, calibrated, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of kiln feed which is used to estimate the amount of clinker produced by the PH/PC Kiln system. The system of measuring clinker is required to be maintained within ±5 percent accuracy.

The hourly clinker production rate is calculated using a kiln-specific feed to clinker ratio based on reconciled clinker production determined by the Plant for accounting purposes and using recorded kiln feed rates. This ratio is updated monthly. If this ratio changes at the time of clinker reconciliation, the Plant will use the new ratio going forward, but it will not be used retroactively to change the clinker production rates previously estimated.

- **Plant Procedure for Monitoring Kiln Stack Volumetric Flowrate**

The Plant operates an ABB ACT-NT rack mount FTIR analyzer located on the Main Stack. This Plant procedure addresses 40 CFR 63.1350(n) requirements where the Plant is required to install, operate, calibrate, and maintain instruments, according to the requirements in paragraphs 40 CFR 63.1350(n)(1) through 40 CFR 63.1350(n)(10), to continuously measure and record the stack gas volumetric flow rate. The stack gas volumetric flow rate data is used in conjunction with the Hg CEMS data to determine the Hg mass emissions rate in a unit of pounds per million tons of clinker and used to demonstrate compliance with the PC MACT PH/PC Kiln Hg emission limit.

- **Plant Procedure for Kiln Stack O_2 Monitoring**

The Plant operates a Servomex Model Pm1158 O_2 analyzer located on the Main Stack. The O_2 monitoring data is used to correct the THC and HCl CEM emission data to 7 percent oxygen. D/F emissions testing is conducted periodically per 40 CFR 63.1349(c) and the results are also corrected for 7% O_2. This Plant procedure addresses 40 CFR 63.1343(a) requirements.

- **Plant Procedure for Kiln Stack Moisture Monitoring**

The moisture content contained in the Main Stack is determined by measuring moisture using a ABB ACT-NT rack mounted FTIR analyzer located on the Main Stack, or alternatively, by using site specific stack moisture content data taken from past Plant stack tests which utilized U. S. EPA Test Method 4, "Determination of Moisture Content in Stack Gases" (40 CFR 60 Appendix A-3). Appropriate moisture corrections need to be made per 40 CFR 63.1343(a) when measuring a dry volumetric flow rate that is used when calculating the Hg emission rate.

- **Plant Procedure for Monitoring Kiln and ARS Baghouse Inlet Temperatures for D/F Parametric Monitoring**

This Plant procedure addresses 40 CFR 63.1350(g) requirements where the Plant is required to install, calibrate, maintain, and continuously operate a CMS to record the temperature of the exhaust gases at the inlet to the Kiln and ARS Baghouses. The inlet temperature data is used to parametrically demonstrate compliance with the D/F emission limit of 0.2 or 0.4 ng/dscfm (TEQ), depending if the inlet temperature measured during the most recent D/F performance tests are greater than 400 °F or less than 400 °F, respectively. Also, during periods of startup and shutdown the temperature limit may only be exceeded by no more than 10 percent per 40 CFR 63.1346. Thermocouples are used which have been calibrated to NIST standards and are changed by the Plant quarterly.

- **Standard Operating Procedure for Kilns and Clinker Coolers During Plant Startup and Shutdown**

Plant Standard Operating Procedures (SOPs) for startup and shutdown are utilized for both the PH/PC Kiln and Clinker Cooler. The Plant O&M Plan provides details of these procedures.

The PC MACT regulations governing startup and shutdown for existing kilns and clinker coolers are provided in 40 CFR 63.1346(g) and 40 CFR 63.1348(b)(9), respectively, and stipulate the "Work Practices" to be followed per 40 CFR 63.1343(a) for an existing kiln and existing clinker cooler located at an existing major source. Work practices for startup of an existing kiln mean the time from when a shutdown kiln first begins firing fuel until the kiln begins producing clinker. Further, startup begins when a shutdown kiln turns on the induced draft fan and begins firing fuel in the main burner. Startup ends when feed is being continuously introduced into the kiln for at least 120 minutes or when the feed rate exceeds 60 percent of the kiln design limitation rate, whichever occurs first. Shutdown means the cessation of kiln operation. Shutdown begins when feed to the kiln is halted and ends when continuous kiln rotation ceases.

As described in 40 CFR 63.1346(a)(1) and (2), the Plant is required to monitor and record the Kiln and ARS Baghouses inlet temperature during periods of startup/shutdown where the inlet temperature limit may be exceeded by no more than 10 percent. The Plant will preheat the PH/PC Kiln with "clean fuels" until the temperature reaches 1,200°F. During periods of startup and shutdown the Plant will use Best Management Practices (BMPs) to minimize emissions. All air pollution control devices must be turned on and operating prior to combusting any fuel.

For the Clinker Cooler, the work practice standards cited in 40 CFR 63.1343(a) are provided in 40 CFR 63.1348(b)(9) where the Plant is required that all APCD's must be in operation during periods of Plant startup and shutdown.

4.0 Quality Control (QC) Activities (40 CFR 1350(p)(1)(iii) and(p)(4))

4.1 General

Quality Control (QC) is defined as the procedures, policies, and corrective actions necessary to ensure product quality. QC procedures are typically "routine activities". These routine activities include, but are not limited to, daily calibration checks, systems inspections, and routine preventative maintenance. The QC activities performed at the Plant are designed to ensure that monitoring and maintenance operations are conducted adequately and appropriately. Besides routine activities, QC activities can also range from performing CMS system installation to developing and implementing data handling/reporting procedures. QC activities are performed by the applicable Plant Departments.

Initial installation of any CMS will be carried out by the Plant in strict accordance with the procedures established by the CMS vendor and any attending regulatory requirements including the applicable EPA Performance Specifications (PS) and/or factory acceptance testing requirements. These QC procedures also include initial start-up, debugging, and inspection of the CMS to ensure proper operation.

A complete set of Operational and Maintenance (O&M) manuals for all components of the CMS's used at the Plant are maintained by the appropriately designated Plant personnel. These O&M manuals provide complete descriptions of the CMS's including theory, installation, operation, trouble shooting, repair, and general maintenance.

Further details regarding additional QC activities including data handling, compliance levels, calibrations, zero and spans checks, loss of CMS data, spare parts, and other relevant topics related to QC activities associated with the CMS's are discussed in the applicable PC MACT CEMS, CPMS, and COMS QA/QC Plans. Additionally, the Plant's O&M Plan provides further relevant discussion of opacity monitoring, open clinker storage piles, O&M procedures, recordkeeping, and reporting requirements stipulated by the PC MACT Rule.

It is important to note that QC activities differ from Quality Assurance (QA) activities. QA is defined as the series of checks performed to ensure the QC procedures are functioning properly. QA activities include, but are not limited to, calibration gas audits, performing Relative Accuracy Test Audits (RATAs), and EPA PS testing which are discussed in further detail in Section 5.0 of this Plan.

