KEEP PERMIT AT SITE

CONTROL NO. B- 05374

State of Maryland

Lawrence J. Hogan, Jr.
Governor

Boyd K. Rutherford
Lt. Governor

Ben Grumbles
Secretary

DEPARTMENT OF THE ENVIRONMENT

Air and Radiation Management Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

[ ] Construction Permit

[X] Part 70 Operating Permit

PERMIT NO. 24-013-0012

DATE ISSUED January 1, 2017

PERMIT FEE To be paid in accordance with COMAR 26.11.02.19B

EXPIRATION DATE September 30, 2021

LEGAL OWNER & ADDRESS

Lehigh Cement Company - Union Bridge
675 Quaker Hill Rd.
Union Bridge, Maryland 21791
Attn: Mr. Kurt Deery, REM, CSEM
Environmental Engineer

SITE

Lehigh Cement Company - Union Bridge
675 Quaker Hill Rd.
Union Bridge, MD 21791
AI # 2167

SOURCE DESCRIPTION

One Portland Cement Manufacturing Plant.

This source is subject to the conditions described on the attached pages.

Program Manager

Director, Air and Radiation Management Administration

(NOT TRANSFERABLE)

LEHIGH CEMENT COMPANY LLC
675 QUAKER HILL ROAD, UNION BRIDGE, MARYLAND 21791
PART 70 OPERATING PERMIT NO. 24-013-0012

SECTION I SOURCE IDENTIFICATION

1. DESCRIPTION OF FACILITY

Lehigh Cement Company LLC (LCC) owns and operates a Portland cement manufacturing plant at 675 Quaker Hill Road in Union Bridge, Maryland 21791. The plant is located in both Carroll and Frederick Counties. The Union Bridge Quarry is located in Frederick County (Maryland Air Quality Region II), while the main part of the plant, including the New Windsor Quarry, is located in Carroll County (Maryland Air Quality Region III). The original plant at Union Bridge was built in 1910 and has been modernized several times including the recent modernization/expansion where the four long-dry kilns were replaced with one pre-heater/pre-calciner kiln system. A permit to construct and New Source Review (NSR) and Prevention of Significant Deterioration (PSD) Approvals were issued on April 8, 1999 and revised on June 7, 2000 for the plant modernization and expansion.

On March 14, 2014, The Department issued a Permit to Construct for the installation of quarrying operations consisting of crushers, conveyors, and transfer towers associated with the expansion of operations at the existing LCC New Windsor Quarry, which is located in New Windsor, Carroll County, Maryland. A five-mile long covered conveyor system is currently being constructed to transfer materials from the New Windsor Quarry to the Union Bridge Plant. The expanded use of the New Windsor Quarry will support future cement production at the Plant. The New Windsor Quarry will ultimately replace the majority of limestone used by the Plant to produce Portland cement. The majority of the limestone currently used by the Plant is at present obtained from the Union Bridge Quarry.

2. FACILITY INVENTORY LIST

LCC has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements:

Emission Unit Table 2-1: Area A-1 – Union Bridge Quarry Operations
(SCC 3-05-006-09)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Not Subject to MACT Requirements			
HR1	6-0027	Quarry haul roads	Modified – 2002
SP1	6-0027	Limestone Storage Pile	Modified – 2002
TLU1	6-0027	Limestone Truck Loading	1970
TLU2	6-0027	Limestone Truck Loading/Unloading	2002
SP8	6-0327	Iron B02-001 Surge Storage Pile	2002
SP9	6-0327	Silica B02-001 Surge Pile	2002
SP11	6-0027	Overburden Storage Pile	1911 & 1957
A01-009	6-0027	Gyratory Crusher – Primary crushing – Baghouse A01-012	1957
B01-017	6-0327	Belt Conveyor #8 - Baghouse A02-025	1970,moved

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
			from Area B
A01-018	6-0027	Belt Conveyor #1 – Baghouse A01-012	1957
A01-021	6-0027	Surge Bin/#8 Belt - Baghouse A01-025	1955
A02-005	6-0027	Belt Conveyor #2 - Baghouse A02-008, A02-003	1970
A02-006	6-0027	Secondary Crusher – Baghouse A02-008	1970
A02-010	6-0027	Belt Conveyor #3 – Baghouse A02-008	1970
A02-017	6-0027	Belt Conveyor #6 – Baghouse A02-008	1970
A02-018	6-0027	Belt Conveyor #5 – Baghouse A02-008	1970
A02-019	6-0027	Tertiary Crusher – Baghouse A02-008	1970
A02-021	6-0027	Belt Conveyor #4 – Baghouse A02-008	1970
A02-011	6-0027	Vibrating Screen and Transfer System – Baghouses A02-012, A01-015, A02-025	1970
A02-022	6-0027	Vibrating Screen and Transfer System - Baghouses A02-012. A01-015, A02-025	1970
A02-023	6-0027	Vibrating Screen and Transfer System - Baghouses A02-012, A02-015 and A02-025	1970
A02-024	6-0027	Belt Conveyor #7 – Baghouses A02-012, A02-015	1970
A03-022	6-0352	Masonry Hauling at Union Bridge (paved)	To be installed
SP13	TBD	Bottom Ash Storage Pile	2011
A02-026	TBD	Screen	2011

Emission Unit Table 2-2: Area A-2 – New Windsor Quarry Operations
(SCC 3-05-006-09)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Not Subject to MACT Requirements (Subject to NSPS 40 CFR 60, Subpart OOO Requirements)			
A03-001A	6-0352	Waste Rock Hauling (Segment A)	To be installed
A03-001B	6-0352	Waste Rock Hauling (Segment B)	To be installed
A03-001C	6-0352	Waste Rock Hauling (Segment C)	To be installed
A03-002A	6-0352	Limestone Hauling (Segment A)	To be installed
A03-002C	6-0352	Limestone Hauling (Crusher Segment)	To be installed
A03-003	6-0352	Front End Loader to Limestone Truck	To be installed
A03-004	6-0352	Truck to Primary Hopper	To be installed
A03-005	6-0352	Primary Crusher for calcium, silica, alumina, and iron bearing raw materials	To be installed
A03-006	6-0352	Primary Crusher for to Belt #1	To be installed
A03-008	6-0352	Belt #1 to Belt #2 Transfer	To be installed
A03-010	6-0352	Transfer from Belt #2 to Belt #3 or to Masonry Pile	To be installed

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
SP10	6-0352	New Windsor Storage Pile	To be installed
SP12	6-0352	Masonry Storage Pile	To be installed
A03-012	6-0352	Belt #2 to Limestone Overland Conveyor (Belt #4)	To be installed
A03-014	6-0352	Overland Conveyor (Belt #4) Transfer to Belt #5 to New Transfer Tower	To be installed
A03-016	6-0352	New Transfer Tower	To be installed
A03-018	6-0352	Masonry Transfer to Crusher	To be installed
A03-019	6-0352	Masonry Portable Crusher	To be installed
A03-020	6-0352	Transfer from Masonry Crusher to Truck	To be installed
A03-021	6-0352	Masonry Hauling at New Windsor (unpaved)	To be installed

Emission Unit Table 2-3: Area B – Raw Material Transport and Storage
(SCC 3-05-006-12)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Not Subject to MACT Requirements			
TU1	6-0327	Iron and Silica Truck Unloading	2002
SP4	6-0327	Silica Storage Pile	2002
SP5	6-0327	Iron Storage Pile	2002
B03-031	6-0256	Activated Carbon Injection (ACI) system tank controlled by a bin vent	2011
Sources Subject to MACT Requirements			
B01-011	6-0327	Enclosed Limestone Dome	2001
B02-007	6-0327	Belt Conveyor – Baghouse B02-008	2001
B02-011	6-0327	Silica Bearing Material Bin – Baghouse B02-008	2001
B02-012	6-0327	Iron Bearing Material Bin – Baghouse B02-008	2001
B02-017	6-0327	Reversible Belt Conveyor – Baghouse B02-008	2001
B03-004	6-0327	Fly Ash Blending Silo System - Baghouse B03-008	2002
B04-019	6-0327	Limestone Bin - Baghouse B04-016	2002
TT3	6-0327	Transfer Tower #3 – Baghouses B04-011, B04-016	2002
TT4	6-0327	Transfer Tower #4 - Baghouse B02-019	2002

Emission Unit Table 2-4: Area C – Raw Grinding
(SCC 3-05-006-13)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
C01-002	6-0328	Limestone Weighfeeder- Baghouse C01-007	2001
C01-004	6-0328	Iron Weighfeeder - Baghouse C01-007	2001
C01-006	6-0328	Silica Weighfeeder - Baghouse C01-007	2001
C01-011	6-0328	Belt Conveyor – Baghouse C01-007, C02-021	2001
C01-015	6-0328	Fly Ash Weigh Bin – Baghouse C01-019	2001
C02-001	6-0328	Bucket Elevator – Baghouse C02-011, C02-021	2001
C02-006	6-0328	100 Ton Bin – Baghouse C02-011	2001
C04-068	6-0328	Airslide – Baghouse C04-050, C04-075	2002
C04-070	6-0328	Airslide – Baghouse C04-075	2002
C04-072	6-0328	Airslide – Baghouse C04-075	2002
C04-074	6-0328	Airslide – Baghouse C04-075	2002
C04-037	6-0328	Bucket Elevator – Baghouses C04-050, C04-075	2002
C04-038	6-0328	600 Ton Bin – Baghouse C04-075, C04-050	2002
C02-038	6-0328	Rejects Belt Conveyor - Baghouse C02-021	2001
C02-060	6-0328	Reversible Belt Conveyor (to Raw Mill) - Baghouse C02-011	2001
C03-034	6-0328	Airslide – Baghouse C03-001	2002
C03-035	6-0328	Airslide – Baghouse C03-001	2002
C03-040	6-0328	Airslide – Baghouse C03-001	2002
C03-042	6-0328	Airslide – Baghouse C03-001	2002
C03-045	6-0328	Airslide – Baghouses C03-047, C03-050	2002
C03-008	6-0328	Airslide – Baghouse C03-050	2002
C03-054	6-0328	Airslide – Baghouse C03-050	2002
C03-046	6-0328	Bucket Elevator – Baghouse C03-030, D01-037	2002
C03-017	6-0328	Airslide – D01-037	2002
C03-010	6-0328	Airslide – Baghouse C03-030	2002
C03-013	6-0328	Airslide – Baghouse C03-030	2002
C02-025	6-0328	Raw Mill – Baghouse C04-014	2001
C04-066	6-0328	Airslide – C03-050	2002

Emission Unit Table 2-5: Area D – Raw Meal – Kiln Feed
(SCC 3-05-006-23)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
D01-001	6-0329	Blending Silo – Baghouse D01-037	2002
D01-002	6-0329	Recirculation Airslide – Baghouse D01-037	2002
D01-003	6-0329	Recirculation Airslide – Baghouse D01-037	2002
D01-020	6-0329	185 Metric Ton Feed Bin – Baghouse D01-034	2002
D02-004	6-0329	Airslide – Baghouse D01-034	2002
D02-006	6-0329	Flow Meter – Baghouse D01-034	2002
D02-017	6-0329	Airslide – Baghouse D01-034	2002
D02-019	6-0329	Flow Meter – Baghouse D01-034	2002
D01-023	6-0329	Airslide – Baghouse D01-040	2002
D01-026	6-0329	Airslide – Baghouse D01-040	2002
D02-007	6-0329	Airslide – Baghouse D01-040	2002
D02-020	6-0329	Airslide – Baghouse D01-040	2002
D02-010	6-0329	Airslide – Baghouse D02-041	2002
D02-023	6-0329	Airslide – Baghouse D02-041	2002
D02-049	6-0329	Airslide – Baghouse D02-041	2002
D02-025	6-0329	Bucket Elevator – Baghouse D02-041, D02-027	2002
D02-026	6-0329	Bucket Elevator – Baghouse D02-041, D02-027	2002
D02-033	6-0329	Airslide – Baghouse D02-027	2002
D02-045	6-0329	Airslide – Baghouse D02-027	2002
D02-047	6-0329	Airslide – Baghouse D02-027	2002

Emission Unit Table 2-6: Area E – Kiln and Clinker Cooler
(SCC 3-05-006-23)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
E01-001	6-0256	Kiln – Baghouse C04-014	2001
E02-001	6-0256	Preheater / Precalciner – baghouse C04-014	2001
E03-001	6-0256	Clinker Cooler – Baghouse E04-016	2001

Emission Unit Table 2-7: Area F – Coal Grinding Mill for Kiln
(SCC 3-05-006-21)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Not Subject to MACT Requirements			
F01-034	6-0330	Belt Conveyor #11/14	1970
F01-037	6-0330	Belt Conveyor #11/14	1970
SP2	6-0330	Coal Storage Pile	2002
SP3	6-0330	Coal Storage Pile	2002
TT2	6-0330	Transfer Tower #2	2002
TU2	6-0330	Truck Unloading	2002
F02-006	6-0330	Reclaim Elevator	2002
F02-018	6-0330	Belt Conveyor	2002
F03-001	6-0330	Belt Conveyor	2002
F03-002	6-0330	Coal Bin Weighfeeder	2002
F03-003	6-0330	Coke Bin Weighfeeder	2002
Sources Subject to MACT Requirements			
F02-007	6-0330	Belt Conveyor	2002
F03-016	6-0330	Coal Mill System – Baghouses F03-028,F03-032, F03-036, F03-040, F03-044, F03-048 (Associated with kiln)	2001
F04-009	6-0330	Pneumatic Pump for Fine Coal Dust Bin – Baghouse F04-010	2002
F04-018	6-0330	Kiln Fuel Bin Pressure Relief - Baghouse C04-014	2002
F04-026	6-0330	Calciner Fuel Bin Pressure Relief - Baghouse C04-014	2002
TT5	6-0330	Transfer Tower #5 – baghouse F02-027	2002

Emission Unit Table 2-8: Area G – Clinker Transport & Storage – Craneway Building
(SCC 3-05-006-16)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
TT8/9	6-0125	Transfer Tower #8/9 – Baghouse G02-041, Baghouse B01-018	2004
TT6	6-0125	Transfer Tower #6 – Baghouse G02-025	2004
G01-001	6-0125	Main Pan Conveyor – Baghouse E04-016	2001
G03-010	6-0125	Clinker into Craneway – Baghouse G03-011	2001
CWAY	6-0125	Craneway	1970
SP6	6-0125	Gypsum Stockpile	2015
TU3	6-0125	Gypsum Truck Unloading	2004
G04-014	6-0125	450 Metric Ton Clinker Bin – Baghouse	2001

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
		G04-011	
G04-020	6-0125	Belt Conveyor - Baghouse G04-011	2001
G04-010	6-0125	Bucket Elevator - Baghouse G04-011	2001
G04-009	6-0125	Belt Conveyor - Baghouse G04-034	2002
G04-016	6-0125	Belt Feeder – Baghouse G04-034	2002
G04-056	6-0125	Belt Feeder – Baghouse G04-034	2002
G04-058	6-0125	Clinker Bin, H01-006 Belt - Baghouse H01-210	2002
G04-059	6-0125	H01-015 Clinker Feeder, G04-018 Belt – Baghouse H01-210	2002
G01-012	6-0125	Clinker Storage Silo – Baghouse G01-009	2002
G02-002	6-0125	Transfer Tower #11, #12, #13 Belt Conveyors – Baghouse G02-047, G02-044, G02-021	2002
G04-018	6-0125	Belt Conveyor – Baghouse G04-037	2004
G04-019	6-0125	CE2 Bucket Elevator – Baghouse G04-037	1970
G04-031	6-0125	Drag Conveyor B3 – Baghouse H09-073	1970
G05	6-0125	Off Loading Trucks Preheater Dust Silo	2004
TL1	6-0125	Clinker Truck/Rail Loadout – Baghouse G02-053	2004
TT7	6-0125	Transfer Tower #7 – Baghouse G03-004	2004
TT9/10	6-0125	Transfer Tower #9/10 – Baghouse G03-011	2004

Emission Unit Table 2-9: Area H – Clinker Finish Mills
(SCC 3-05-006-17)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
H04-001	6-0331	Gypsum Bin 409	2002
H04-003	6-0331	Limestone Tank 416	2002
H05-001	6-0331	Gypsum Bin 509	2002
H06-001	6-0331	Gypsum Bin 609	2002
H07-001	6-0331	Gypsum Bin	2002
H08-001	6-0331	Gypsum Bin	2002
H04-004	6-0331	Clinker Bin 403	1970
H05-004	6-0331	Gypsum Bin 503	1970
H06-004	6-0331	Clinker Bin 603	1970
H07-004	6-0331	Gypsum Bin	2004
H01-040	6-0331	Finish Mill #1 – Baghouse H01-070	2002

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
H01-061	6-0331	Cyclone and Belts – Baghouse H01-070	2002
H01-063	6-0331	Cyclone and Belts – Baghouse H01-070	2002
H01-080	6-0331	Elevator and Tipping Valves – Baghouse H01-230	2002
H01-090	6-0331	Finish Mill #1 Burner – Baghouse H01-070	2002
H01-105	6-0331	Belt Conveyor and Tipping Valves – Baghouse H01-210	2002
H01-110	6-0331	Bin – Baghouse H01-210	2002
H01-112	6-0331	Belt Conveyor and Tipping Valves – Baghouse H01-210	2002
H07-015	6-0331	Cement to Cement Cooler – Finish Mill #7 – Baghouse H01-240	2002
H07-016	6-0331	Airslide – Baghouse H01-240	2002
H04-006	6-0331	Belt Conveyor – Finish Mill #4 System – Baghouse H04-044	1970
H04-014	6-0331	Finish Mill #4 System – Baghouse H04-044	1970
H05-014	6-0331	Finish Mill #5 System – Baghouse H05-044	1970
H06-014	6-0331	Finish Mill #6 System – Baghouse H06-044	1970
H06-017	6-0331	Cyclone 642 – Finish Mill #6 System - Baghouse H06-044	1970
H06-037	6-0331	Separator 627 – Finish Mill #6 System - Baghouse H06-044	1970
H07-014	6-0331	Finish Mill #7 System – Baghouses H07-056, H07-057	2002
H07-018	6-0331	Finished Cement Transfer System – Baghouses H07-056, H07-057	2001
H07-068	6-0331	Finished Cement Transfer System – Baghouses H07-056, H07-057	2001
H07-040	6-0331	Cement Cooler – Baghouse H10-113	2002
H07-070	6-0331	Airslide – Baghouses H07-056, H07-057	2001
H07-071	6-0331	Airslide – Baghouse H10-113	2002
H08-014	6-0331	Finish Mill #8 System – Baghouse H08-056	2002
H08-017	6-0331	Separator – Finish Mill #8 System – Baghouse H08-056	2002
H08-037	6-0331	Cyclone – Finish Mill #8 System – Baghouse H08-056	2002
H08-038	6-0331	Cyclone – Finish Mill #8 System – Baghouse H08-056	2002
H08-040	6-0331	Cement Cooler – Baghouse H10-113	2002

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
H08-064	6-0331	Airslide – Baghouse H10-113	2002
H09-000	6-0331	Semi Finishing Grinding System – Baghouse H09-059	2001
H09-019	6-0331	Weighfeeder (from 750 ton Clinker Bin) – Baghouse H09-025	2001
H09-020	6-0331	100 Metric Ton Slag/Clinker Bin Weighfeeder – Baghouse H09-082	2002
H09-021	6-0331	100 Metric Ton Clinker Bin Weighfeeder – Baghouse H09-082	2002
H09-023	6-0331	100 Metric Ton Gypsum Bin Weighfeeder – Baghouse H09-025	2001
H09-024	6-0331	Belt Conveyor (from weigh feeders) – Baghouse H09-025	2001
H09-028	6-0331	Bucket Elevator – Baghouse H09-051	2000
H09-031	6-0331	Belt Conveyor – Baghouses H09-051, H09-033	2000
H09-036	6-0331	Bin – Baghouses H09-059, H09-033	2004
H09-041	6-0331	Roll Press – Baghouse H09-033	2004
H09-046	6-0331	Belt Conveyor – Baghouse H09-033	2002
H09-047	6-0331	Bucket Elevator – Baghouse H09-059	2000
H09-058	6-0331	Belt Conveyor to 90 Metric Ton Bin - Baghouse H09-073, H09-059	2000
H09-062	6-0331	Reversible Belt Conveyor – Baghouse H09-051, H09-082	2000
H09-066	6-0331	Belt Conveyor – Baghouse H09-082	2002
H09-075	6-0331	90 Ton Bin – Baghouse H09-073	2000
H09-091	6-0331	Clinker Belt – Baghouse H09-094	2000
H10-001	6-0331	Airslide – Baghouse H10-113	2002
H10-006	6-0331	Bucket Elevator – Baghouse H10-113	2002
H10-007	6-0331	Airslide – Baghouse H10-119	2001
H10-010	6-0331	Bucket Elevator – Baghouse H10-119	2001
H10-124	6-0331	Airslide – Baghouse H10-119	2001
H10-125	6-0331	Airslide – Baghouse H10-119	2001
H10-167	6-0331	Airslide – Baghouse H10-181	2002
H10-176	6-0331	Bucket Elevator – Baghouse H10-181	2002
H10-177	6-0331	Airslide – Baghouse H10-179	2002

Emission Unit Table 2-10: Area I – Cement Storage and Shipping with Bag Packing
(SCC 3-05-006-18)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
I01-033	6-0039	Day Tank – Baghouse H10-179	2002
I02-289	6-0039	Feed Bin – Baghouse I02-290	2002
I03/I04	6-0039	Packaging and Palletizing – Pack house Collector	1970
TL2	6-0039	Truck Day Tank Loadout – Baghouse I02-290	2002
I02-001 to I02-032	6-0039	Product Silos – Baghouses H10-224, H10-252, H10-254, H10-221,	1970 and 2003
TL4 (F6/F5/H7/J6/ J3/J4/E7/H3)	6-0039	Bulk Loadout System – Baghouses I11-180, I11-190, I12-180, I12-190, I13-180, I13-190, I14-180, I14-190	1970 and 2003

Emission Unit Table 2-11: Dried BioSolids (DBS) Related Processes

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Not Subject to MACT Requirements			
F04-058	6-0330	DBS Storage Tank (Fluidized Coke Storage Tank) – Baghouses F04-062 & F04-064	2007
F05-049	6-0330	Rotary Air Lock for Feeding DBS from Silo – Baghouses F04-062, F04-064	2007
F05-050	6-0330	Scale, Pfister Dosing System – Baghouses F04-062, F04-064	2007
F05-051	6-0337	Mobile DBS Conveyor	2007
F05-055	6-0330	Diverter Valve to Calciner – Baghouses F04-062, F04-064	2007
F05-056	6-0330	Diverter Valve to Main Kiln Burner – Baghouses F04-062, F04-064	2007
G05-001	6-0331	Pneumatic baghouse dust (BD) transfer system – Baghouse G05-003	2009

Emission Unit Table 2-12: Emergency Generator

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
J08-532	9-0186	Caterpillar 2520 horsepower emergency generator	2001

SECTION II GENERAL CONDITIONS

1. DEFINITIONS

[COMAR 26.11.01.01] and [COMAR 26.11.02.01]

The words or terms in this Part 70 permit shall have the meanings established under COMAR 26.11.01 and .02 unless otherwise stated in this permit.

2. ACRONYMS

ARMA	Air and Radiation Management Administration
BACT	Best Available Control Technology
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emissions Monitor
CFR	Code of Federal Regulations
CO	Carbon Monoxide
COMAR	Code of Maryland Regulations
EPA	United States Environmental Protection Agency
FR	Federal Register
gr	grains
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
MDE	Maryland Department of the Environment
MVAC	Motor Vehicle Air Conditioner
NESHAPS	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standards
NSR	New Source Review
OTR	Ozone Transport Region
PM	Particulate Matter
PM10	Particulate Matter with Nominal Aerodynamic Diameter of 10 micrometers or less
ppm	parts per million
ppb	parts per billion
PSD	Prevention of Significant Deterioration
PTC	Permit to construct
PTO	Permit to operate (State)
SIC	Standard Industrial Classification
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	tons per year
VE	Visible Emissions

VOC Volatile Organic Compounds

3. EFFECTIVE DATE

The effective date of the conditions in this Part 70 permit is the date of permit issuance, unless otherwise stated in the permit.

4. PERMIT EXPIRATION

[COMAR 26.11.03.13B(2)]

Upon expiration of this permit, the terms of the permit will automatically continue to remain in effect until a new Part 70 permit is issued for this facility provided that the Permittee has submitted a timely and complete application and has paid applicable fees under COMAR 26.11.02.16.

Otherwise, upon expiration of this permit the right of the Permittee to operate this facility is terminated.

5. PERMIT RENEWAL

[COMAR 26.11.03.02B(3)] and [COMAR 26.11.03.02E]

The Permittee shall submit to the Department a completed application for renewal of this Part 70 permit at least 12 months before the expiration of the permit. Upon submitting a completed application, the Permittee may continue to operate this facility pending final action by the Department on the renewal.

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall submit such supplementary facts or corrected information no later than 10 days after becoming aware that this occurred. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a completed application was submitted, but prior to the release of a draft permit. This information shall be submitted to the Department no later than 20 days after a new requirement has been adopted.

6. CONFIDENTIAL INFORMATION

[COMAR 26.11.02.02G]

In accordance with the provisions of the State Government Article, Sec. 10-611 et seq., Annotated Code of Maryland, all information submitted in an application shall be considered part of the public record and available for inspection and copying, unless the Permittee claims that the information is confidential when it is submitted to the Department. At the time of the request for inspection or copying, the Department will make a determination with regard to the confidentiality of the information. The Permittee, when requesting confidentiality, shall identify the information in a manner specified by the Department and, when requested by the Department, promptly provide specific reasons supporting the claim of confidentiality. Information submitted to the Department without a request that the information be deemed confidential may be made available to the public. Subject to approval of the Department, the Permittee may provide a summary of confidential information that is suitable for public review. The content of this Part 70 permit is not subject to confidential treatment.

7. PERMIT ACTIONS

[COMAR 26.11.03.06E(3)] and [COMAR 26.11.03.20(A)]

This Part 70 permit may be revoked or reopened and revised for cause. The filing of an application by the Permittee for a permit revision or renewal; or a notification of termination, planned changes or anticipated noncompliance by the facility, does not stay a term or condition of this permit.

The Department shall reopen and revise, or revoke the Permittee's Part 70 permit under the following circumstances:

a. Additional requirements of the Clean Air Act become applicable to this facility and the remaining permit term is 3 years or more;

b. The Department or the EPA determines that this Part 70 permit contains a material mistake, or is based on false or inaccurate information supplied by or on behalf of the Permittee;

c. The Department or the EPA determines that this Part 70 permit must be revised or revoked to assure compliance with applicable requirements of the Clean Air Act; or

d. Additional requirements become applicable to an affected source under the Federal Acid Rain Program.

8. PERMIT AVAILABILITY

[COMAR 26.11.02.13G]

The Permittee shall maintain this Part 70 permit in the vicinity of the facility for which it was issued, unless it is not practical to do so, and make this permit immediately available to officials of the Department upon request.

9. REOPENING THE PART 70 PERMIT FOR CAUSE BY THE EPA

[COMAR 26.11.03.20B]

The EPA may terminate, modify, or revoke and reissue a permit for cause as prescribed in 40 CFR §70.7(g)

10. TRANSFER OF PERMIT

[COMAR 26.11.02.02E]

The Permittee shall not transfer this Part 70 permit except as provided in COMAR 26.11.03.15.

11. REVISION OF PART 70 PERMITS – GENERAL CONDITIONS

[COMAR 26.11.03.14] and [COMAR 26.11.03.06A(8)]

a. The Permittee shall submit an application to the Department to revise this Part 70 permit when required under COMAR 26.11.03.15 -.17.

b. When applying for a revision to a Part 70 permit, the Permittee shall comply with the requirements of COMAR 26.11.03.02 and .03 except that the application for a revision need include only information listed that is related to the proposed change to the source and revision to the permit. This information shall be sufficient to evaluate the proposed change and to determine whether it will comply with all applicable requirements of the Clean Air Act.

c. The Permittee may not change any provision of a compliance plan or schedule in a Part 70 permit as an administrative permit amendment or as a minor permit modification unless the change has been approved by the Department in writing.

d. A permit revision is not required for a change that is provided for in this permit relating to approved economic incentives, marketable permits, emissions trading, and other similar programs.

12. SIGNIFICANT PART 70 OPERATING PERMIT MODIFICATIONS

[COMAR 26.11.03.17]

The Permittee may apply to the Department to make a significant modification to its Part 70 Permit as provided in COMAR 26.11.03.17 and in accordance with the following conditions:

a. A significant modification is a revision to the federally enforceable provisions in the permit that does not qualify as an administrative permit amendment under COMAR 26.11.03.15 or a minor permit modification as defined under COMAR 26.11.03.16.

b. This permit does not preclude the Permittee from making changes, consistent with the provisions of COMAR 26.11.03, that would make the permit or particular terms and conditions of the permit irrelevant, such as by shutting down or reducing the level of operation of a source or of an emissions unit within the source. Air pollution control equipment shall not be shut down or its level of operation reduced if doing so would violate any term of this permit.

c. Significant permit modifications are subject to all requirements of COMAR 26.11.03 as they apply to permit issuance and renewal, including the requirements for applications, public participation, and review by affected states and EPA, except:

(1) An application need include only information pertaining to the proposed change to the source and modification of this permit, including a description of the change and modification, and any new applicable requirements of the Clean Air Act that will apply if the change occurs;

(2) Public participation, and review by affected states and EPA, is limited to only the application and those federally enforceable terms and conditions of the Part 70 permit that are affected by the significant permit modification.

d. As provided in COMAR 26.11.03.15B(5), an administrative permit amendment may be used to make a change that would otherwise require a significant permit modification if procedures for enhanced preconstruction review of the change are followed that satisfy the requirements of 40 CFR 70.7(d)(1)(v).

e. Before making a change that qualifies as a significant permit modification, the Permittee shall obtain all permits-to-construct and approvals required by COMAR 26.11.02.

f. The Permittee shall not make a significant permit modification that results in a violation of any applicable requirement of the Clean Air Act.

g. The permit shield in COMAR 26.11.03.23 applies to a final significant permit modification that has been issued by the Department, to the extent applicable under COMAR 26.11.03.23.