4.2 Routine Performance Evaluations ((40 CFR 1350(p)(1)(iii))

4.2.1 Daily Calibration Checks

Each CEMS, CPMS, and COMS is automatically challenged to a known standard once every 24 hours. The DAHS calculates the percent difference from entered known values. The Plant

Instrumentation Supervisor or designee is responsible for verifying monitor response with the applicable PS specified in 40 CFR Part 60 Appendix F, at a minimum.

Recalibration of the CEMS, CPMS, and COMS will be performed if drift is indicated. Further details regarding QC procedures and acceptance criteria for the PM, Hg, THC, and HCl CEMS are provided in their respective PC MACT CEMS, PC MACT COMS, and PC MACT CPMS QA/QC Plans. Also, the Plant has established separate QC procedures applicable to the Kiln and ARS Baghouse inlet temperature monitors, the Main Stack volumetric flowrate monitor, O_2 monitor, and the permanent weigh scale system.

4.2.2 Systems Checks

System checks for each CMS analyzer consists of performing a zero drift check and a span drift check. Where applicable, system checks also include checking the calibration gas pressure, the compressed air supply, sample gas flow rates, and performing weekly, monthly, and bi-annual maintenance on each CMS analyzer. Also, where applicable, the system check includes performing a quarterly calibration gas audits for all CMS's and performing a monthly inspection of the permanent weigh scale system.

4.2.3 Routine Preventative Maintenance

Routine preventive maintenance is a regularly scheduled set of activities designed to prevent problems before they occur. Routine maintenance is performed on all the CMS systems, including the CEMS, CPMS, and COMS utilizing procedures provided in their respective PC MACT Hg, HCl, and THC CEMS QA/QC Plans, PM CPMS QA/QC Plan, COMS QA/QC Plan, and the Plant O&M Manual. Additional information on operations and maintenance plans and procedures is provided in Section 3.0 of this Plan.

5.0 Quality Assurance Activities (40 CFR 63.1350(p)(2)(ii))

5.1 Ongoing QA Activities

The Plant performs ongoing quality assurance (QA) activities per 40 CFR 60 Appendices A, B, and F to assess the accuracy of the CEMS, CPMS, and COMS which are used to demonstrate compliance with PC MACT standards (i.e., emission limits). Verification of the operational status includes completion of the manufacturer's written specifications or recommendations for installation, operation, and calibration of the monitoring systems. Further details on QA activities associated with the CEMS, CPMS, and COMS can be found in the PC MACT Hg, HCl, and THC CEMS QA/QC Plans, PM CPMS QA/QC Plan, and COMS QA/QC Plan which are kept on file at the Plant.

5.2 Quality Assurance Procedures

The purpose of QA procedures is to ensure that the CEMS, COMS, and the CPMS provide accurate and reliable data. These procedures compare the pollutant/diluent values obtained from the CEMS to values obtained by the EPA Reference Method or an approved alternative testing method. The results of these tests provide verification of the continued comparability of the CEMS data to data collected by and compared to outside references. The procedures for these tests are published in EPA 40 CFR Part 60, Appendices A, B, and F. For the COMS and PM CPMS procedures are published in 40 CFR 60, Appendix B, Performance Specification 1, 40 CFR 60, Appendix F; Quality Assurance Procedures.

Per 40 CFR 1350(d)(2), each quarter the Plant will determine, record, and maintain a record of the ongoing accuracy of the permanent weigh scale system for measuring hourly feed mass flow for the PH/PC Kiln. The Plant maintains a copy of this procedure at the Plant.

5.3 Relative Accuracy Test Audit (RATA)

A Relative Accuracy Test Audit (RATA) as described in EPA's, 40 CFR 60 Appendix B is a test designed to assess the accuracy of the applicable CMS monitors relative to the appropriate EPA reference method tests. The RATA for the applicable CMS's is conducted in accordance with the applicable U.S. EPA Test Methods and U.S. EPA Performance Specifications. Further details regarding QA procedures for COMS, PM CPMS and the Hg, THC, and HCl CEMS are provided in the PM CPMS QA/QC Plan, COMS QA/QC Plan, and the Hg, THC, and HCl CEMS QA/QC Plans.

The Plant is responsible for hiring the RATA contractor and providing appropriate notification to the state. Additionally, designated Plant personnel will oversee the performance of the RATA and assemble and provide the required CMS data during the conduct of the RATA. The contractor is responsible for preparing the RATA report and using applicable Plant emission data and information which will be provided by the Plant. All RATA data and records will be kept by the Plant.

5.3.1 RATA Testing Prerequisites

Prior to the actual RATA testing procedures, several testing prerequisites will be performed. Testing prerequisites include but are not limited to the following:

- Verify the availability of all personnel required to perform testing,
- Verify that all schedule maintenance of the CMS has been performed,
- Verify that the test location conditions are adequate for testing, and that necessary support services are available,
- Review the applicable Reference Methods contained in 40 CFR Part 60 Appendices. Also review applicable Performance Specifications contained in 40 CFR Part 60, Appendix B and relevant and applicable Methods, and
- Submit RATA Notification. Per 40 CFR 63.9(g)(1) a notification of the date for any scheduled performance evaluation must be submitted to the state in writing at least 60 calendar days prior to when the performance evaluation is scheduled to begin. Per 40 CFR 63.2 *Performance evaluation* means the conduct of relative accuracy testing, calibration error testing, and other measurements used in validating the continuous monitoring system data.

5.3.2 RATA Testing Procedures

The following procedures will be conducted before, during, and after RATA testing.

- Verify that the CMS operating conditions are "in control" by conducting a systems audit.
- Notify applicable Plant personnel and the RATA contractor of the testing schedule and request notification form the Plant Control Room if any condition arises that would result in less than a 50 percent stable load during the RATA.
- Obtain copies of CMS reports covering the test period.
- Perform the post-test calibration and document the results of the calibration.

5.3.3 RATA Data Reduction and Analysis

The results of the manual Reference Method (RM) tests, as part of the RATA, are calculated according to procedures included in EPA's 40 CFR Part 60, Appendix A.

5.4 Relative Accuracy Calculations

The calculation procedure for relative accuracy as described in EPA's, 40 CFR 60, Appendix B is a test designed to assess the accuracy of the applicable CMS monitors relative to the

appropriate EPA RM tests. The RATA calculations for the applicable CMS systems are conducted in accordance with applicable U.S. EPA Test Methods. Further details regarding QA procedures for Hg, THC, and HCl are provided in their respective PC MACT CEMS QA/QC Plan.