13. MINOR PERMIT MODIFICATIONS

[COMAR 26.11.03.16]

The Permittee may apply to the Department to make a minor modification to the federally enforceable provisions of this Part 70 permit as provided in COMAR 26.11.03.16 and in accordance with the following conditions:

a. A minor permit modification is a Part 70 permit revision that:

(1) Does not result in a violation of any applicable requirement of the Clean Air Act;

(2) Does not significantly revise existing federally enforceable monitoring, including test methods, reporting, record keeping, or compliance certification requirements except by:

(a) Adding new requirements,

(b) Eliminating the requirements if they are rendered meaningless because the emissions to which the requirements apply will no longer occur, or

(c) Changing from one approved test method for a pollutant and source category to another;

(3) Does not require or modify a:

(a) Case-by-case determination of a federally enforceable emissions standard,

(b) Source specific determination for temporary sources of ambient impacts, or

(c) Visibility or increment analysis;

(4) Does not seek to establish or modify a federally enforceable permit term or condition for which there is no corresponding underlying applicable requirement of the Clean Air Act, but that the Permittee has assumed to avoid an applicable requirement to which the source would otherwise be subject, including:

(a) A federally enforceable emissions standard applied to the source pursuant to COMAR 26.11.02.03 to avoid classification as a Title I modification; and

(b) An alternative emissions standard applied to an emissions unit pursuant to regulations promulgated under Section 112(i)(5) of the Clean Air Act

(5) Is not a Title I modification; and

(6) Is not required under COMAR 26.11.03.17 to be processed as a significant modification to this Part 70 permit.

b. Application for a Minor Permit Modification

The Permittee shall submit to the Department an application for a minor permit modification that satisfies the requirements of COMAR 26.11.03.03 which includes the following:

(1) A description of the proposed change, the emissions resulting from the change, and any new applicable requirements that will apply if the change is made;

(2) The proposed minor permit modification;

(3) Certification by a responsible official, in accordance with COMAR 26.11.02.02F, that:

(a) The proposed change meets the criteria for a minor permit modification, and

(b) The Permittee has obtained or applied for all required permits-to-construct required by COMAR 26.11.03.16 with respect to the proposed change;

(4) Completed forms for the Department to use to notify the EPA and affected states, as required by COMAR 26.11.03.07-.12.

c. Permittee's Ability to Make Change

(1) For changes proposed as minor permit modifications to this permit that will require the applicant to obtain a permit to construct, the permit to construct must be issued prior to the new change.

(2) During the period of time after the Permittee applies for a minor modification but before the Department acts in accordance with COMAR 26.11.03.16F(2):

(a) The Permittee shall comply with applicable requirements of the Clean Air Act related to the change and the permit terms and conditions described in the application for the minor modification.

(b) The Permittee is not required to comply with the terms and conditions in the permit it seeks to modify. If the Permittee fails to comply with the terms and conditions in the application during this time, the terms and conditions of both this permit and the application for modification may be enforced against it.

d. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.16 is not within the scope of this regulation.

e. Minor permit modification procedures may be used for Part 70 permit modifications involving the use of economic incentives, marketable permits, emissions trading, and other similar approaches, but only to the extent that the minor permit modification procedures are explicitly provided for in regulations approved by the EPA as part of the Maryland SIP or in other applicable requirements of the Clean Air Act.

14. ADMINISTRATIVE PART 70 OPERATING PERMIT AMENDMENTS

[COMAR 26.11.03.15]

The Permittee may apply to the department to make an administrative permit amendment as provided in COMAR 26.11.03.15 and in accordance with the following conditions:

a. An application for an administrative permit amendment shall:

(1) Be in writing;

(2) Include a statement certified by a responsible official that the proposed amendment meets the criteria in COMAR 26.11.03.15 for an administrative permit amendment, and

(3) Identify those provisions of this part 70 permit for which the amendment is requested, including the basis for the request.

b. An administrative permit amendment:

(1) Is a correction of a typographical error;

(2) Identifies a change in the name, address, or phone number of a person identified in this permit, or a similar administrative change involving the Permittee or other matters which are not directly related to the control of air pollution;

(3) requires more frequent monitoring or reporting by the Permittee;

(4) Allows for a change in ownership or operational control of a source for which the Department determines that no other revision to the permit is necessary and is documented as per COMAR 26.11.03.15B(4);

(5) Incorporates into this permit the requirements from preconstruction review permits or approvals issued by the Department in accordance with COMAR 26.11.03.15B(5), but only if it satisfies 40 CFR 70.7(d)(1)(v);

(6) Incorporates any other type of change, as approved by the EPA, which is similar to those in COMAR 26.11.03.15B(1)—(4);

(7) Notwithstanding COMAR 26.11.03.15B(1)—(6), all modifications to acid rain control provisions included in this Part 70 permit are governed by

applicable requirements promulgated under Title IV of the Clean Air Act; or

(8) Incorporates any change to a term or condition specified as State-only enforceable, if the Permittee has obtained all necessary permits-to-construct and approvals that apply to the change.

c. The Permittee may make the change addressed in the application for an administrative amendment upon receipt by the Department of the application, if all permits-to-construct or approvals otherwise required by COMAR 26.11.02 prior to making the change have first been obtained from the Department.

d. The permit shield in COMAR 26.11.03.23 applies to administrative permit amendments made under Section B(5) of COMAR 26.11.03.15 , but only after the Department takes final action to revise the permit.

e. The Permittee is subject to enforcement action if it is determined at any time that a change made under COMAR 26.11.03.15 is not within the scope of this regulation.

15. OFF-PERMIT CHANGES TO THIS SOURCE

[COMAR 26.11.03.19]

The Permittee may make off-permit changes to this facility as provided in COMAR 26.11.03.19 and in accordance with the following conditions:

a. The Permittee may make a change to this permitted facility that is not addressed or prohibited by the federally enforceable conditions of this Part 70 permit without obtaining a Part 70 permit revision if:

(1) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(2) The change is not subject to any requirements under Title IV of the Clean Air Act;

(3) The change is not a Title I modification; and

(4) The change does not violate an applicable requirement of the Clean Air Act or a federally enforceable term or condition of the permit.

b. For a change that qualifies under COMAR 26.11.03.19, the Permittee shall provide contemporaneous written notice to the Department and the EPA, except for a change to an emissions unit or activity that is exempt from the Part 70 permit application, as provided in COMAR 26.11.03.04. This written notice shall describe the change, including the date it was made, any change in emissions, including the pollutants emitted, and any new applicable requirements of the Clean Air Act that apply as a result of the change.

c. Upon satisfying the requirements of COMAR 26.11.03.19, the Permittee may make the proposed change.

d. The Permittee shall keep a record describing:

(1) Changes made at the facility that result in emissions of a regulated air pollutant subject to an applicable requirement of the Clean Air Act , but not otherwise regulated under this permit; and

(2) The emissions resulting from those changes.

e. Changes that qualify under COMAR 26.11.03.19 are not subject to the requirements for Part 70 revisions.

f. The Permittee shall include each off-permit change under COMAR 26.11.03.19 in the application for renewal of the part 70 permit.

g. The permit shield in COMAR 26.11.03.23 does not apply to off-permit changes made under COMAR 26.11.03.19.

h. The Permittee is subject to enforcement action if it is determined that an off-permit change made under COMAR 26.11.03.19 is not within the scope of this regulation.

16. ON-PERMIT CHANGES TO SOURCES

[COMAR 26.11.03.18]

The Permittee may make on-permit changes that are allowed under Section 502(b)(10) of the Clean Air Act as provided in COMAR 26.11.03.18 and in accordance with the following conditions:

a. The Permittee may make a change to this facility without obtaining a revision to this Part 70 permit if:

(1) The change is not a Title I modification;

(2) The change does not result in emissions in excess of those expressly allowed under the federally enforceable provisions of the Part 70 permit for the permitted facility or for an emissions unit within the facility, whether expressed as a rate of emissions or in terms of total emissions;

(3) The Permittee has obtained all permits and approvals required by COMAR 26.11.02 and .03;

(4) The change does not violate an applicable requirement of the Clean Air Act;

(5) The change does not violate a federally enforceable permit term or condition related to monitoring, including test methods, record keeping, reporting, or compliance certification requirements;

(6) The change does not violate a federally enforceable permit term or condition limiting hours of operation, work practices, fuel usage, raw material usage, or production levels if the term or condition has been established to limit emissions allowable under this permit;

(7) If applicable, the change does not modify a federally enforceable provision of a compliance plan or schedule in this Part 70 permit unless the Department has approved the change in writing; and

(8) This permit does not expressly prohibit the change under COMAR 26.11.03.18.

b. The Permittee shall notify the Department and the EPA in writing of a proposed on-permit change under COMAR 26.11.03.18 not later than 7 days before the change is made. The written information shall include the following information:

(1) A description of the proposed change;

(2) The date on which the change is proposed to be made;

(3) Any change in emissions resulting from the change, including the pollutants emitted;

(4) Any new applicable requirement of the Clean Air Act; and

(5) Any permit term or condition that would no longer apply.

c. The responsible official of this facility shall certify in accordance with COMAR 26.11.02.02F that the proposed change meets the criteria for the use of on-permit changes under COMAR 26.11.03.18.

d. The Permittee shall attach a copy of each notice required by condition b. above to this Part 70 permit.

e. On-permit changes that qualify under COMAR 26.11.03.18 are not subject to the requirements for part 70 permit revisions.

f. Upon satisfying the requirements under COMAR 26.11.03.18, the Permittee may make the proposed change.

g. The permit shield in COMAR 26.11.03.23 does not apply to on-permit changes under COMAR 26.11.03.18.

h. The Permittee is subject to enforcement action if it is determined that an on-permit change made under COMAR 26.11.03.18 is not within the scope of the regulation or violates any requirement of the State air pollution control law.

17. FEE PAYMENT

[COMAR 26.11.02.16A(2) & (5)(b)]

a. The fee for this Part 70 permit is as prescribed in Regulation .19 of COMAR 26.11.02.

b. The fee is due on and shall be paid on or before each 12-month anniversary date of the permit.

c. Failure to pay the annual permit fee constitutes cause for revocation of the permit by the Department.

18. REQUIREMENTS FOR PERMITS-TO-CONSTRUCT AND APPROVALS

[COMAR 26.11.02.09.]

The Permittee may not construct or modify or cause to be constructed or modified any of the following sources without first obtaining, and having in current effect, the specified permits-to-construct and approvals:

a. New Source Review source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

b. Prevention of Significant Deterioration source, as defined in COMAR 26.11.01.01, approval required, except for generating stations constructed by electric companies;

c. New Source Performance Standard source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

d. National Emission Standards for Hazardous Air Pollutants source, as defined in COMAR 26.11.01.01, permit to construct required, except for generating stations constructed by electric companies;

e. A stationary source of lead that discharges one ton per year or more of lead or lead compounds measured as elemental lead, permit to construct required, except for generating stations constructed by electric companies;

f. All stationary sources of air pollution, including installations and air pollution control equipment, except as listed in COMAR 26.11.02.10, permit to construct required;

g. In the event of a conflict between the applicability of (a.— e.) above and an exemption listed in COMAR 26.11.02.10, the provision that requires a permit applies.

h. Approval of a PSD or NSR source by the Department does not relieve the Permittee obtaining an approval from also obtaining all permits-to-construct required by (c.— g.) above.

19. CONSOLIDATION OF PROCEDURES FOR PUBLIC PARTICIPATION

[COMAR 26.11.02.11C] and [COMAR 26.11.03.01K]

The Permittee may request the Department to authorize special procedures for the Permittee to apply simultaneously, to the extent possible, for a permit to construct and a revision to this permit.

These procedures may provide for combined public notices, informational meetings, and public hearings for both permits but shall not adversely affect the rights of a person, including EPA and affected states, to obtain information about the application for a permit, to comment on an application, or to challenge a permit that is issued.

These procedures shall not alter any existing permit procedures or time frames.

20. PROPERTY RIGHTS

[COMAR 26.11.03.06E(4)]

This Part 70 permit does not convey any property rights of any sort, or any exclusive privileges.

21. SEVERABILITY

[COMAR 26.11.03.06A(5)]

If any portion of this Part 70 permit is challenged, or any term or condition deemed unenforceable, the remainder of the requirements of the permit continues to be valid.

22. INSPECTION AND ENTRY

[COMAR 26.11.03.06G(3)]

The Permittee shall allow employees and authorized representatives of the Department, the EPA, and local environmental health agencies, upon presentation of credentials or other documents as may be required by law, to:

a. Enter at a reasonable time without delay and without prior notification the Permittee's property where a Part 70 source is located, emissions-related activity is conducted, or records required by this permit are kept;

b. Have access to and make copies of records required by the permit;

c. Inspect all emissions units within the facility subject to the permit and all related monitoring systems, air pollution control equipment, and practices or operations regulated or required by the permit; and

d. Sample or monitor any substances or parameters at or related to the emissions units at the facility for the purpose of determining compliance with the permit.

23. DUTY TO PROVIDE INFORMATION

[COMAR 26.11.03.06E(5)]

The Permittee shall furnish to the Department, within a reasonable time specified by the Department, information requested in writing by the Department in order to determine whether the Permittee is in compliance with the federally enforceable conditions of this Part 70 permit, or whether cause exists for revising or revoking the permit. Upon request, the Permittee shall also furnish to the Department records required to be kept under the permit.

For information claimed by the Permittee to be confidential and therefore potentially not discloseable to the public, the Department may require the Permittee to provide a copy of the records directly to the EPA along with a claim of confidentiality.

The Permittee shall also furnish to the Department, within a reasonable time specified by the Department, information or records requested in writing by the Department in order to determine if the Permittee is in compliance with the State-only enforceable conditions of this permit.

24. COMPLIANCE REQUIREMENTS

[COMAR 26.11.03.06E(1)] and [COMAR 26.11.03.06A(11)] and [COMAR 26.11.02.05]

The Permittee shall comply with the conditions of this Part 70 permit. Noncompliance with the permit constitutes a violation of the Clean Air Act, and/or the Environment Article Title 2 of the Annotated Code of Maryland and may subject the Permittee to:

a. Enforcement action,

b. Permit revocation or revision,

c. Denial of the renewal of a Part 70 permit, or

d. Any combination of these actions.

The conditions in this Part 70 permit are enforceable by EPA and citizens under the Clean Air Act except for the State-only enforceable conditions.

Under Environment Article Section 2-609, Annotated Code of Maryland, the Department may seek immediate injunctive relief against a person who violates

this permit in such a manner as to cause a threat to human health or the environment.

25. CREDIBLE EVIDENCE

Nothing in this permit shall be interpreted to preclude the use of credible evidence to demonstrate noncompliance with any term of this permit.

26. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE

[COMAR 26.11.03.06E(2)]

The need to halt or reduce activity in order to comply with the conditions of this permit may not be used as a defense in an enforcement action.

27. CIRCUMVENTION

[COMAR 26.11.01.06]

The Permittee may not install or use any article, machine, equipment or other contrivance, the use of which, without resulting in a reduction in the total weight of emissions, conceals or dilutes emissions which would otherwise constitute a violation of any applicable air pollution control regulation.

28. PERMIT SHIELD

[COMAR 26.11.03.23]

A permit shield as described in COMAR 26.11.03.23 shall apply only to terms and conditions in this Part 70 permit that have been specifically identified as covered by the permit shield. Neither this permit nor COMAR 26.11.03.23 alters the following:

a. The emergency order provisions in Section 303 of the Clean Air Act, including the authority of EPA under that section;

b. The liability of the Permittee for a violation of an applicable requirement of the Clean Air Act before or when this permit is issued or for a violation that continues after issuance;

c. The requirements of the Acid Rain Program, consistent with Section 408(a) of the Clean Air Act;

d. The ability of the Department or EPA to obtain information from a source pursuant to Maryland law and Section 114 of the Clean Air Act; or

e. The authority of the Department to enforce an applicable requirement of the State air pollution control law that is not an applicable requirement of the Clean Air Act.

29. ALTERNATE OPERATING SCENARIOS

[COMAR 26.11.03.06A(9)]

For all alternate operating scenarios approved by the Department and contained within this permit, the Permittee, while changing from one approved scenario to another, shall contemporaneously record in a log maintained at the facility each scenario under which the emissions unit is operating and the date and time the scenario started and ended.

SECTION III PLANT WIDE CONDITIONS

1. PARTICULATE MATTER FROM CONSTRUCTION AND DEMOLITION

[COMAR 26.11.06.03D]

The Permittee shall not cause or permit any building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

2. OPEN BURNING

[COMAR 26.11.07]

Except as provided in COMAR 26.11.07.04, the Permittee shall not cause or permit an open fire from June 1 through August 31 of any calendar year. Prior to any open burning, the Permittee shall request and receive approval from the Department.

3. AIR POLLUTION EPISODE

[COMAR 26.11.05.04]

When requested by the Department, the Permittee shall prepare in writing standby emissions reduction plans, consistent with good industrial practice and safe operating procedures, for reducing emissions creating air pollution during periods of Alert, Warning, and Emergency of an air pollution episode.

4. REPORT OF EXCESS EMISSIONS AND DEVIATIONS

[COMAR 26.11.01.07] and [COMAR 26.11.03.06C(7)]

The Permittee shall comply with the following conditions for occurrences of excess emissions and deviations from requirements of this permit, including those in Section VI – State-only Enforceable Conditions:

a. Report any deviation from permit requirements that could endanger human health or the environment, by orally notifying the Department immediately upon discovery of the deviation;

b. Promptly report all occurrences of excess emissions that are expected to last for one hour or longer by orally notifying the Department of the onset and termination of the occurrence;

c. When requested by the Department the Permittee shall report all deviations from permit conditions, including those attributed to malfunctions as defined in COMAR 26.11.01.07A, within 5 days of the request by submitting a written description of the deviation to the Department. The written report shall include the cause, dates and times of the onset and termination of the deviation, and an account of all actions planned or taken to reduce, eliminate, and prevent recurrence of the deviation;

d. The Permittee shall submit to the Department semi-annual monitoring reports that confirm that all required monitoring was performed, and that provide accounts of all deviations from permit requirements that occurred during the reporting periods. Reporting periods shall be January 1 through June 30 and July 1 through December 31, and reports shall be submitted within 30 days of the end of each reporting period. Each account of deviation shall include a description of the deviation, the dates and times of onset and termination, identification of the person who observed or discovered the deviation, causes and corrective actions taken, and actions taken to prevent recurrence. If no deviations from permit conditions occurred during a reporting period, the Permittee shall submit a written report that so states.

e. When requested by the Department, the Permittee shall submit a written report to the Department within 10 days of receiving the request concerning an occurrence of excess emissions. The report shall contain the information required in COMAR 26.11.01.07D(2).

5. ACCIDENTAL RELEASE PROVISIONS

[COMAR 26.11.03.03B(23)] and [40 CFR 68]

Should the Permittee become subject to 40 CFR 68 during the term of this permit, the Permittee shall submit risk management plans by the date specified in 40 CFR 68.150 and shall certify compliance with the requirements of 40 CFR 68 as part of the annual compliance certification as required by 40 CFR 70.

The Permittee shall initiate a permit revision or reopening according to the procedures of 40 CFR 70.7 to incorporate appropriate permit conditions into the Permittee's Part 70 permit.

6. GENERAL TESTING REQUIREMENTS

[COMAR 26.11.01.04]

The Department may require the Permittee to conduct, or have conducted, testing to determine compliance with this Part 70 permit. The Department, at its option, may witness or conduct these tests. This testing shall be done at a reasonable time, and all information gathered during a testing operation shall be provided to the Department.

7. EMISSIONS TEST METHODS

[COMAR 26.11.01.04]

Compliance with the emissions standards and limitations in this Part 70 permit shall be determined by the test methods designated and described below or other test methods submitted to and approved by the Department.

Reference documents of the test methods approved by the Department include the following:

a. 40 CFR 60, appendix A

b. 40 CFR 51, appendix M

c. The Department's Technical Memorandum 91-01 "Test Methods and Equipment Specifications for Stationary Sources", (January 1991), as amended through Supplement 3, (October 1, 1997)

8. EMISSIONS CERTIFICATION REPORT

[COMAR 26.11.01.05-1] and [COMAR 26.11.02.19C] and [COMAR 26.11.02.19D]

The Permittee shall certify actual annual emissions of regulated pollutants from the facility on a calendar year basis.

a. The certification shall be on forms obtained from the Department and submitted to the Department not later than April 1 of the year following the year for which the certification is required;

b. The individual making the certification shall certify that the information is accurate to the individual's best knowledge. The individual shall be:

(1) Familiar with each source for which the certifications forms are submitted, and

(2) Responsible for the accuracy of the emissions information;

c. The Permittee shall maintain records necessary to support the emissions certification including the following information if applicable:

(1) The total amount of actual emissions of each regulated pollutant and the total of all regulated pollutants;

(2) An explanation of the methods used to quantify the emissions and the operating schedules and production data that were used to determine emissions, including significant assumptions made;

(3) Amounts, types and analyses of all fuels used;

(4) Emissions data from continuous emissions monitors that are required by this permit, including monitor calibration and malfunction information;

(5) Identification, description, and use records of all air pollution control equipment and compliance monitoring equipment including:

(a) Significant maintenance performed,
(b) Malfunctions and downtime, and
(c) Episodes of reduced efficiency of all equipment;

(6) Limitations on source operation or any work practice standards that significantly affect emissions; and

(7) Other relevant information as required by the Department.

9. COMPLIANCE CERTIFICATION REPORT

[COMAR 26.11.03.06G(6) and (7)]

The Permittee shall submit to the Department and EPA Region III a report certifying compliance with each term of this Part 70 permit including each applicable standard, emissions limitation, and work practice for the previous calendar year by April 1 of each year.

a. The compliance certification shall include:

(1) The identification of each term or condition of this permit which is the basis of the certification;

(2) The compliance status;

(3) Whether the compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of each source, currently and over the reporting period; and

(5) Any other information required to be reported to the Department that is necessary to determine the compliance status of the Permittee with this permit.

b. The Permittee shall submit the compliance certification reports to the Department and EPA simultaneously.

10. CERTIFICATION BY RESPONSIBLE OFFICIAL

[COMAR 26.11.02.02F]

All application forms, reports, and compliance certifications submitted pursuant to this permit shall be certified by a responsible official as to truth, accuracy, and completeness. The Permittee shall expeditiously notify the Department of an appointment of a new responsible official.

The certification shall be in the following form:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

11. SAMPLING AND EMISSIONS TESTING RECORD KEEPING

[COMAR 26.11.03.06C(5)]

The Permittee shall gather and retain the following information when sampling and testing for compliance demonstrations:

a. The location as specified in this permit, and the date and time that samples and measurements are taken;

b. All pertinent operating conditions existing at the time that samples and measurements are taken;

c. The date that each analysis of a sample or emissions test is performed and the name of the person taking the sample or performing the emissions test;

d. The identity of the Permittee, individual, or other entity that performed the analysis;

e. The analytical techniques and methods used; and

f. The results of each analysis.

12. GENERAL RECORDKEEPING

[COMAR 26.11.03.06C(6)]

The Permittee shall retain records of all monitoring data and information that support the compliance certification for a period of five (5) years from the date that the monitoring, sample measurement, application, report or emissions test was completed or submitted to the Department.

These records and support information shall include:

a. All calibration and maintenance records;

b. All original data collected from continuous monitoring instrumentation;

c. Records which support the annual emissions certification; and

d. Copies of all reports required by this permit.

13. GENERAL CONFORMITY

[COMAR 26.11.26.09]

The Permittee shall comply with the general conformity requirements of 40 CFR 93, Subpart B and COMAR 26.11.26.09.

14. ASBESTOS PROVISIONS

[40 CFR 61, Subpart M]

The Permittee shall comply with 40 CFR 61, Subpart M when conducting any renovation or demolition activities at the facility.

15. OZONE DEPLETING REGULATIONS

[40 CFR 82, Subpart F]

The Permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for MVACs in subpart B:

a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the prohibitions and required practices pursuant to 40 CFR 82.154 and 82.156.

b. Equipment used during the maintenance, service, repair or disposal of appliances shall comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.

c. Persons performing maintenance, service, repairs or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.

d. Persons performing maintenance, service, repairs or disposal of appliances shall certify with the Administrator pursuant to 40 CFR 82.162.

e. Persons disposing of small appliances, MVACS, and MVAC-like appliances as defined in 40 CFR 82.152, shall comply with record keeping requirements pursuant to 40 CFR 82.166.

f. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.

g. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

16. ACID RAIN PERMIT

Not applicable

SECTION IV PLANT SPECIFIC CONDITIONS

This section provides tables that include the emissions standards, emissions limitations, and work practices applicable to each emissions unit located at this facility. The Permittee shall comply with all applicable emissions standards, emissions limitations and work practices included herein.

The tables also include testing, monitoring, record keeping and reporting requirements specific to each emissions unit. In addition to the requirements included here in **Section IV**, the Permittee is also subject to the general testing, monitoring, record keeping and reporting requirements included in **Section III – Plant Wide Conditions** of this permit.

Unless otherwise provided in the specific requirements for an emissions unit, the Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, all records that the Permittee is required under this section to establish. [Authority: COMAR 26.11.03.06C(5)(g)]

Table IV – 1
Quarry - Fugitive Sources (Area A)

1.0	**Emissions Unit Number(s)** *a. The Union Bridge quarry located in Frederick County* HR1- Quarry Haul Roads SP1- Limestone Storage Pile TLU1- Limestone truck loading/unloading TLU2- Truck loading/unloading SP8 – Iron B01-001 Surge Storage Pile SP9 – Silica B02-001 Storage Pile SP11 – Overburden Storage Pile A03-022 Masonry Hauling at Union Bridge (paved) (to be installed 2016) *b. The New Windsor quarry located in Carroll County* A03-001A - Waste Rock Hauling (Segment A; to be installed 2016) A03-001B - Waste Rock Hauling (Segment B; to be installed 2016) A03-001C - Waste Rock Hauling (Segment C; to be installed 2016) A03-002A - Limestone Hauling (Segment A; to be installed 2016) A03-002C - Limestone Hauling (Crusher Segment; to be installed 2016) A03-003 - Front End Loader to Limestone Truck (to be installed 2016) A03-004 - Truck to Primary Hopper (to be installed 2016) SP10 – New Windsor Storage Pile (to be installed 2016) SP12 - Masonry Storage Pile (to be installed 2016) A03-018- Masonry Transfer to Crusher (to be installed 2016) A03-019- Masonry Portable Crusher (to be installed 2016) A03-020- Transfer from Masonry Crusher to Truck (to be installed 2016) A03-021- Masonry Hauling at New Windsor (unpaved) (to be installed 2016)

Table IV – 1 **Quarry - Fugitive Sources (Area A)**	
1.1	**Applicable Standards/Limits:** A. & B. Control of Visible Emissions and Particulate Matters (1) **COMAR 26.11.06.03D**- Particulate Matter from Materials Handling and Construction. A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. (2) **New Source Performance Standards (NSPS) for nonmetallic mineral processing plants 40 CFR 60 Subpart OOO** (New Windsor Quarry Only): (a) The fugitive emissions from crushers at which a capture system is not used shall not exceed 12% opacity; **[Reference 40 CFR §60.672(b) & (e)(2)]** (b) The fugitive emissions from each vent or each transfer point on a belt conveyor shall not exceed 7% opacity; and **[Reference 40 CFR §60.672(b) & (e)(2)]** (c) Fugitive emissions from the building openings (except for vents as defined in 40 CFR §60.671) shall not exceed 7% opacity. **[Reference 40 CFR §60.672(e)(1)]**
1.2	**Testing Requirements:** A. & B. New Windsor Quarry Only: (1) For each fugitive emissions unit with an applicable opacity limit, the Permittee must conduct opacity observations to demonstrate compliance with applicable opacity limits within 60 days after achieving the maximum hourly production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under 40 CFR §60.11. **[Reference 40 CFR §60.672(b)]** (2) For opacity observations, the Permittee shall use Method 9 of Appendix A-4 of 40 CFR, Part 60 and the procedures in 40 CFR §60.11, with the following additions: (a) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet). (b) 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 of Appendix A-4 of 40 CFR Part 60, Section 2.1) must be followed. (c) 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

Table IV – 1 **Quarry - Fugitive Sources (Area A)**	
	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. (d) The duration of the Method 9 observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of 40 CFR, Part 60, Subpart OOO must be based on the average of the five 6-minute averages. (e) Method 9 observations for buildings shall be conducted while all affected facilities inside the building are operating. **[Reference 40 CFR § 60.675(c)(1) and (d)]**
1.3	**Monitoring Requirements:** A. Control of Particulate Matters (1) The Permittee shall prepare and update as needed the best management plan that describes the procedures and methods that will be used to take reasonable precautions. The management plan may be included in the written operation and maintenance plan required under the Portland Cement MACT. **[COMAR 26.11.03.06C]** (2) The Permittee shall perform a visual inspection for a minimum of one minute once a month or when weather conditions are favorable to create airborne particulate matter to verify that best management practices are being implemented. **[COMAR 26.11.03.06C]** New Windsor Quarry only: (3) The Permittee shall control fugitive dust from plant roads and stockpiles by using water, chemical dust suppressants, or a combination of both, as needed. (4) For each wet suppression system, the Permittee must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The Permittee must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the Permittee finds that water is not flowing properly during an inspection of the water spray nozzles. The Permittee must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under 40 CFR § 60.676(b). **[Reference: 40 CFR § 60.674(b)]** (5) If the Permittee relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of 40 CFR, Part 60, Subpart OOO provided that the affected facility meets the following criteria in paragraphs 40 CFR §60.676(b)(1)(i) and (ii):

Table IV – 1 **Quarry - Fugitive Sources (Area A)**	
	(a) The Permittee conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to 40 CFR §60.676(b) and 40 CFR §60.676(b); and (b) The Permittee designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under 40 CFR §60.11 and 40 CFR §60.675. **[Reference: 40 CFR §60.674(b)(1)]** (6) If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under § 60.676(b) must specify the control mechanism being used instead of the water sprays. **[Reference: 40 CFR §60.674(b)(2)]**
1.4	**Record Keeping Requirements:** A. & B. Control of Visible Emissions and Particulate Matters The Permittee shall maintain the best management plan and records of the dates and inspection results for at least five (5) years and make them available to the Department upon request. 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. **[COMAR 26.11.03.06C]**
1.5	**Reporting Requirements:** A. & B. Please see the record keeping requirements.