A calibration check must be conducted at least daily for determination of zero and upscale calibration drift. Each day, the COMS and PM CPMS status indicators and final recording device must be checked for faults and/or alarms associated with the COMS and PM CPMS. A calibration error test shall be performed on each COMS and PM CPMS at least once every calendar quarter using neutral density audit filters. . Further details regarding QA procedures for are provided in their respective PC MACT COMS and PM CPMS QA/QC Plan.

5.5 Calibration Gas Audit

A calibration gas audit (CGA) is performed quarterly for each CEMS monitor for each quarter in which a RATA is not conducted. Refer to Section 5.2.1 of the respective PC MACT CEMS QA/QC Plans for a discussion of CGA procedures. The CGA is performed in accordance with the requirements specified in Appendix F to 40 CFR Part 60. For additional information on use of CGA's as part of applicable CEM RATA procedures refer to the applicable EPA Test Methods. Designated Plant personnel perform the CGA.

The CGA results are maintained on file by the Plant. The audit calibration gases are introduced at the CEM probe's injection port. The CEMS is challenged at two calibration levels (low-, and mid-). The two calibration gas levels are defined by 40 CFR Part 60 as: (1) low-level concentration is 20 to 30% of span and (2) mid-level concentration is 50 to 60% of span.

6.0 Performance Evaluations (40 CFR 63.1350(p)(3))

6.1 General

Performance evaluations (i.e., performance tests) will be performed in accordance with applicable EPA 40 CFR 60 Appendix B requirements. The required PC MACT performance testing requirements are specified in 40 CFR 63.1349.

The required applicable Appendix B Reference Method testing will be conducted by a competent and professional testing contractor hired by the Plant, and performed in accordance with approved EPA procedures. If the performance evaluation does not produce acceptable results, corrective actions will be taken and the performance evaluation will need to be again performed. Full documentation of all corrective actions performed is required. Further details regarding the conduct and content of performance evaluations (i.e., systems appraisals) for each CMS are provided in the respective CEMS QA/QC Plans, PM CPMS QA/QC Plan, and COMS QA/QC Plan.

6.2 Report Emission Test Requirements

40 CFR 63.1349(b) specifies emission test requirements for PM (b)(1), Opacity (b)(2), D/F (b)(3), THC (b)(4), Hg (b)(5), HCl (b)(6), Total Organic HAPs (b)(7), and HCl with SO_2 Monitoring (b)(8). Applicable 40 CFR 63.1349(b) emission test requirements will be reported by the Plant.

6.3 Performance Test Notification and Reporting

As described in 40 CFR 63.7(c)(2)(i), the Plant will need to make available to the applicable regulatory authority prior to conducting the performance test, if requested, a specific performance test plan (i.e., Testing Protocol) which needs to be followed during the conduct of the performance testing. Per 40 CFR 63.1349(e), the Plant must notify the WV DEP in writing of its intent to conduct a performance test at least 60 calendar days before it is scheduled to begin.

The Plant is required to document performance test results in a complete test report that contains the information required by paragraphs (a)(1) through (a)(10) of 40 CFR 63.1349, as well as all other relevant information. See Sections 8.2 and 8.3 of this Plan for specific requirements and the content of the Performance Test Report.

The Performance Test Report will need to be submitted no later than 60 days following the conduct of the performance test and signed by a responsible company official.

6.4 Performance Test Frequency

Performance tests are required to be performed every 30 months for affected sources that are subject to a D/F, Organic HAP (in lieu of a THC limit), or HCl (only if you use a wet or dry

scrubber or tray tower) emissions limit. A performance test for all PC MACT affected sources subject of a PM emission limit is required to be repeated every 12 months.

Performance tests for THC, Hg, and HCl (only if you are not using a wet or dry scrubber or tray tower) where these three pollutants are monitored using a CEMS, have to be conducted only during the initial performance test.

6.5 Conditions of Performance Tests

Conduct performance tests under such conditions as specified in the PC MACT Rule. Upon request, the Plant will need to make available to the WV DEP any records that may be necessary to determine the Plant conditions at the time of the conduct of any performance test.

7.0 Recordkeeping and Reporting (40 CFR 63.1350(p)(2)(iii))

7.1 General

As described in the Plant O&M Plan, appropriate documentation of the operating, maintenance, monitoring, and inspection activities conducted pursuant to the O&M Plan will be maintained on file at the Plant in accordance with applicable PC MACT requirements. Also, ongoing recordkeeping and reporting will be performed in accordance with the general requirements of 40 CFR 63.10(c), (e)(1), and (e)(2)(i).

The Plant will record all relevant files in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files will be retained by the Plant for a period of least five years following the date of each occurrence, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data will be retained at the Plant. The remaining three years of data may be retained by the Plant at an offsite location.

7.2 Performance Test Report Outline

Per 40 CFR 63.1349(a), after the conduct of a performance test, a Performance Test Report needs to be prepared and specifically address the following, as well as all other relevant information:

(1) A brief description of the process and the air pollution control system;

(2) Sampling location description(s);

(3) A description of sampling and analytical procedures and any modifications to standard procedures;

(4) Test results;

(5) Quality assurance procedures and results;

(6) Records of operating conditions during the performance test, preparation of standards, and calibration procedures;

(7) Raw data sheets for field sampling and field and laboratory analyses;

(8) Documentation of calculations;

(9) All data recorded and used to establish parameters for monitoring; and

(10) Any other information required by the performance test method.

7.3 Performance Test Reporting Requirements

The information specified below will need to be submitted no later than 60 days following the initial performance test and any subsequent performance tests.

- The performance test data as recorded
- The values for the site-specific operating limits or parameters established pursuant to 40 CFR 63.1349(b)(1), (3), (6), and (7), as applicable, and a description, including sample calculations, of how the operating parameters were established during the performance test.

All reports will need to be signed by a responsible company official or their designee.

Within 60 days after the date of completing each performance test, as defined in 40 CFR 63.2, which was conducted to demonstrate compliance with any standard covered by 40 CFR 63.1349, the Plant needs to submit the RATA data and performance test data, except for opacity data, to the EPA by successfully submitting the data electronically to the EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) found at the following EPA website, *http://www.epa.gov/ttn/chief/ert/ert_tool.html/*.

8.0 Operation and Maintenance of the CMS's (40 CFR 1350(p)(4))

All maintenance of the CMS's can be classified into one of two areas:

1. **Routine Preventive Maintenance**: A regularly scheduled set of activities designed to prevent problems before they occur.

2. **Non-Routine Preventive Maintenance:** A set of activities designed to prevent problems, but the need for it cannot be predicted, so it is done on an as-needed basis. Non-routine preventive maintenance is not discussed in the CEMS QA/QC Plans, PM CPMS QA/QC Plan, or the COMS QA/QC Plan because it is neither practical nor necessary to develop written procedures for it.