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 2 **Union Bridge Quarry - Point Sources (Area A-1)** **(Note: The Union Bridge quarry is located in Frederick County)**		
2.0	**Emissions Unit Number(s)**	
	Baghouse	Emission Unit
	A01-012	A01-009- Gyratory Crusher
		A01-018- Belt Conveyor #1
	A01-025	A01-021- Surge Bin
	A02-008	A02-005- Belt Conveyor #2
		A02-006- Secondary Crusher

Table IV – 2
Union Bridge Quarry - Point Sources (Area A-1)
(Note: The Union Bridge quarry is located in Frederick County)

		A02-010- Belt Conveyor #3 A02-017-Belt Conveyor #6 A02-018- Belt Conveyor #5 A02-019- Tertiary Crusher A02-021- Belt Conveyor #4
	A02-012	A02-011- Vibrating Screens and Transfer System A02-022- Vibrating Screens and Transfer System A02-023- Vibrating Screens and Transfer System A02-024- Belt Conveyor #7
	A02-015	A02-011- Vibrating Screens and Transfer System A02-022- Vibrating Screens and Transfer System A02-023- Vibrating Screens and Transfer System A02-024- Belt Conveyor #7
	A02-025	A02-011- Vibrating Screens and Transfer System A02-022- Vibrating Screens and Transfer System A02-023- Vibrating Screens and Transfer System B01-017- Belt Conveyor #8
	The Union Bridge quarry, which does not commence construction, modification, or reconstruction after August 31, 1983, is not subject to New Source Performance Standards (NSPS) for nonmetallic mineral processing plants 40 CFR 60 Subpart OOO.	
2.1	**<u>Applicable Standards/Limits</u>:** A. <u>Visible Emissions Limitations</u> COMAR 26.11.30.05(B)(1), which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is greater than 20 percent opacity. B. <u>Control of Particulate Matter</u> (1) COMAR 26.11.30.04(B)(1), which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.05 grains per standard cubic foot dry. (2) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000** - The following equipment shall be equipped with a dust collector designed to reduce particulate matter emissions to 0.01 gr/SCFD (22.9 mg/dscm): (a) A01-021 – Surge Bin; (b) A02-024 & B01-017 – Belt Conveyors #7 & #8; and (c) A02-011, A02-023, and A02-022 - Vibrating Screens and Transfer System. (3) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000 -** The following equipment shall be equipped with a dust collector designed to reduce particulate matter emissions to 0.015 gr/SCFD (34.3 mg/dscm): (a) A01-009- Gyratory Crusher; (b) A01-018- Belt Conveyor #1;	

Table IV – 2 **Union Bridge Quarry - Point Sources (Area A-1)** **(Note: The Union Bridge quarry is located in Frederick County)**	
	(c) A02-005- Belt Conveyor #2; (d) A02-006- Secondary Crusher; (e) A02-010- Belt Conveyor #3; (f) A02-017- Belt Conveyor #6; (g) A02-018- Belt Conveyor #5; (h) A02-019- Tertiary Crusher; and (i) A02-021- Belt Conveyor #4.
2.2	**Testing Requirements:** A & B. Please see the monitoring requirements.
2.3	**Monitoring Requirements:** A. Visible Emissions Limitations The Permittee shall conduct a monthly 1-minute visible emissions test of the exhaust stack of each emission unit in accordance with Method 22 of Appendix A to part 60. The test must be conducted while the emission unit is in operation. If no visible emissions are observed in six consecutive monthly tests for the exhaust stack of any emission unit, the Permittee may decrease the frequency of testing from monthly to semi-annually for the exhaust stack of that emission unit. If visible emissions are observed during any semi-annual test, the Permittee must resume testing of the exhaust stack of that emission unit 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 the exhaust stack of any emission unit, the Permittee may decrease the frequency of testing from semi-annually to annually for the exhaust stack of that emission unit. If visible emissions are observed during any annual test, the Permittee must resume testing of the exhaust stack of that emission unit on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests. If visible emissions are observed on any stack during any Method 22 test, the Permittee shall initiate, within one hour, the corrective actions specified in the preventive maintenance plan or the best management plan. Within 24 hours at the end of the Method 22 test, the Permittee shall conduct a follow-up Method 22 test of any stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are still observed, conduct a visual opacity test in accordance with Method 9 of Appendix A of 40 CFR Part 60. The Method 9 test shall be conducted within one-hour of the end of the follow-up Method 22 test and the duration of the Method 9 test shall be at least six minutes. **[COMAR 26.11.03.06C]** A & B. (1) The exhaust gas from each emissions unit shall vent through a dust collector designed to meet the particulate matter emissions limit before discharging into the atmosphere. **[Permit to Construct #06-6-0256N dated April 8, 1999 and**

Table IV – 2 **Union Bridge Quarry - Point Sources (Area A-1)** **(Note: The Union Bridge quarry is located in Frederick County)**	
	revised June 7, 2000] (2) The Permittee shall comply with and update, as needed, the preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. **[COMAR 26.11.03.06C]**
2.4	**Record Keeping Requirements:** A. Visible Emissions Limitations The Permittee shall maintain records of the results of the monthly inspections for at least five (5) years and make them available to the Department upon request. 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. **[COMAR 26.11.03.06C]** A & B The Permittee shall maintain the log of inspection and maintenance records for at least five (5) years and make it available to the Department upon request. 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. **[COMAR 26.11.03.06C]**
2.5	**Reporting Requirements:** A & B. Please see the record keeping requirements.

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 3 **New Windsor Quarry - Point Sources (Area A-2)** **(Note: The New Windsor quarry is located in Carroll County)**	
3.0	**Emissions Unit Number(s)** Baghouse — Emission Unit A01-012 — A03-005- Primary Crusher for Ca, silica, alumina, and Fe bearing raw materials A03-006- Primary Crusher for to Belt #1 A01-025 — A03-008- Belt #1 to Belt #2 Transfer A02-003 — A03-010- Transfer from Belt #2 to Belt #3 or to Masonry Pile A02-008 — A03-012- Belt #2 to Limestone Overland Conveyor (Belt #4) A03-014- Overland Conveyor (Belt #4) Transfer to Belt #5 to New Transfer Tower A03-016- New Transfer Tower

Table IV – 3 **New Windsor Quarry - Point Sources (Area A-2)** **(Note: The New Windsor quarry is located in Carroll County)**	
	The New Windsor quarry, which commenced construction, modification, or reconstruction after August 31, 1983, is subject to New Source Performance Standards (NSPS) for nonmetallic mineral processing plants 40 CFR 60 Subpart OOO.
3.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations **COMAR 26.11.30.05(B)(2),** which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers. B. Control of Particulate Matter **COMAR 26.11.30.04(B)(2)**, which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot of dry exhaust gas. **New Source Performance Standards (NSPS) for nonmetallic mineral processing plants 40 CFR 60 Subpart OOO**: Particulate matter emissions from each baghouse shall not exceed 0.014 grains per standard cubic foot of dry air (0.014 gr/dscf); **[Reference 40 CFR §60.672(a)]** **Permit to Construct #013-0012-6-0352 dated March 13, 2014**: (1) The Permittee shall comply with the following operating requirements: (a) Prior to the initial operation of the New Windsor Quarry expansion project, the Permittee shall apply for and obtain a temporary permit to operate from the Department. (b) Particulate matter emissions from each bag filter shall not exceed 0.010 grains per standard cubic foot of dry air (0.010 gr/dscf). (c) The limestone mined from both the Union Bridge Quarry and the New Windsor Quarry shall be used only to support the Union Bridge Portland Cement Plant. (d) The limestone crushing throughput from the New Windsor Quarry is limited to 3.65 million short tons for any rolling 12-month period. (e) The combined limestone crushing throughput from the Union Bridge Quarry and the New Windsor Quarry is limited to 3.70 million short tons for any rolling 12-month period. (f) The Union Bridge Quarry crushing system and the New Windsor Quarry crushing system shall not operate at the same time. (g) A combined annual hours of operation, on a calendar year basis, for Union Bridge Quarry crushing system and the New Windsor Quarry crushing system is limited to 3,952 hours. (h) The limestone withdrawal rate from the Union Bridge Limestone Storage

Table IV – 3 **New Windsor Quarry - Point Sources (Area A-2)** **(Note: The New Windsor quarry is located in Carroll County)**	
	Dome is limited to 3.53 million short tons for any rolling 12-month period. (i) The throughput for the portable crusher A03-049 is limited to 86,000 short tons of limestone for any rolling 12-month period. (j) Beginning with the calendar month in which the New Windsor Quarry crushing system produces 811,100 annual short tons of limestone, when rolled monthly, the Union Bridge Quarry crushing system shall be limited to 2,615,942 short tons for any rolling 12-month period. The production of limestone from the Union Bridge Quarry crushing system shall be permanently reduced from the 2,615,942 short ton limit by at least 0.9 short tons for every short ton produced by the New Windsor Quarry crushing system above 811,100 annual short tons, rolled monthly. (2) The following equipment shall vent through a bag filter prior to discharging to the atmosphere to meet all applicable particulate matter emissions limits: (a) Primary Crusher operations to Belt Conveyor #1; (b) limestone transport operations from Belt Conveyor #1 to Belt Conveyor #2; (c) limestone transport operations from Belt Conveyor #2 to the New Windsor Transfer Tower and from the New Windsor Transfer Tower to Belt Conveyor #3; (d) limestone transport operations from the New Windsor Transfer Tower to Belt Conveyor #4 (the Overland Conveyor); (e) limestone transport operations from Belt Conveyor #4 (the Overland Conveyor) to Belt Conveyor #5 at the Union Bridge Portland Cement Plant; and (f) limestone transport operations from Belt Conveyor #5 to the Union Bridge Transfer Tower and from the Union Bridge Transfer Tower to the modified Belt Conveyor B01-002. (3) Wet suppression systems shall be used whenever they are needed to comply with all applicable visible emissions and opacity limits.
3.2	**<u>Testing Requirements</u>:** A & B. (1) The Permittee must conduct stack emissions tests to demonstrate compliance with all applicable particulate matter emissions limits within 60 days after achieving the maximum hourly production rate at which the affected facility will be operated, but not later than 180 days after initial startup. **[Reference 40 CFR § 60.672(a)]**

Table IV – 3 **New Windsor Quarry - Point Sources (Area A-2)** **(Note: The New Windsor quarry is located in Carroll County)**	
	(2) The Permittee shall submit a stack emissions testing protocol to the Department for review and approval at least 30 days prior to each stack emissions test. (3) During each stack emissions test or opacity observation, the affected equipment shall be operated at 90% or higher of its rated capacity. (4) Each stack emissions test shall be conducted in accordance with Method 5 of Appendix A-3 of 40 CFR, Part 60 or Method 17 of Appendix A-6 of 40 CFR, Part 60 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. **[Reference 40 CFR §60.675(b)(1)]** (5) Within 45 days after the last day of any required stack emissions test or opacity observation, the Permittee shall submit to the Department the results.
3.3	**Monitoring Requirements:** A & B. (1) Except as specified in 40 CFR §60.674(d), any affected facility that uses a bag filter to control emissions must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR, Part 60, Appendix A-7). The Method 22 (40 CFR, Part 60, Appendix A-7) test shall be conducted while the bag filter is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the Permittee must initiate corrective action within 24 hours to return the bag filter to normal operation. The Permittee must record each Method 22 test, including the date and any corrective actions taken, in the logbook required under 40 CFR §60.676(b). (2) The Permittee may establish a different bag filter-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to 40 CFR §60.675(b) simultaneously with Method 22 to determine what constitutes normal visible emissions from that affected facility's bag filter when it is in compliance with the applicable PM concentration limit in Table 2 of 40 CFR 60, Subpart OOO. The revised visible emissions success level must be incorporated into the permit for the affected facility. **[Reference: 40 CFR §60.674(c)]**
3.4	**Record Keeping Requirements:** A. Visible Emissions Limitations The Permittee shall maintain records of the results of the monthly inspections for at least five (5) years and make them available to the Department upon request. At a minimum, the most recent two years of data shall be retained on site. The remaining

Table IV – 3
New Windsor Quarry - Point Sources (Area A-2)
(Note: The New Windsor quarry is located in Carroll County)

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. **[COMAR 26.11.03.06C]**

A & B

(1) The Permittee shall maintain the log of inspection and maintenance records for at least five (5) years and make it available to the Department upon request. 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. **[COMAR 26.11.03.06C]**

(2) The Permittee shall comply with the federal recordkeeping requirements under 40 CFR §60.7, §60.19 and §60.676, which include the following and the records shall be kept on site for at least 5 years and shall be made available to the EPA Region III and the Department upon request:

(a) Rrecords of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility and any malfunction of the air pollution control equipment**. [Reference: 40 CFR §60.7 and §60.676]**

(b) Records of each periodic inspection required under §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). **[Reference: 40 CFR § 60.676(b)(1)]**

(3) Records of the following operating data shall be kept at the site for at least five (5) years and shall be made available to the Department upon request:

(a) The amount of limestone processed in the New Windsor Quarry crushing system each month and for any 12-month period rolling monthly;

(b) The amount of limestone processed in the Union Bridge Quarry crushing system each month and for any 12-month period rolling monthly;

(c) Records to demonstrate compliance with operating requirements per Permit to construct #013-0012-6-0352 dated March 13, 2014 as listed in Table IV-3.1B of this permit;

(d) The exact times when the New Windsor Quarry crushing system was operated and the total annual operating hours on a calendar year basis;

(e) The exact times when the Union Bridge Quarry crushing system was operated and the total annual operating hours on a calendar year basis;

(f) The total annual operating hours, on a calendar year basis, for the New Windsor Quarry crushing system and the Union Bridge Quarry crushing

Table IV – 3 **New Windsor Quarry - Point Sources (Area A-2)** **(Note: The New Windsor quarry is located in Carroll County)**	
	system, combined. (g) The amount of limestone withdrawn from the Union Bridge Limestone Storage Dome each month and for any 12-month period rolling monthly; and (h) The amount of limestone processed by the portable crusher A03-049 in the New Windsor Quarry each month and for any 12-month period rolling monthly. **[Reference: Permit to Construct #013-0012-0352 issued March 14, 2014]**
3.5	**Reporting Requirements:** A & B. (1) The Permittee shall comply with the federally reporting requirements under 40 CFR §60.7, §60.19 and §60.676, which include the following: (a) A notification of the actual date of initial startup of an affected facility postmarked within 15 days after such date. (b) The Permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 CFR §60.672, including reports of opacity observations made using Method 9 (40 CFR, Part 60, Appendix A-4) to demonstrate compliance with 40 CFR §60.672(b) and (e). (c) A notification of any physical or **operational** change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR §60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Department may request additional relevant information subsequent to this notice. (d) A notification of the anticipated date for conducting the opacity observations required by 40 CFR §60.11(e)(1). The notification shall also include, if appropriate, a request for the Department to provide a visible emissions reader during a performance test. The notification shall be postmarked not less than 30 days prior to such date. (2) At least 30 days prior to initial operation of the New Windsor Quarry expansion project, the Permittee shall submit to the Department the following for review and approval: (a) The operation and maintenance plan for the Union Bridge Portland Cement

Table IV – 3 **New Windsor Quarry - Point Sources (Area A-2)** **(Note: The New Windsor quarry is located in Carroll County)**	
	Plant revised to include the New Windsor Quarry expansion project; (b) The preventative maintenance plan for the Union Bridge Portland Cement Plant revised to include each bag filter for the New Windsor Quarry expansion project; and (c) The best management plan for fugitive emissions for the Union Bridge Portland Cement Plant revised to include fugitive sources from the New Windsor Quarry expansion project.

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 4 **Material Handling - Fugitive Sources - Not subject to MACT Requirements**	
4.0	**Emissions Unit Numbers** **Area A – Union Bridge Quarry Operations** SP13 – Bottom Ash Storage Pile A02-026 – Screen **Area B – Raw Material Transport and Storage** TU1- Iron and silica truck unloading SP4- Silica Storage Pile SP5- Iron Ore Storage Pile **Area F – Coal Grinding Mill for Kiln** F01-034 - Belt Conveyor #11 F01-037 – Belt Conveyor #14 SP2 – Coal Storage Pile SP3 – Coal Storage Pile TT2 – Transfer Tower #2 TU2 – Truck Unloading F02-018 - Belt Conveyor F03-001 - Belt Conveyor F03-002 – Coal Weigh feeder F03-003 – Coke Weigh feeder
4.1	**Applicable Standards/Limits:** Control of Particulate Matters **COMAR 26.11.06.03D** - Particulate Matter from Materials Handling and Construction. A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

Table IV – 4
Material Handling - Fugitive Sources - Not subject to MACT Requirements

4.2	**Testing Requirements:** Please see the monitoring requirements.
4.3	**Monitoring Requirements:** Control of Particulate Matters (1) The Permittee shall comply with and update as needed the best management plan that describes the procedures and methods that will be used to take reasonable precautions. The management plan may be included in the written operation and maintenance plan required under the Portland Cement MACT. **[COMAR 26.11.03.06C]** (2) The Permittee shall perform an inspection at a minimum of one minute once a month or when weather conditions are favorable to create particulate matter becoming airborne to verify that best management practices are being implemented. **[COMAR 26.11.03.06C]**
4.4	**Record Keeping Requirements:** Control of Particulate Matters The Permittee shall maintain the best management plan and records of the dates and inspection results for at least five (5) years and make them available to the Department upon request. 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. **[COMAR 26.11.03.06C]**
4.5	**Reporting Requirements:** Please see the record keeping requirements.

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 5 **Material Handling - Fugitive Sources - Subject to MACT Requirements**	
5.0	**Emissions Unit Numbers** **Area B – Raw Material Transport and Storage** B01-011 – Enclosed Limestone Dome **Area F – Coal Grinding Mill for Kiln** F02-007 – Belt Conveyor **Area G – Clinker Transport & Storage – Craneway Building** CWAY – Craneway TU3 – Gypsum Truck Unloading **Area H – Clinker Finish Mill** H04-001 – Gypsum Bin 409 H04-003 – Limestone Tank 416 H04-004 – Clinker Bin 403 H05-001 – Gypsum Bin 509 H05-004 – Clinker Bin 503 H06-001 – Gypsum Bin 609 H06-004 – Clinker Bin 603 H07-001 – Gypsum Bin H07-004 – Clinker Bin H08-001 – Gypsum Bin
5.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations **Portland Cement MACT-** Each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; bulk loading or unloading system; raw and finish mills; and each existing raw material dryer, at a facility which is a major source subject to the provisions of this subpart must not cause to be discharged any gases from these affected sources which exhibit opacity in excess of 10 percent. **[Reference: §63.1345]** B. Control of Particulate Matter **COMAR 26.11.06.03D** - Particulate Matter from Materials Handling and Construction. A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.
5.2	**Testing Requirements:** A & B. Please see the monitoring requirements.

Table IV – 5 **Material Handling - Fugitive Sources - Subject to MACT Requirements**	
5.3	**Monitoring Requirements:** A. Visible Emissions Limitations (1) *Opacity monitoring requirements.* If you are subject to a limitation on opacity under 40 CFR §63.1345, you must conduct required opacity monitoring in accordance with the provisions of paragraphs (f)(1)(i) through (vii) of 40 CFR §63.1350(f) and in accordance with your monitoring plan developed under 40 CFR §63.1350(p). You must also develop an opacity monitoring plan in accordance with paragraphs (p)(1) through (4) and paragraph (o)(5), if applicable, of this section. **[40 CFR §63.1350(f)]** A & B The Permittee shall comply with and update as needed the written operations and maintenance plan [40 CFR §63.1347] which includes 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 of §63.1345; and (2) Procedures to be used to periodically monitor affected sources. **[COMAR 26.11.03.06C]**
5.4	**Record Keeping Requirements:** A & B. The Permittee shall maintain the written operations and maintenance plan and all records 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. **[40 CFR §63.1355]**
5.5	**Reporting Requirements:** A & B. The Permittee shall submit a summary report semiannually which contains all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a). **[40 CFR §63.1354(b)(9)(v)]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 6
Material Handling - Point Sources - Subject to MACT requirements

6.0 Emissions Unit Numbers

Area B - Raw Material Transport and Storage

Baghouse	Emission Unit
B02-008	B02-007- Belt Conveyor
	B02-011- Silica Bearing Material Bin
	B02-012- Iron Bearing Material Bin
	B02-017- Reversible Belt Conveyor
B03-008	B03-004- Fly ash Blending System
B04-016	TT3- Transfer Tower #3
B04-011	TT3- Transfer Tower #3
B04-016	B04-019 Limestone bin
B02-019	TT4- Transfer Tower #4

Area C – Raw Grinding

Baghouse	Emission Unit
C02-021	C02-038- Rejects Belt Conveyor
C02-011	C02-060- Reversible Belt Conveyor (to Raw Mill)
C03-001	C03-034, C03-035, C03-040, & C03-042 - Airslides
C03-047	C03-045- Airslides
C03-050	C03-008, C03-045, C03-054, & C04-066 - Airslides
C03-030	C03-010 & C03-013 - Airslides and C03-046- Bucket Elevator
C01-007	C01-002- Limestone Weighfeeder
	C01-004- Iron Weighfeeder
	C01-006- Silica Weighfeeder
	C01-011- Belt Conveyor
C01-019	C01-015- Fly ash Weigh bin
C02-011	C02-001- Bucket elevator
C02-011	C02-006- 100 T Bin
C04-050	C04-037- Bucket Elevator
C04-075	C04-037- Bucket Elevator
C04-050	C04-038- 600T Bin and C04-068- Airslide
C04-075	C04-070, C04-072, and C04-074- Airslide

Area D – Raw Meal - Kiln Feed

Baghouse	Emission Unit
D01-037	C03-046- Bucket Elevator
	C03-017-Airslide
	D01-001- Blending Silo
	D01-003 & D01-002 - Recirculation Airslides
D01-034	D01-020- 185 MT Feed Bin
	D02-004 & D02-017- Airslides
	D02-006 & D02-019- Flow Meters
D01-040	D01-023, D01-026, D02-007, & D02-020 - Airslides

Table IV – 6
Material Handling - Point Sources - Subject to MACT requirements

D02-041	D02-010, D02-023, & D02-049 - Airslides
D02-041	D02-025- Bucket Elevator and D02-026- Bucket Elevator
D02-027	D02-033, D02-045 & D02-047 – Air Slides
	Area F – Coal Grinding Mill for Kiln
F02-027	TT5 – Transfer Tower #5
	F02-006 Reclaim Elevator
	F02-007 Belt Conveyor
	Area G – Clinker Transport & Storage – Craneway Building
Baghouse	Emission Unit
B01-018	TT8/9- Transfer Tower #8/9
G02-041	TT8/9- Transfer Tower #8/9
G02-025	TT6 – Transfer Tower #6
G04-037	G04-018 – Belt Conveyor
	Area H – Clinker Finish Mill
Baghouse	Emission Unit
G05-003	G05-001 Dust System
H10-113	H07-040- Cement Cooler
	H07-071- Airslide
	H08-040-Cement Cooler
	H08-064- Airslide
	H10-001- Airslide
	H10-006- Bucket Elevator
H10-119	H10-007, H10-124, and H10-125- Airslides
	H10-010- Bucket Elevator
H10-181	H10-167- Airslide
	H10-176- Bucket Elevator
H10-179	H10-177- Airslide
	Area I – Cement Storage and Shipping with Bag Packing
Baghouse	Emission Unit
H10-179	H10-177
	I01-033- Day Tank
I02-290	I02-289 – Feed Bin
	TL2 – Truck Day Tank Loadout
H10-221	Product Silos (I02-001 to I02-032)
H10-224	Product Silos (I02-001 to I02-032)
H10-252	Product Silos (I02-001 to I02-032)
H10-254	Product Silos (I02-001 to I02-032)
Pack house	I03/I04 - Packaging and Palletizing
I11-180	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)
I11-190	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)
I12-180	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)

Table IV – 6
Material Handling - Point Sources - Subject to MACT requirements

	I12-190	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)
	I13-180	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)
	I13-190	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)
	I14-180	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)
	I14-190	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)

6.1 **Applicable Standards/Limits:**

A. Visible Emissions Limitations

(1) **COMAR 26.11.30.05(B)(2)**, which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

(2) **40 CFR Part 60, Subpart F, §60.62(c) -** Which limits the opacity of any gas from raw material storage to 10 percent for facility that commences construction or modification after August 17, 1971.

Note: This condition is equivalent to the requirements of **§63.1345** for the same affected facilities, therefore as long as the Company complies with **§63.1345,** it meets this requirement.

(3) **40 CFR Part 60, Subpart Y, §60.254(a)** - which limits 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 to 20 percent opacity.

(4) **Portland Cement MACT-** Each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; bulk loading or unloading system; raw and finish mills; and each existing raw material dryer, at a facility which is a major source subject to the provisions of this subpart must not cause to be discharged any gases from these affected sources which exhibit opacity in excess of 10 percent. **[Reference: §63.1345]**

B. Control of Particulate Matters

(1) **COMAR 26.11.30.04(B)(2)**, which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot dry.

(2) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000** - Each emissions unit shall be equipped with a dust collector designed to reduce particulate matter emissions to 0.01 gr/SCFD (22.9 mg/dscm).

6.2 **Testing Requirements:**

A & B. Please see the monitoring requirements.

Table IV – 6
Material Handling - Point Sources - Subject to MACT requirements

6.3 **Monitoring Requirements:**

A. Visible Emissions Limitations

Opacity monitoring requirements. If you are subject to a limitation on opacity under 40 CFR §63.1345, you must conduct required opacity monitoring in accordance with the provisions of paragraphs (f)(1)(i) through (vii) of 40 CFR §63.1350(f) and in accordance with your monitoring plan developed under 40 CFR §63.1350(p). You must also develop an opacity monitoring plan in accordance with paragraphs (p)(1) through (4) and paragraph (o)(5), if applicable, of this section. **[40 CFR §63.1350(f)]**

A & B

(1) The Permittee shall comply with and update as needed the written operations and maintenance plan which includes the following information: **[40 CFR §63.1350(a) and (b)]**

(a) 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 of §§63.1345; and

(b) Procedures to be used to periodically monitor affected sources.

(2) The exhaust gas from each emissions unit shall vent through a dust collector designed to meet the particulate matter emissions limit before discharging into the atmosphere. **[Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000]**

(3) Each railcar shall be inspected upon completion of filling to determine spillage or dust on top of the railcar. **[COMAR 26.11.03.06C]**

(4) The Permittee shall perform a weekly inspection of the railcar vacuuming system. **[COMAR 26.11.03.06C]**

(5) The Permittee shall monitor the amount of fly ash in the fly ash silo and shall use an alarm to warn the Process Control Supervisor when the level of the fly ash in the silo reaches a height of 25 meters (90% full) and 26 meters (93% full). When the 26 meter alarm sounds the Process Control Supervisor shall lock the unloading valves out until the level reaches 25 meters. **[COMAR 26.11.03.06C]**

6.4 **Record Keeping Requirements:**

A & B.

The Permittee shall maintain the written operations and maintenance plan and all records for at least five years following the date of each inspection, occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the

Table IV – 6
Material Handling - Point Sources - Subject to MACT requirements

	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. **[40 CFR §63.1355]** If spillage or dust is observed on top of a railcar, the Permittee shall log the incident into the Railcar Vacuuming Logbook by recording the car number, the time of the spill, the operator's name, and that the spill has been cleaned up. The records in the Railcar Vacuuming Logbook and records of the weekly inspections of the railcar vacuuming system shall be kept on site for at least five years and shall be made available to the Department upon request. [**COMAR 26.11.03.06C]**
6.5	**Reporting Requirements:** A & B. The Permittee shall submit a summary report semiannually which contains all failures to comply with any provision of the Operation and Maintenance Plan developed in accordance with §63.1350(a). **[40 CFR §63.1354(b)(9)(v)]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 7
Kiln, Raw and Coal Mills - (Subject to MACT requirements)

7.0 **Emissions Unit Numbers**

Area C – Raw Grinding

Baghouse	Emission Unit
C04-014	C02-025- Raw Mill

Area E – Clinker Burning and Cooling with Preheater Kiln

Baghouse	Emission Unit
C04-014	E01-001/E02-001- Preheater-Precalciner/Kiln System

Area F – Coal Grinding Mill for Kiln

Baghouse	Emission Unit
F03-028	F03-016- Coal Mill
F03-032	F03-016- Coal Mill
F03-036	F03-016- Coal Mill
F03-040	F03-016- Coal Mill
F03-044	F03-016- Coal Mill
F03-048	F03-016- Coal Mill
F04-010	F04-009-Pneumatic Pump for Fine Coal Dust Bin
C04-014	F04-018-Kiln Fuel Pressure Relief
C04-014	F04-026-Calciner Fuel Bin Pressure Relief

	Table IV – 7 **Kiln, Raw and Coal Mills - (Subject to MACT requirements)**
	Note: These emission units discharge through a common stack. Selective Non-Catalytic Reduction (SNCR) system (6-0256) was installed 2010 and modified 2013. Powered Activated Carbon (PAC) system was installed 2011, modified 2013.
7.1	**Applicable Standards/Limits:** A. & B. Visible and Particulate Matter Emissions (1) COMAR 26.11.30.05(B)(2), which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers. (2) Each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; bulk loading or unloading system; raw and finish mills; and each existing raw material dryer, at a facility which is a major source subject to the provisions of this subpart must not cause to be discharged any gases from these affected sources which exhibit opacity in excess of 10 percent. **[Reference: §63.1345]** (3) The Permittee 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. **[Reference: §60.254(a)]** (4) **COMAR 26.11.30.04B(2)** - A person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 gr/SCFD (68.7 mg/dscm). (5) The Permittee may not discharge particulate matter (PM) into the atmosphere from the kiln in excess of 0.07 pound per ton of clinker. **[Reference: §60.62(a)(1)(iii)] and Table 1-1 of §63.1343(b)(1)]** (6) If the Permittee has an affected source subject to 40 CFR 60, Subpart F with a different emissions limit or requirement for the same pollutant under another regulation in Title 40, the Permittee must comply with the most stringent emissions limit or requirement and is not subject to the less stringent requirement. **[Reference: §60.62(d)]** (7) When there is an alkali bypass and/or an inline coal mill with a separate stack associated with a kiln, the combined PM emissions from the kiln and the alkali bypass stack and/or the inline coal mill stack are subject to the PM emissions

Table IV – 7
Kiln, Raw and Coal Mills - (Subject to MACT requirements)

limit. Existing kilns that combine the clinker cooler exhaust and/or coal mill exhaust with the kiln exhaust and send the combined exhaust to the PM control device as a single stream may meet an alternative PM emissions limit. This limit is calculated using the following equation:

$$PM_{alt} = (0.0060 \times 1.65) \times (Q_k + Q_c + Q_{ab} + Q_{cm})/7000$$

Where:
PM_{alt} = Alternative PM emission limit for commingled sources.
0.006 = The PM exhaust concentration (gr/dscf) equivalent to 0.070 lb per ton clinker where clinker cooler and kiln exhaust gas are not combined.
1.65 = The conversion factor of ton feed per ton clinker.
Q_k = The exhaust flow of the kiln (dscf/ton feed).
Q_c = The exhaust flow of the clinker cooler (dscf/ton feed).
Q_{ab} = The exhaust flow of the alkali bypass (dscf/ton feed).
Q_{cm} = The exhaust flow of the coal mill (dscf/ton feed).
7000 = The conversion factor for grains (gr) per lb.