Routine maintenance is performed on all the CMS systems, including the CEMS, PM CPMS, and COMS, utilizing procedures provided in their respective CEMS QA/QC Plans, PM CPMS QA/QC Plan, COMS QA/QC Plan, and the Plant O&M Plan.

Attachment A: Opacity Monitoring Plan

23

PC MACT OPACITY MONITORING PLAN

ESSROC MARTINSBURG PLANT

MARTINSBURG, WEST VIRGINIA

Preparation Date:
July 2015

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PC MACT Opacity Monitoring Plan
Table of Contents

1.0 Introduction

2.0 PC MACT Regulatory Requirements

3.0 Opacity Emission Limits

4.0 Monitoring Requirements

5.0 Reporting Requirements

6.0 Recordkeeping Requirements

Appendix

A List of PC MACT Affected Sources

1.0 Introduction

This PC MACT Opacity Monitoring Plan was developed for the Martinsburg Plant (Plant) to meet PC MACT Rule 40 CFR 63.1350(f) and 40 CFR 63.1350(p) requirements. Specifically, 40 CFR 63.1350(f) requires that a Opacity Monitoring Plan must be developed in accordance with 40 CFR 63.1350(p)(1) through (4) and 40 CFR 63.1350(f)(1)(i) through (vii).

Since kiln systems and clinker coolers no longer have an applicable PC MACT opacity limit beginning on September 9, 2015, the Plant is required to only perform visible emission monitoring (Method 22) and opacity monitoring (Method 9) for all other applicable Plant PC MACT affected sources, as defined in 40 CFR 63.1340(b) to (c), to demonstrate compliance with their PC MACT opacity limits.

Alternatively, the Plant has an option of using a Bag Leak Detection System (BLDS) or a continuous opacity monitoring system (COMS) to demonstrate compliance with each PC MACT affected source's opacity limit. The Plant is using COMS on Finish Mill #1 and Finish Mill #2 to demonstrate compliance with the PC MACT opacity limit.

The PC MACT Opacity Monitoring Plan consists of this Introduction (Section 1.0), PC MACT Regulatory Requirements (2.0), Opacity Limits (3.0), Monitoring Requirements (4.0), Reporting Requirements (5.0), Recordkeeping Requirements (6.0), and a List of PC MACT Affected Sources (Appendix A).

2.0 PC MACT Regulatory Requirements

The following provides a summary of applicable PC MACT opacity regulatory requirements.

- 40 CFR 63.1343(b), Table 1, Item 13, presents the opacity limit which is applicable to the three existing Plant finish mills.

- 40 CFR 63.1345, Emissions Limits for PC MACT Affected Sources Other Than Kilns, Clinker Coolers, and New or Reconstructed Raw Material Dryers, provides the opacity limit which is applicable to Plant PC MACT affected sources other than those listed above. Specifically, the Plant PC MACT affected sources include raw material, clinker, and finished product storage bins; conveying system transfer points; bagging systems; and bulk loading and unloading systems, (herein referenced as "material handling points").

- 40 CFR 63.1348(b)(3), Continuous Monitoring Requirements for Opacity Compliance, requires that the Plant, since it is subject to the opacity limit specified in 40 CFR 63.1345, demonstrate compliance using the monitoring methods and procedures specified in 40 CFR 63.1350(f), which is based on the maximum 6-minute average opacity exhibited during the performance test period. The Plant also is required to initiate corrective actions within 1-hour of detecting a visible emission above the PC MACT affected source's opacity limit.

- 40 CFR 63.1349(b)(2), Initial Opacity Tests, requires the Plant, since the Plant is subject to an opacity limit, to perform an initial opacity test on each PC MACT affected source in accordance with Method 9 of 40 CFR 60 Appendix A-4. The duration of this Method 9 performance test is required to be 3-hours (consisting of 30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1-hour if the conditions of 40 CFR 63.1349(b)(2)(i) through (b)(2)(ii) are applicable. Specifically, 40 CFR 63.1349 (b)(2)(i) specifies that there are no individual readings greater than 10 percent opacity and 40 CFR 63.1349 (b)(2)(ii) specifies that there are no more than three readings of 10 percent for the first 1-hour period.

- 40 CFR 63.1349(d) Performance Test Reporting Requirements. The Plant is required to submit the information specified in 40 CFR 63.1349(d) for all performance testing required under 40 CFR 63.1349(b).

- 40 CFR 63.1350(f), Opacity Monitoring Requirements. The Plant, since it is subject to a opacity limit specified in 40 CFR 63.1345, is required to conduct opacity monitoring in accordance with the provisions of paragraphs (f)(1)(i) through (vii) and also be in accordance with this PC MACT Opacity Monitoring Plan which is required to be developed by 40 CFR 63.1350(p). Specifically, the PC MACT Opacity Monitoring Plan is required to be developed in accordance with requirements defined in 40 CFR 63.1350(p)(1) through (4) and (o)(5), if applicable.

- 40 CFR 63.1350(p), Development of Monitoring Plans. 40 CFR 63.1350(p)(1-4) provides guidance for the development of monitoring plans for each continuous monitoring system (CMS). CMS is defined by 40 CFR 63.2 as "a comprehensive term that may include, but is not limited to, continuous emission monitoring systems (CEMS), continuous opacity monitoring systems (COMS), continuous parameter monitoring systems (CPMS), or other manual or automatic monitoring that is used for demonstrating compliance with an applicable regulation on a continuous basis as defined by the regulation." As of September 9, 2015, the Plant only utilizes manual monitoring (i.e., Method 22 and Method 9) to measure visible emissions and opacity from applicable PC MACT affected sources subject to an opacity limit except for Finish Mill #1 and Finish Mill #2 which monitor opacity using COMS.

- 40 CFR 63.1350(p)(1) requires information specific to COMS, CEMS, and CPMS to be included in the monitoring plan, such as installation details, performance and equipment specifications, and calibration procedures. This information is not applicable to the manual monitoring (Method 22/Method 9) conducted by the Plant to measure visible emissions and opacity from applicable PC MACT affected sources but is applicable for the use of COMS to monitor opacity from Finish Mill #1 and Finish Mill #2 and is addressed in the Plant's COMS QA/QC Plan.

- 40 CFR 63.1350(p)(2) requires the monitoring plan to address the following:

  - Ongoing operation and maintenance procedures in accordance with the general requirements of 40 CFR 63.8(c)(1), (c)(3), and (c)(4)(ii). These are addressed in the Plant's Operation and Maintenance Plan.

  - Ongoing data quality assurance procedures in accordance with the general requirements of 40 CFR 63.8(d). This requirement is not applicable to the manual monitoring (Method 22/Method 9) conducted by the Plant to measure visible emissions and opacity from applicable PC MACT affected sources but is applicable for the use of COMS to monitor opacity from Finish Mill #1 and Finish Mill #2 and is addressed in the Plant's COMS QA/QC Plan.

  - Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 CFR 63.10(c), (e)(1), and (e)(2)(i). Reporting requirements are provided in Section 5.0 of this Opacity Monitoring Plan. Recordkeeping requirements are provided in Section 6.0 of this Opacity Monitoring Plan.

- 40 CFR 63.1350(p)(3) requires the Plant to conduct a performance evaluation of each CMS. This requirement is not applicable to the manual monitoring (Method 22/Method 9) conducted by the Plant to measure visible emissions and opacity from applicable PC MACT affected sources but is applicable for the Plant's use of COMS on Finish Mill #1 and Finish Mill #2 to monitor opacity and is addressed in the Plant's QA/QC Plan.

- 40 CFR 63.1350(p)(4) requires the Plant to operate and maintain the CMS in continuous operation. This requirement is not applicable to the manual monitoring (Method

22/Method 9) conducted by the Plant to measure visible emissions and opacity for applicable PC MACT affected sources but is applicable for the use of COMS to monitor opacity from Finish Mill #1 and Finish Mill #2.

- 40 CFR 63.1353(b)(3), Notification Requirements, requires the Plant to notify the West Virginia Department of Environmental Protection (WV DEP) of any opacity and visible emission observations that will be conducted as required by 40 CFR 63.1349 and be performed in accordance with 40 CFR 63.6(h)(5) and 40 CFR 63.9(f).

- 40 CFR 63.1355 presents details of the PC MACT Rule recordkeeping requirements.

3.0 Opacity Limits

- **Finish Mills**

The three Plant finish mills have a 10 percent opacity limit.

- **PC MACT Affected Sources Which are Material Handling Points**

The PC MACT affected sources which are considered to be Plant material handling points have a 10 percent opacity limit.

4.0 Opacity Monitoring Requirements

4.1 Material Handling Points

The following describes the procedures used to periodically conduct visual emissions monitoring of PC MACT affected sources which are material handling points.

The Plant routinely performs Method 22 and Method 9 tests which meet the PC MACT Rule requirements specified below. Per 40 CFR 63.1350(f) of the PC MACT Rule, the Operations and Maintenance (O&M) Plan includes procedures to be used to periodically monitor PC MACT affected sources which have an opacity limit. These requirements include:

Conducting a **monthly 10-minute** visible emissions test (**Method 22**) of each PC MACT affected source in accordance with Method 22 of 40 CFR 60 Appendix A-7. The performance test is required to be conducted while the PC MACT affected source is in operation.

If no visible emissions are observed in **six consecutive monthly tests** for any PC MACT affected source, the Plant may decrease the frequency of performance testing from monthly to semi-annually for that PC MACT affected source. If visible emissions are observed during any semi-annual test, the Plant is required to resume performance testing of that PC MACT affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

If no visible emissions are observed during the **semi-annual test** for any PC MACT affected source, the Plant may decrease the frequency of performance testing from semi-annually to **annually** for that PC MACT affected source. If visible emissions are observed during any annual performance test, the Plant is required to resume performance testing of that PC MACT affected source on a **monthly** basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

If visible emissions are observed during any Method 22 performance test, the Plant is required to conduct a **30-minute** opacity observation (**Method 9**), **recorded at 15-second intervals**, in accordance with Method 9 as specified in 40 CFR 60 Appendix A-4. The Method 9 performance test is required to **begin within 1-hour** of any observation of visible emissions.

If the results of the Method 9 visible emissions observations indicate that the **10 percent opacity** threshold is exceeded, this will be noted in the plant environmental records. Plans will be developed and a work order will be written to perform maintenance and/or equipment modifications as necessary to ensure that emissions return to and remain at levels below 10 percent opacity.

Also, any totally enclosed conveying system transfer point, regardless of the location of the transfer point is not required to conduct Method 22 visible emissions monitoring. The enclosures for these transfer points are required to be operated and maintained as total enclosures on a continuing basis as specified in the Plant PC MACT O&M Plan.

If any partially enclosed or unenclosed conveying system transfer point is located in a building, the Plant is required to conduct a Method 22 performance test according to the requirements of 40 CFR 63.1350(f)(1)(i) through (iv), as specified above, for each such conveying system transfer point located within the building, or for the building itself.

If visible emissions from a building are monitored, the requirements of 40 CFR 63.1350(f)(1)(i) through (iv) apply to the monitoring of the building, and the Plant is required to also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

4.2 Finish Mills

For the three finish mills, the Plant uses a COMS system to measure opacity on Finish Mill #1 and Finish Mill #2 and monitors opacity by conducting **daily** visible emissions observations (**Method 22**) of the mill sweep and separator baghouses (i.e., PM control devices (PMCD)) for Finish Mill #3 in accordance with the procedures of Method 22 specified in 40 CFR 60 Appendix A-7.

Method22/Method 9

The daily Method 22 test is required to be conducted while the PC MACT affected source is operating at the representative performance conditions in accordance with 40 CFR 63.7(e). The duration of the Method 22 performance test is required to be **6-minutes**.

If visible emissions are observed during any Method 22 visible emissions test, the Plant is required to perform **within 24 hours** of the end of the Method 22 test in which visible emissions were observed, **a follow-up Method 22** test of each stack from which visible emissions were observed during the previous Method 22 test.

If visible emissions are still observed during the follow-up Method 22, the Plant is required to conduct a visual opacity test (Method 9) of each PC MACT affected source from which visible emissions were observed in accordance with Method 9 of Appendix A of 40 CFR Part 60. The duration of the **Method 9** test is required to be **30-minutes** per 40 CFR 63.1350(f)(2)(ii).

COMS

Per 40 CFR 63.1350(f)(4)(i), since the Plant has chosen to install a COMS in lieu of conducting the daily visible emissions testing on Finish Mill #1 and #2, then the COMS must be installed at the outlet of the PM control device of the finish mill and the COMS

must be installed, maintained, calibrated, and operated as required by the general provisions of 40 CFR 63 Subpart A and according to PS-1 of 40 CFR 60 Appendix B.

The COMS measures opacity on Finish Mills #1 and #2 stacks as a percentage of light passing through the gases compared to the reference light beam originating from the source. The COMS consist of four major components: the transmissometer, the terminal control box, the air-purging system and the remote control unit and data acquisition equipment.

The COMS undergoes an automatic daily calibration control cycle that runs at regular intervals. Specifically, a calibration check is conducted daily for determination of zero and upscale calibration drift. Also, a calibration error test is performed on each COMS at least once every calendar quarter using neutral density audit filters.

Field check verification of the COMS can be performed by conducting a manual Method 9 test.