(8) **Permit to Construct #06-6-0256 dated April 8, 1999 and revised June 7, 2000**, which limits particulate matter emissions from the main exhaust stack to 0.0158 gr/scfd (36.2 mg/dscm).

C. Dioxins/Furans (D/F)

(1) Dioxins and furans (D/F) emissions limits of 0.2 nanograms per dry standard cubic meter (ng/dscm) (TEQ) corrected to 7% O_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). TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989. **[Reference: Table 1-1. of §63.1343(b)(1)]**

(2) The Permittee, subject to a D/F emissions limitation under §63.1343, must operate the kiln such that the temperature of the gas at the inlet to the kiln PM Control Device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in paragraph (b) of §63.1346. The Permittee must operate the in-line kiln/raw mill, such that: **[Reference: §63.1346(a)]**

(a) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of §63.1346 and established during the performance test when the raw mill was operating, is not exceeded, except during periods of startup and shutdown when the temperature

Table IV – 7
Kiln, Raw and Coal Mills - (Subject to MACT requirements)

limit may be exceeded by no more than 10 percent. **[Reference: §63.1346(a)(1)]**

(b) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in paragraph (b) of §63.1346 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. **[Reference: §63.1346(a)(2)]**

(c) The temperature limit for affected sources meeting the limits of paragraph (a) of §63.1346 or paragraphs (a)(1) through (a)(3) of §63.1346 is determined in accordance with §63.1349(b)(3)(iv). **[Reference: §63.1346(b)]**

D. Control of Nitrogen Oxides

(1) **Permit to Construct #06-6-0256, 0331, and 0337 September 21,** 2009 - NOx emission limits shall not exceed 3.85 pounds per tons of clinker on a monthly average only if the number of hours of the Pyroprocessing Portland cement plant burning DBS is greater than 25% of the kiln operating hours during the month.

(2) The Permittee shall operate the Selective Non-catalytic Reduction System (SNCR) to reduce NOx emissions in order to comply with a NOx emission limit of 2.4 pounds per ton of clinker produced on a 30-day rolling average in accordance with COMAR 26.11.30.07C(2) & 26.11.30.07D.

(3) **COMAR 26.11.30.07** which requires a person who owns or operates a cement manufacturing facility to meet the applicable emission standards in §A(2) or §C(2) of this regulation:

(a) For pre-calciner kilns, maximum emissions of 2.8 pounds of NO_x per ton of clinker produced; or
(b) For pre-calciner kilns, maximum emissions of 2.4 pounds of NO_x per ton of clinker produced, on and after April 1, 2017.

Note: The new regulations COMAR 26.11.30, effective July 20, 2015, have been submitted to the EPA on December 15, 2015 for approval into Maryland's State Implementation Plan (SIP).

E. SO_x Emissions

(1) **COMAR 26.11.30.06A(1)** and **26.11.30.06C**, which limit the sulfur dioxide concentration in the exhaust gases not to exceed 500 parts per million by volume corrected to 7 percent oxygen.

Table IV – 7
Kiln, Raw and Coal Mills - (Subject to MACT requirements)

(2) **COMAR 26.11.30.06B(1)** and **26.11.30.06C**, which limits the content of sulfuric acid, sulfur trioxide, or any combination not to exceed 35 milligrams reported as sulfuric acid per cubic meter of gas corrected to 7 percent oxygen.

F. CO Emissions

Prevention of Significant Deterioration (PSD) Approval #PSD-97-01R dated April 8, 1999 and revised on June 7, 2000 which states that the premises-wide carbon monoxide (CO) emissions from the Pyroprocessing Portland cement plant and the existing Portland cement plant shall not exceed 3,328 tons for any 12-month period, rolling monthly.

G. VOC Emissions (THC)

The emissions limits of total hydrocarbons (THC) is 24 parts per million by volume dry (ppmvd) measured as propane and corrected to 7% O_2. Any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic hazardous air pollutants (HAP). **[Reference: Table 1-1. of §63.1343(b)(1)]**

H. Lead Emissions

Permit to Construct #06-6-0256 dated April 8, 1999 and revised June 7, 2000 which states that the emissions from the entire premises, including the existing Portland cement plant and the Pyroprocessing Portland cement plant, shall not exceed 0.6 tons of lead for any 12-month period, rolling monthly.

I. Fluoride Emissions

(1) COMAR 26.11.06.07B(1)(a), which states that a person may not cause or permit the discharge of fluorides into the atmosphere that causes a violation of any applicable air quality standards for fluorides set forth in COMAR 26.11.04.

(2) COMAR 26.11.06.07B(1)(b), which states that the Department, after written notice to a person discharging fluorides to the atmosphere, may require the person to conduct a surveillance to determine whether ambient air quality standards for fluorides are violated. The manner, scope, and duration of the surveillance program will be determined by the Department.

(3) COMAR 26.11.06.07B(1)(c), which states that the procedures for measuring total fluorides shall be Method 1010 of the Department's Technical Memorandum 91-01, "Test Methods and Equipment Specifications for Stationary Sources," which is incorporated by reference in COMAR 26.11.01.04C.

J. Mercury

The Permittee shall operate the PAC injection system to reduce mercury emissions in order to comply with the following mercury emission limits in accordance with §63.1343(b):

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	(1) During normal operation, the mercury emission limit is 55 lbs per million tons of clinker based on a 30-day rolling average. The 30-day period means 30 consecutive kiln operating days excluding periods of startup and shutdown; and (2) During periods of startup and shutdown, the Permittee shall comply with the work practice requirements in accordance with §63.1343(g). Startup and shutdown work practices - 40 CFR 63.1346(g) or see Table IV-15 Facility wide 15.1 Applicable standards /Limits and operating conditions. **[References: Permit to Construct No. 013-0012-6-0256, 0331, and 0337 issued March 1, 2013]** K. Hydrogen Chloride (HCl) HCl emissions of 3 parts per million by volume dry (ppmvd) corrected to 7% O_2 for any major source. **[Reference: Table 1-2. of §63.1343(b)(1)]** L. Greenhouse Gas (GHG) Emissions – There is no GHG emission limit specified in 40 CFR 98 Subpart H (Cement Production). **Note: The final rules for the National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry (40 CFR part 63 subpart LLL) effective on February 12, 2013. The compliance date for the new limits in 63.1343(b) is September 9, 2015.**
7.2	**Testing Requirements:** A. & B. Visible Emissions and Particulate Matter Emissions (1) If the source subject to the opacity limits under 40 CFR 63, Subpart LLL, the Permittee must conduct opacity tests in accordance with Method 9 of appendix A-4 to part 60. 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 following conditions apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating. **[Reference: §63.1349(b)(2)]** (a) There are no individual readings greater than 10 percent opacity. (b) There are no more than three readings of 10 percent for the first 1-hour period. (2) The Permittee shall conduct stack emissions tests on the main kiln stack. The stack emissions tests shall be conducted as follows: (a) For compliance with the limitations on PM emissions under §63.1343(b), the

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Permittee 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. Permittee must also monitor continuous performance through use of a PM continuous parametric monitoring system (PM CPMS) **[Reference: §60.63(c)(1) and §63.1349(b)(1)]**

(b) For the PM CPMS, the Permittee will establish a site-specific operating limit in accordance with §60.63(c)(2) through (5) and §63.1349(b)(1)(i) through (iv). **[Reference: §60.63(c)(2) and §63.1349(b)(1)]**

(c) To determine continuous operating compliance, the Permittee 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. The Permittee 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 digit equivalent) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. Use Equation 7 of §63.1349(b)(1)(v) to determine the 30 kiln operating day average. **[Reference: §60.63(c)(6) and §63.1349(b)(1)(v)]**

(d) For each performance test, the Permittee must 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 §63.1349(b)(1)(viii), to determine compliance. The Permittee needs 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. **[Reference: §60.63(c)(7) and §63.1349(b)(1)(vi)]**

(e) 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 digit equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp or digit equivalent signals corresponding to each PM compliance test run. **[Reference: §60.63(c)(8) and §63.1349(b)(1)(vii)]**

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(f) The Permittee 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. **[Reference: §63.1349(b)(1)(ix)]**

C. D/F Emissions

(1) The Permittee must conduct a performance test using Method 23 of appendix A-7 to 40 CFR, Part 60. If the kiln or in-line kiln/raw mill is equipped with an alkali bypass, the Permittee must conduct simultaneous performance tests of the kiln or in-line kiln/raw mill exhaust and the alkali bypass. The Permittee 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. **[Reference: §63.1349(b)(3)]**

(2) 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). **[Reference: §63.1349(b)(3)(i)]**

(3) 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. **[Reference: §63.1349(b)(3)(ii)]**

(4) Average temperatures must be calculated for each run of the performance test. **[Reference: §63.1349(b)(3)(iii)]**

(5) The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with §63.1346(b). **[Reference: §63.1349(b)(3)(iv)]**

G. VOC/THC Emissions

(1) The Permittee 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 40 CFR, Part 60. **[Reference: §63.1349(b)(4)(i))**

(2) The Permittee must use the THC CEMs to conduct the initial compliance test for the first 30 kiln operating days of kiln operation after the compliance date of the rule. See §63.1348(a). **[Reference: §63.1349(b)(4)(ii)]**

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(3) THC must be measured either upstream of the coal mill or the coal mill stack. **[Reference: §63.1349(b)(4)(iv)]**

(4) Instead of conducting the performance test specified in paragraph (b)(4) of §63.1349, the Permittee may conduct a performance test to determine emissions of total organic HAP by following the procedures of §63.1349(b)(7). **[Reference: §63.1349(b)(4)(v)]**

I. Fluoride Emissions

COMAR 26.11.06.07B(1)(c), which states that the procedures for measuring total fluorides shall be Method 1010 of the Department's Technical Memorandum 91-01, "Test Methods and Equipment Specifications for Stationary Sources," which is incorporated by reference in COMAR 26.11.01.04C.

J. Mercury

(1) The Permittee 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)). **[Reference: §63.1349(b)(5)]**

(2) The Permittee 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). **[Reference: §63.1349(b)(5)(i)]**

(3) The Permittee must calculate the mercury emission rate using Equation 10 of §63.1349(b)(5)(ii). **[Reference: §63.1349(b)(5)(ii)]**

K. Hydrogen Chloride (HCl)

(1) The Permittee must conduct performance testing using Method 321 of appendix A to Part 63 unless the Permittee 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. **[Reference: §63.1349(b)(6)(i)(A)]**

(2) The initial compliance test must be based on the 30 kiln operating days that occur after the compliance date of this rule in which the affected source operates using a HCl CEMs. Hourly HCl concentration data must be obtained according to §63.1350(l). **[Reference: §63.1349(b)(6)(ii)(B)]**

(3) If kiln gases are diverted through an alkali bypass or to a coal mill and exhausted through a separate stack, the Permittee must calculate a kiln-specific HCl limit

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	using Equation 11of §63.1349(b)(6)(iv). **[Reference: §63.1349(b)(6)(iv)]** D through F. Please see the monitoring requirements.
7.3	**Monitoring Requirements:** A. Visible Emissions Limitations (1) **COMAR 26.11.30.05(B)(3)**, which states that compliance with the visibility standards of COMAR 26.11.30.05(B)(2) shall be demonstrated by a visible emission observation using Method 9 of 40 CFR Part 60. (2) **COMAR 26.11.30.05(C)**, which states that the owner or operator of a cement kiln at a Portland cement manufacturing plant shall either: (a) Use a COM in accordance with the requirements of COMAR 26.11.01.10; or (b) Use a PM continuous parametric monitoring system (CPMS) to establish a site-specific operating parameter limit for continuous visible emission compliance determinations in accordance with Regulation .04C of this chapter. (3) For affected **sources** subject to opacity requirements under §63.1345, the Permittee must develop an opacity monitoring plan in accordance with §63.1350(p)(1) through (4) and (o)(5), if applicable, and conduct required opacity monitoring in accordance with the plan and the following requirements **[Reference: §63.1350(f)]**: (a) The Permittee must conduct a monthly 10-minute visible emissions test of each affected source subject to opacity requirements under §63.1345 in accordance with Method 22 of appendix A-7 to part 60 of CFR 40. The performance test must be conducted while the affected source is in operation. **[Reference: §63.1350(f)(1)(i)]** (b) If no visible emissions are observed in six consecutive monthly tests for any affected source, the Permittee 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, the Permittee 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. **[Reference: §63.1350(f)(1)(ii)]** (c) If no visible emissions are observed during the semi-annual test for any affected source, the Permittee 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 Permittee must resume performance testing of that affected source on a monthly basis

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and maintain that schedule until no visible emissions are observed in six consecutive monthly tests. **[Reference: §63.1350(f)(1)(iii)]**

(d) If visible emissions are observed during any Method 22 performance test, of appendix A-7 to part 60 of CFR 40, the Permittee must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9 of appendix A-4 to part 60 of CFR 40. The Method 9 performance test, of appendix A-4 to part 60 of this chapter, must begin within 1 hour of any observation of visible emissions. **[Reference: §63.1350(f)(1)(iv)]**

(e) 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 must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan. **[Reference: §63.1350(f)(1)(v)]**

(f) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the Permittee must conduct a Method 22 performance test, of appendix A-7 to Part 60, according to the requirements of (f)(1)(i) through (iv) of **§63.1350** for each such conveying system transfer point located within the building, or for the building itself, according to (f)(1)(vii) of **§63.1350**. **[Reference: §63.1350(f)(1)(vi)]**

(g) If visible emissions from a building are monitored, the requirements of (f)(1)(i) through (f)(1)(iv) of **§63.1350** apply to the monitoring of the building, and the Permittee must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes. **[Reference: §63.1350(f)(1)(vii)]**

(4) For a raw mill or **finish** mill, the Permittee must monitor opacity in accordance with the following unless it is equipped with a continuous opacity monitoring system (COMS) or a bag leak detection system (BLDS): **[Reference: §63.1350(f)(2) & (4)]**

(a) Conduct daily visible emissions observations of the mill sweep and air separator PM control devices (PMCD) of these affected sources in accordance with the procedures of Method 22 of appendix A-7 to part 60 of CFR 40. The duration of the Method 22 performance test must be 6 minutes. **[Reference: §63.1350(f)(2)(i)]**

(b) 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. **[Reference: §63.1350(f)(2)(ii)]**

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(c) If visible emissions are observed during the follow-up Method 22 performance test required by (f)(2)(ii) of **§63.1350** from any stack from which visible emissions were observed during the previous Method 22 performance test required by (f)(2)(i) of **§63.1350**, the Permittee must then conduct an opacity test of each stack from which emissions were observed during the follow up Method 22 performance test in accordance with Method 9 of appendix A-4 to Part 60. The duration of the Method 9 test must be 30 minutes. **[Reference: §63.1350(f)(2)(iii)]**

(5) If visible emissions are **observed** during any Method 22 visible emissions test conducted under (f)(1) or (2) of §63.1350, the Permittee must initiate, within one-hour, the corrective actions specified in the operation and maintenance plan as required in §63.1347. **[Reference: §63.1350(f)(3)]**

(6) If the Permittee chooses to install a COMS in lieu of **conducting** the daily visible emissions testing required under (f)(2) of §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 Part 60 and according to PS-1 of appendix B to Part 60. **[Reference: §63.1350(f)(4)(i)]**

(7) If the Permittee choose to install a **BLDS** in lieu of conducting the daily visible emissions testing required under (f)(2) of §63.1350, the requirements in (m)(1) through (m)(4), (m)(10) and (m)(11) of §63.1350 apply. **[Reference: §63.1350(f)(4)(ii)]**

B. Control of Particulate Matters

(1) The exhaust gas from each emission unit shall vent through a dust collector designed to meet the particulate matter emissions limit before discharging into the atmosphere. **[COMAR 26.11.03.06C]**

(2) COMAR 26.11.30.04(B)(3), which states that compliance with the particulate matter standards of COMAR 26.11.30.04(B)(1) shall be demonstrated by a 3-run stack test using Method 5 or Method 5I of 40 CFR Part 60.