If a COMS is ever found to be malfunctioning, then the Plant must conduct daily Method 22 visible emissions observations on the finish mill until the COMS returns to normal operation.

The Plant COMS QA/QC Plan contains all required information pertaining to the COMS as specified in 40 CFR 63.1350(p)(1)- (4), as presented in Section 2.0 of this Plan.

4.3 Corrective Actions and Other Required Information

If visible emissions are observed during any Method 22 visible emissions test conducted under paragraphs by 40 CFR 63.1350(f)(1) (i.e., material handling points) or (2) (i.e. finish mills), the Plant is required to **initiate, within 1-hour**, the corrective actions specified in the Plant PC MACT O&M Plan as required by 40 CFR 63.1347.

The Plant COMS QA/QC Plan, Site Specific Monitoring Plan, and the O&M Plan provide information on the necessary corrective action required for the COMS systems.

5.0 Reporting Requirements

40 CFR 63.1354(b)(2) and 40 CFR 63.10(d)(3) require the Plant to report the opacity results from tests that are required by 40 CFR 63.1349.

The Plant is required to **report** per 40 CFR 63.1354(b)(9)(vii) **each violation** of the opacity limit and report the date, duration, and description of each violation and the specific actions taken for each violation including inspections, corrective actions and repeat performance tests, and the results of those actions.

40 CFR 63.1354(c) requires the Plant to report all failures to meet the opacity limit due to a Plant malfunction. For each failure to meet the opacity limit caused by a malfunction, the Plant is required to report each failure in the **Semi-Annual PC MACT Compliance Report (Report)** required by 40 CFR 63.1354(b)(9). The Report is required to contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The Report is required to list for each event the PC MACT affected source or equipment, the estimated opacity emitted over the emission limit for which the PC MACT affected source failed to meet a standard (e.g., 20 percent opacity which is 10 percent over the 10 percent opacity limit for the PC MACT affected source), and a description of the method used to estimate opacity. Also, the Report is required to include a description of actions taken by the Plant during the malfunction of the PC MACT affected source for minimizing emissions in accordance with 40 CFR 63.1348(d), including actions taken to correct the malfunction.

6.0 Recordkeeping Requirements

Recordkeeping requirements are presented in 40 CFR 63.1355. The Plant is required to maintain files of all information (including all reports and notifications) recorded in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files are required to 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 are required to be retained onsite at the Plant. The remaining three years of data may be retained offsite. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

The Plant is required to maintain records for each PC MACT affected source as required by 40 CFR 63.10(b)(2) and (b)(3) and

(1) All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9,

(2) All records of applicability determination, including supporting analyses, and

(3) If the Plant has been granted a waiver under 40 CFR 63.8(f)(6), any information demonstrating whether a PC MACT affected source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

Per 40 CFR 63.1355(g)(1), the Plant is required to keep records of the date, time, and duration of each malfunction that causes an PC MACT affected source to fail to meet a PC MACT applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record is required to list the PC MACT affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the PC MACT affected source failed to meet a standard, and a description of the method used to estimate the emissions.

Per 40 CFR 63.1355(g)(2), the Plant is required to keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

Per 40 CFR 63.1355(h), for each exceedance of the opacity limit, the Plant is required to keep records of the date, duration and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions and repeat performance tests and the results of those actions.

Appendix A
List of PC MACT Affected Sources

MARTINSBURG PLANT
PC MACT Affected Source List

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
RAW MATERIAL HANDLING							
EP37.08	-	EP37.08	Limestone/Clinker Storage Pile (Quarry)	FUGITIVE	Operated in accordance with the fugitive dust emission control measures as identified in Section 7.0 of this O&M Plan.		
EP37.11		EP37.11	Limestone/Clinker Storage Pile (Outside Craneway)	FUGITIVE	Operated in accordance with the fugitive dust emission control measures as identified in Section 7.0 of this O&M Plan.		
EP37.12		EP37.12	Limestone/Clinker Transfer to Craneway Storage Building	FUGITIVE	Building Sides/Roof/Vent		
CD39.03	Raw Material Discharge D\C 1	EP39.03.03	Shale bin to feeder	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP39.03.04	Shale bin feeder to conveyor				
		EP39.02.01	Limestone mix bin to feeder				
		EP39.02.02	Limestone mix feeder to conveyor				
		EP39.08.02	Sand silo to feeder				
		EP39.08.03	Sand silo feeder to conveyor				
		EP39.07.02	Pyrite silo to feeder				
		EP39.07.03	Pyrite silo feeder to conveyor				
CD39.04	Raw Material Discharge D\C 2	EP39.04.02	Shale silo 2 to feeder	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP39.04.03	Shale silo 2 feeder to conveyor				
CD39.06	Raw Mill Feeding D\C	EP39.06.01	Raw Mill Feed Conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD31.01	Flyash Tank No.1 D\C	EP31.01	Fly Ash Tank #1	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
EP39.09	-	EP39.09	Inert Raw Material Storage Pile (Within Mines)	FUGITIVE	Operated in accordance with the fugitive dust emission control measures as identified in Section 7.0 of this O&M Plan.		
RAW GRINDING AND KILN FEED							
CD40.01	Raw Mill High Zone D\C	EP40.01.01	RM Feed Conveyor to conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP40.01.02	Conveyor to split				
		EP40.01.03	Split to hopper				
		EP40.02.03	Elevator to conveyor				
		EP40.04.01	Split to Raw Mill				
CD40.02	Raw Mill Low Zone D\C	EP40.02.01	Conveyor to split	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22

MARTINSBURG PLANT
PC MACT Affected Source List

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
		EP40.02.02	Split to bucket elevator				
		EP40.04.02	Raw Mill to conveyor				
		EP40.02.04	Conveyor to bucket elevator				
CD40.05	Raw Meal Air Slide D\C	EP40.05	Raw Meal Conveying Equipment	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD40.06	Homo Silo Feeding D\C	EP40.06	Homogenizing Silo Feeding Equipment	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD40.07	Homo Silo Discharge D\C	EP40.07	Homogenizing Silo Discharging Equipment	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD40.08	Top of Homogenizing Silo	EP40.08	Top of Homogenizing Silo	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD42.02	Kiln Feeding Bucket Elevator D\C	EP42.02	Kiln Feeding Bucket Elev DC	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD42.03	Kiln Feeding D\C 1	EP42.03	Kiln Feed Belt	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD42.05	Kiln Feeding D\C 2	EP42.05	Kiln Feed Belt	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
PREHEATER/PRECALCINER KILN AND CLINKER COOLER & SOLID FUEL GRINDING SYSTEM							
CD41.04	Alternate Fuel Feeding System D/C	EP41.04	Alternate Fuel Feeding System	BAGHOUSE	Main Stack	Continuous	CEMS, CPMS
CD41.05	Alternate Fuel dosing System D/C	EP41.05	Alternate Fuel dosing System	BAGHOUSE	Main Stack	Continuous	CEMS, CPMS
CD42.04	Inline Raw Mill / PH/PC Kiln / Clinker Cooler & Bypass & Coal Mill D\Cs	EP42.04	Kiln System - Inline Raw Mill / PH/PC Kiln / Clinker Cooler	BAGHOUSE	Main Stack	Continuous	CEM, CPMS
		EP42.08	Kiln Bypass Baghouse DC	BAGHOUSE			
		EP41.03.01	Coal Mill	BAGHOUSE			
CD42.01	Cement Fringe Bin D\C	EP42.01	Cement Fringe Bin	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD42.06	Lime Storage D\C	EP42.06	Lime Storage for Scrubber System	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD42.07	Bypass Truck Spout Dedusting	EP42.07	Bypass Truck Spout Dedusting	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD31.02	Bypass Dust Tank D\C	EP31.02	Bypass Dust Tank	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD31.03	Bypass Dust Loadout D\C	EP31.03	Bypass Dust silo/loadout	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CLINKER/GYPSUM/FM ADDITIVE HANDLING AND STORAGE							
CD43.03	Clinker Storage Feeding D\C	EP43.05	Clinker conveyor to big clinker silo	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22

MARTINSBURG PLANT
PC MACT Affected Source List

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
CD43.19	Top of LA Clinker Silo DC	EP43.19	Top of LA Clinker Silo	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD43.20	Normal Clinker Bin at Pan Conveyor 73 DC	EP43.20	Normal Clinker Bin at Pan Conveyor 73	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD43.21	Top of Normal Clinker Silo DC	EP43.21	Top of Normal Clinker Silo	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD43.04	Small Clinker Storage Feeding D\C	EP43.04	Clinker conveyor to clinker silo	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD43.06	Small Clinker Storage Discharge D\C	EP43.06.01	Low Alkali Clinker Silo to upper conveyors	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP43.06.02	Upper conveyors to lower conveyor				
		EP43.06.03	Low Alkali Clinker silo to lower conveyor				
CD43.07	Clinker Storage Discharge D\C	EP43.07.01	Big clinker silo to upper conveyor1	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP43.07.02	Big clinker silo to upper conveyor2				
		EP43.07.03	Big clinker silo to lower conveyor				
		EP43.07.04	Big clinker silo to short conveyor				
		EP43.07.05	Short conveyor to lower conveyor				
CD43.08	Finish Mill Conveying D\C1	EP43.08	Upper conveyor 1 to FM feed hoppers belt	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD43.09	Finish Mill Conveying D\C2	EP43.09	Lower conveyor to FM feed hoppers belt	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD43.13	Finish Mill Conveying D\C3	EP43.13	Upper conveyor 2 to FM feed hoppers belt	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD43.14	Finish Mill 1 & 2 Hoppers D\C	EP43.14	Conveyor to clinker feeding hoppers (FM1 &2)	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP43.15	Conveyor to lower conveyor (FM3)	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD43.16	Finish Mill 3 Hopper D\C	EP43.16	Lower conveyor to clinker feeding hopper (FM3)	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD43.17	Normal Clinker Bin - Bin Vent	EP43.17	Normal Clinker Bin - Bin Vent	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
EP26.06.03	-	EP26.06.03	Gypsum/Synthetic Gypsum truck unloading to storage hall	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22

MARTINSBURG PLANT
PC MACT Affected Source List

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
EP26.06.04	-	EP26.06.04	Clam bucket to gypsum/synthetic gypsum pile	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP26.06.05	-	EP26.06.05	Gypsum/synthetic gypsum pile to clam bucket	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP26.06.06	-	EP26.06.06	Clam bucket to gypsum/synthetic gypsum bin (FM1/2/3)	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP26.07.01	-	EP26.07.01	Limestone Pile to clam bucket	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP26.07.02	-	EP26.07.02	Clam bucket to limestone bin (FM1/2/3)	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP27.01	-	EP27.01	Conveyor to clinker hopper	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP27.02	-	EP27.02	Clinker hopper to crane	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP27.03	-	EP27.03	Crane to clinker pile	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP14.08	-	EP14.08	Clinker stockpile (Craneway)	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP27.04	-	EP27.04	Clinker pile to crane	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP27.05	-	EP27.05	Crane to clinker bins (FM1/2/3)	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP27.06	-	EP27.06	Transfer to Outdoor Clinker Storage Pile	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
EP27.07	-	EP27.07	Outdoor Clinker Storage Pile - Tarped	FUGITIVE	Operated in accordance with the fugitive dust emission control measures as identified in Section 7.0 of this O&M Plan.		
EP26.08	-	EP26.08	Outdoor Clinker Storage Pile Reclaim	FUGITIVE	Building Sides/Roof/Vent	Monthly	10 Minute Method 22
FINISH MILL SYSTEMS							
CD44.01	Finish Mill 2 Feeding D\C1	EP44.01	L.A. clinker bin to FM2 conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD44.02	Finish Mill 1 Feeding D\C1	EP44.02	Clinker bin to FM1 conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD44.03	Finish Mill 2 Feeding D\C2	EP44.03	Clinker bin to FM2 conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD44.04	Finish Mill 2 Feeding	EP44.04.01	Limestone bin to FM2 conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22

MARTINSBURG PLANT
PC MACT Affected Source List

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
	D\C3	EP44.04.02	Gypsum/synthetic gypsum bin to FM2 conveyor	BAGHOUSE			
CD44.05	Finish Mill 1 Feeding D\C 2	EP44.05.01	Limestone bin to FM1 conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP44.05.02	Gypsum/synthetic gypsum bin to FM1 conveyor	BAGHOUSE			
CD19.02	Finish Mill 3 Baghouse D\C	EP19.01Pb	No. 3 Finish Mill Separator (Existing FM 10)	BAGHOUSE	DC Outlet	Daily	6 Minute Method 22
CD19.01	Finish Mill 3 Norblo D\C	EP19.01U	FM3 Feed bins to feeders	BAGHOUSE	DC Outlet	Daily	6 Minute Method 22
		EP19.01Pa.01	FM3 Feeders to belt conveyor 650	BAGHOUSE			
		EP19.01Pa.02	Belt conveyor 650 to FM3	BAGHOUSE			
		EP19.02	Finish Mill 3	BAGHOUSE			
CD44.06	Finish Mill 1 Conveying D\C	EP44.06	FM1 Conveyor to conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD44.07	Finish Mill 1 High Zone D\C	EP44.07.01	Elevator to FM1 conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP44.07.02	FM1 Conveyor to bin	BAGHOUSE			
		EP44.07.03	Conveyor to Finish Mill 1	BAGHOUSE			
CD44.08	Finish Mill 1 Low Zone D\C	EP44.08.01	Finish Mill 1 to Conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP44.08.02	Bin to FM1 conveyor	BAGHOUSE			
		EP44.08.03	FM1 Conveyor to bucket elevator	BAGHOUSE			
CD44.09	Finish Mill 1 D\C	EP44.09	Finish Mill 1	BAGHOUSE	DC Outlet	Daily	6 Minute Method 22
CD44.13	Finish Mill 1 Discharge D\C	EP44.13	Finish Mill 1 Conveying	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD44.14	Finish Mill 2 Conveying D\C	EP44.14	FM2 Conveyor to conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD44.10	Finish Mill 2 High Zone D\C	EP44.10.01	FM2 Elevator to conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP44.10.02	FM2 Conveyor to bin	BAGHOUSE			
		EP44.10.03	Conveyor to Finish Mill 2	BAGHOUSE			
CD44.11	Finish Mill 2 Low Zone D\C	EP44.11.01	Finish Mill 2 to conveyor	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
		EP44.11.02	Bin to FM2 conveyor	BAGHOUSE			
		EP44.11.03	FM2 Conveyor to bucket elevator	BAGHOUSE			
CD44.12	Finish Mill 2 D\C	EP44.12	Finish Mill 2	BAGHOUSE	DC Outlet	Daily	6 Minute Method 22

MARTINSBURG PLANT
PC MACT Affected Source List

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
CD44.15	Finish Mill 2 Discharge D\C	EP44.15	Finish Mill 2 Conveying	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD44.09 CD44.12	Finish Mill 1/2 Air Heater	EP44.16	Finish Mill 1/2 Air Heater	BAGHOUSE	DC Outlet	Daily	6 Minute Method 22
CD44.17	Finish Mills Reject Bin	EP44.17	Finish Mills Reject Bin	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD44.18	Finish Mill 1 Reject Elevator High Zone DC	EP44.18	Finish Mill 1 Reject Elevator High Zone	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD44.19	Finish Mill 2 Reject Elevator High Zone DC	EP44.19	Finish Mill 2 Reject Elevator High Zone	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CEMENT DISTRIBUTION							
CD45.01	Finish Mill 1 Airslides D\C	EP45.01	Finish Mill 1 airslides	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.02	Finish Mill 2 Airslides D\C	EP45.02	Finish Mill 2 airslides	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.03	Cement Silos Feeding D\C1	EP45.03	Finish Mill 1 to cement silos	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.04	Cement Silos Feeding D\C2	EP45.04	Finish Mill 2 to cement silos	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.05	Cement Silo A1 & A2 D\C	EP45.05	Cement Silo A1 & A2	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.06	Cement Silo B1 & B2 D\C	EP45.06	Cement Silo B1 & B2	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.07	Cement Silo C1 & C2 D\C	EP45.07	Cement Silo C1 & C2	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.08	Truck Loadout 1 D\C	EP45.08	Bulk lane loadout 1	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.09	Truck Loadout 2 D\C	EP45.09	Bulk lane loadout 2	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.10	Truck Loadout 3 D\C	EP45.10	Bulk lane loadout 3	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.11	Truck Loadout 4 D\C	EP45.11	Bulk lane loadout 4	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD21.05	Middle Bank Silos 1 D\C	EP21.05	Middle Bank Silos 1 DC	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD21.06	Middle Bank Silos 2 D\C	EP21.06	Middle Bank Silos 2 DC	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD21.07	Middle Bank Silos 3 D\C	EP21.07	Middle Bank Silos 3 DC	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD21.08	Middle Bank Silos 4 D\C	EP21.08	Middle Bank Silos 4 DC	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22

MARTINSBURG PLANT
PC MACT Affected Source List

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
CD21.09	Middle Bank Silos 5 D\C	EP21.09	Middle Bank Silos 5 DC	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD21.10	Middle Bank Vent 1 D\C	EP21.10	Middle Bank Bin Vent 1 - Silos Inlet	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD21.11	Middle Bank Vent 2 D\C	EP21.11	Middle Bank Bin Vent 2 - Silos Inlet	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD21.12	South Middle Bank CP Pump DC	EP21.12	South Middle Bank CP Pump	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD21.13	North Middle Bank CP Pump DC	EP21.13	North Middle Bank CP Pump	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.12	Rail Loadout 1 D\C	EP45.12	Bulk rail loadout 1	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.13	Rail Loadout 2 D\C	EP45.13	Bulk rail loadout 2	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.14	Cement Analyzer D\C	EP45.14	Cement Analyzer	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.15	Transfer Airslide D\C at the Multi Cell	EP45.15	Transfer Airslide at the Multi Cell	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD45.16	Rail Transloader D\C	EP45.16	Rail Transloader	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD46.01	Truck Loadout Silo 1 D\C	EP46.01	Truck Loadout Silo 1	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD46.02	Truck Loadout Silo 2 D\C	EP46.02	Truck Loadout Silo 2	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD46.03	Truck Loadout Silo 3 D\C	EP46.03	Truck Loadout Silo 3	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD46.04	Truck Loadout Silo 4 D\C	EP46.04	Truck Loadout Silo 4	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD46.05	Truck Loadout Silo 5 D\C	EP46.05	Truck Loadout Silo 5	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD46.06	Truck Loadout 5 D\C	EP46.06	Bulk loadout 5 - Truck Loadout Silos	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD46.07	Truck Loadout 6 D\C	EP46.07	Bulk loadout 6 - Truck Loadout Silos	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD20.04	East Bank Silos 1 D\C	EP20.04	East Bank Silos 1	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD20.05	East Bank Silos 2 D\C	EP20.05	East Bank Silos 2	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD20.06	East Bank Silos 3 D\C	EP20.06	East Bank Silos 3	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD48.01	Packhouse D\C	EP48.01	Packhouse	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD23.01	N.E. PACKER D/C	EP23.01	Packer #1 N.E.	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD22.05	West Bank Silo #70/71 D\C	EP22.05	West Bank Silos #70/#71	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD22.06	West Bank Silo #72 D\C	EP22.06	West Bank Silos #72	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22

MARTINSBURG PLANT
PC MACT Affected Source List

PSD Permit EP ID	CD Description	EU ID	EU Description	SOURCE TYPE	POINT OF COMPLIANCE	MONITORING FREQUENCY	MONITORING METHOD
CD22.07	West Bank Silo #84 D\C	EP22.07	West Bank Silos #84	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD22.08	West Bank Silo Loadout Spout D\C	EP22.08	West Bank Silos Loadout Spout	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22
CD22.09	Dry Flyash Weigh Bin D\C	EP22.09	Dry Flyash Weigh Bin/Alleviator	BAGHOUSE	DC Outlet	Monthly	10 Minute Method 22