(3) COMAR 26.11.30.04(C) - which states that by September 1, 2016, the owner or operator of a cement kiln or clinker cooler at a Portland cement manufacturing plant shall:

(i) use a PM continuous parametric monitoring system (CPMS) to establish a site-specific operating parameter limit corresponding to the results of the performance test as required in COMAR 26.11.30.04(B)(3) demonstrating compliance with the PM limits in COMAR 26.11.30.04(B)(1**); [reference**

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COMAR 26.11.30.04(C)(1)]

(ii) conduct the performance test as required in COMAR 26.11.30.04(B)(3) using Method 5 or Method 5I of 40 CFR part 60; **[Reference: COMAR 26.11.30.04(C)(2)]**

(iii) use the PM CPMS to demonstrate continuous compliance with the site-specific operating parameter limit established in COMAR 26.11.30.04(C)(1); **[Reference: COMAR 26.11.30.04(C)(3)]**

(iv) repeat the performance test as required in COMAR 26.11.30.04(B)(3) annually and reassess and adjust the site-specific operating parameter limit of COMAR 26.11.30.04(C)(1) in accordance with the results of the performance test using the procedures in 40 CFR §63.1349(b)(1)(i)—(ix); **[Reference: COMAR 26.11.30.04(C)(4)]** and

(v) follow the procedures in 40 CFR §63.1350(b)(iii) and (iv) for any exceedance of the established operating parameter limit of COMAR 26.11.30.04(C)(1) on a 30 process operating day basis. **[Reference: COMAR 26.11.30.04(C)(5)]**

(4) If the Permittee will use the PM CPMS to demonstrate continuous compliance with this operating limit, the Permittee must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test using the procedures in §63.1349(b)(1) (i) through (vi) of this subpart. the Permittee must also repeat the test if the Permittee changes the analytical range of the instrument, or if the Permittee replaces the instrument itself or any principle analytical component of the instrument that would alter the relationship of output signal to in-stack PM concentration. **[Reference: §63.1350(b)(1)(i)]**

(5) To determine continuous compliance, the Permittee must use the PM CPMS output data for all periods when the process is operating and the PM CPMS is not out-of-control. The Permittee must demonstrate continuous compliance by using all quality-assured hourly average data collected by the PM CPMS for all operating hours to calculate the arithmetic average operating parameter in units of the operating limit (milliamps) on a 30 operating day rolling average basis, updated at the end of each new kiln operating day. **[Reference: §63.1350(b)(1)(ii)]**

(6) For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the Permittee must: **[Reference: §63.1350(b)(1)(iii)]**

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(a) Within 48 hours of the exceedance, visually inspect the Air Pollution Control Device (APCD);

(b) If inspection of the APCD identifies the cause of the exceedance, take corrective action as soon as possible and return the PM CPMS measurement to within the established value; and

(c) Within 30 days of the exceedance or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit within 45 days. The Permittee is not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph. For an annual re-test, the first valid 30-day average will be 30 kiln operating days after the PM performance test.

(7) PM CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of this subpart. **[Reference: §63.1350(b)(1)(iv)]**

C. D/F Emissions

(1) If the Permittee is subject to an emissions limitation on D/F emissions, the Permittee must comply with the monitoring requirements of (g)(1) through (g)(6) and (m)(1) through (m)(4) of this §63.1350 to demonstrate continuous compliance with the D/F emissions standard. The Permittee must also develop an emissions monitoring plan in accordance with (p)(1) through (p)(4) of **§63.1350**. **[Reference: §63.1350(g)]**

(2) The Permittee must install, calibrate, maintain, and continuously operate a continuous monitoring system (CMS) to record the temperature of the exhaust gases from the kiln and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln and/or alkali bypass PMCDs. **[Reference: §63.1350(g)(1)]**

(3) The temperature recorder response range must include zero and 1.5 times the average temperature established according to the requirements in §63.1349(b)(3)(iv). **[Reference: §63.1350(g)(1)(i)]**

(4) 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 Department. The calibration of all thermocouples and other temperature sensors must be verified at least once every three months. **[Reference: §63.1350(g)(1)(ii) & (iii)]**

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(5) The Permittee must monitor and continuously record the temperature of the exhaust gases from the kiln and alkali bypass, if applicable, at the inlet to the kiln and/or alkali bypass PMCD. The required minimum data collection frequency must be one minute. **[Reference: §63.1350(g)(2) & (3)]**

(6) The Permittee shall calculate the rolling three-hour average temperature using the average of 180 successive one-minute average temperatures. See §63.1349(b)(3). **[Reference: §63.1350(g)(4)]**

(7) 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. **[Reference: §63.1350(g)(5)]**

D & E NO_X & Sulfur Oxide Emissions

(1) The Permittee must install, operate, calibrate, and maintain a CEMs continuously monitoring and recording the concentration by volume of NO_X emissions into the atmosphere for the kiln. If the kiln has an alkali bypass, NO_X emissions from the alkali bypass do not need to be monitored, and NO_X emission monitoring of the kiln exhaust may be done upstream of any commingled alkali bypass gases.

(2) The Permittee must install, operate, calibrate, and maintain a CEMs for continuously monitoring and recording the concentration by volume of SO_2 emissions into the atmosphere for the kiln.

(3) The NO_X and SO_2 CEMs must be installed, operated and maintained according to Performance Specification 2 of Appendix B of 40 CFR, Part 60.

(4) The Permittee shall install, operate, maintain, and calibrate the continuous emission rate monitoring system (CERMS) in accordance with Performance Specification 6 under 40 CFR Part 60, Appendix B.

(5) The Permittee shall use a continuous emissions monitoring system, (CEM) to monitor NOx emissions from the main exhaust stack. The Permittee shall install, operate, maintain, and calibrate the CEM in accordance with Performance Specification 2 under 40 CFR Part 60, Appendix B and the Quality Assurance Procedures under 40 CFR Part 60, Appendix F.
[Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000]

(6) The Permittee shall monitor NOx emissions, pounds per ton of clinker, on a monthly average, the total operating hours of the kiln, and the total operating hour of the Pyroprocessing Portland cement plant burning DBS for each month. **[Permit to Construct #06-6-0256 dated April 8, 1999 and revised June 7, 2000, August 7, 2009, and September 21, 2009]**

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(7) The Permittee shall continuously monitor NOx emissions with a continuous emissions monitor ("CEM") certified in accordance with COMAR 26.11.01.11B(1) and (4) and C or use an alternative method approved by the Department and the EPA for compliance determination. **[COMAR 26.11.30.08A & B]**

(8) The Permittee shall use a continuous emissions monitoring system, (CEM) to monitor SO_2 emissions from the main exhaust stack. The Permittee shall install, operate, maintain, and calibrate the CEM in accordance with the Performance Specifications under 40 CFR Part 60, Appendix B and the Quality Assurance Procedures under 40 CFR Part 60, Appendix F.
[Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000] and [COMAR 26.11.01.11C]

(9) The daily amount of reagent used in the SNCR system is required to be monitored.
[Permit to Construct #013-0012-6-026, 0331, and 0037, Section E.1(l) issued August 31, 2010]

F. Carbon Monoxide Emissions
The Permittee shall use a CEM to monitor CO emissions from the main exhaust stack. The Permittee shall install, operate, maintain, and calibrate the CEM in accordance with the Performance Specifications under 40 CFR Part 60, Appendix B and the Quality Assurance Procedures under 40 CFR Part 60, Appendix F.
[Prevention of Significant Deterioration (PSD) Approval #PSD-97-01 issued April 8, 1999 and revised June 7, 2000 and COMAR 26.11.01.11C]

G. VOC /THC Emissions
(1) The Permittee must comply with the monitoring requirements of (i)(1) and (i)(2) and (m)(1) through (m)(4) of **§63.1350**. The Permittee must also develop an emissions monitoring plan in accordance with (p)(1) through (p)(4) of **§63.1350. [Reference: §63.1350(i)]**

(2) The Permittee must install, operate, and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8 or Performance Specification 8A of appendix B to Part 60 and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of Part 60. The Permittee must operate and maintain each CEMs according to the quality assurance requirements in Procedure 1 of appendix F in Part 60. For THC continuous emission monitoring system certified under Performance Specification 8A, conduct the relative accuracy test audit required under Procedure 1 in accordance with Performance Specification 8, Section 8 and 11 using Method 25A in appendix A to 40 CFR part 60 as the reference method; the relative accuracy must meet the criteria of Performance Specification 8, Section 13.2.**[Reference: §63.1350(i)(1)]**

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(3) The Permittee shall use continuous emission monitoring system (CEM) to monitor total hydrocarbon (THC) emissions from the main exhaust stack. The Permittee shall install, operate, maintain, and calibrate the CEM in accordance with the Performance Specifications 8A of Appendix B to Part 60 and comply with all of the requirements from CEM found in the general provisions, subpart A of this part.
[New Source Review Approval #NSR-97-02 issued April 8, 1999 and COMAR 26.11.01.11C]

D. through G.
For each CEM used to monitor a gas concentration, the Permittee shall equip the CEM to record not less than four equally spaced data points per hour and to automatically reduce data in terms of averaging times consistent with applicable emission standard.
[COMAR 26.11.01.11D(3)]

H. Lead
The Permittee shall follow the particulate matters emission monitoring requirements.

I. Mercury
(1) The Permittee shall monitor the following operating data: [**Permit to Construct No. 013-0012-6-0256, 0331, and 0337 issued March 1, 2013]**

(a) Mercury emissions in pounds per million tons of clinker produced based on a 30-day rolling average during normal operation by using the mercury CEMs; and

(b) Work Practices required under §63.1346(g) during periods of startup and shutdown.

(2) The Permittee must install and operate a mercury continuous emissions monitoring system (Hg CEMs) in accordance with Performance Specification 12A (PS 12A) of appendix B to Part 60 or an integrated sorbent trap monitoring system in accordance with Performance Specification 12B (PS 12B) of appendix B to Part 60. The Permittee must monitor mercury continuously according to (k)(1) through (5) of **§63.1350**. The Permittee must also develop an emissions monitoring plan in accordance with (p)(1) through (4) of **§63.1350**. **[Reference: §63.1350(k)]**

(3) The Permittee must operate and maintain each Hg CEMs or an integrated sorbent trap monitoring system according to the quality assurance requirements in Procedure 5 of appendix F to Part 60. During the RATA of integrated sorbent trap monitoring systems required under Procedure 5, the Permittee may apply the following appropriate exception for sorbent trap section 2 breakthrough in

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accordance with (k)(3)(i) through (iv) of **§63.1350**: **[Reference: §63.1350(k)(3)]**

(a) For stack Hg concentrations >1 µg/dscm, ≤10% of section 1 mass;

(b) For stack Hg concentrations ≤1 µg/dscm and >0.5 µg/dscm, ≤20% of section 1 mass;

(c) For stack Hg concentrations ≤0.5 µg/dscm and >0.1 µg/dscm, ≤50% of section 1 mass; and

(d) For stack Hg concentrations ≤0.1 µg/dscm, no breakthrough criterion assuming all other QA/QC specifications are met.

(4) Relative accuracy testing of mercury monitoring systems under PS 12A, PS 12B, or Procedure 5 must be conducted at normal operating conditions. If a facility has an inline raw mill, the testing must occur with the raw mill on. **[Reference: §63.1350(k)(4)]**

(5) If the Permittee use a Hg CEMs or an integrated sorbent trap monitoring system, the Permittee 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 (n)(1) through (10) of **§63.1350**.

If kiln gases are diverted through an alkali bypass or to a coal mill and exhausted through separate stacks, the Permittee must account for the mercury emitted from those stacks by complying with the following procedures in accordance with (k)(5)(i) through (iv) of **§63.1350**: **[Reference: §63.1350(k)(5)]**

(a) Develop a mercury hourly mass emissions rate by conducting annual, within 11 to 13 calendar months after the previous performance test, performance tests using Method 29, or Method 30B, to measure the concentration of mercury in the gases exhausted from the alkali bypass and coal mill.

(b) On a continuous basis, determine the mass emissions of mercury in lb/hr from the alkali bypass and coal mill exhausts by using the mercury hourly emissions rate, the exhaust gas flow rate and hourly mercury emission rate to calculate hourly mercury emissions in lb/hr.

(c) Sum the hourly mercury emissions from the kiln, alkali bypass and coal mill to determine total mercury emissions. Using hourly clinker production, calculate the hourly emissions rate in pounds per ton of clinker to determine the 30 day rolling average.

(d) If mercury emissions from the coal mill and alkali bypass are below the method detection limit for two consecutive annual performance tests, the

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Permittee may reduce the frequency of the performance tests of coal mills and alkali bypasses to once every 30 months. If the measured mercury concentration exceeds the method detection limit, the Permittee must revert to testing annually until two consecutive annual tests are below the method detection limit.

(6) If the Permittee operate an integrated sorbent trap monitoring system conforming to PS 12B, the Permittee may use a monitoring period at least 24 hours but no longer than 168 hours in length. The Permittee should use a monitoring period that is a multiple of 24 hours (except during relative accuracy testing as allowed in PS 12B). **[Reference: §63.1350(k)(6)]**

K. Hydrogen Chloride (HCl)

(1) The Permittee must monitor HCl emissions continuously according to (l)(1) or (2) and (m)(1) through (4) of §63.1350. **[Reference: §63.1350(l)]**

(2) If the Permittee monitors compliance with the HCl emissions limit by operating an HCl CEMs, the Permittee must do so in accordance with Performance Specification 15 (PS 15) of appendix B to Part 60, or, upon promulgation, in accordance with any other performance specification for HCl CEMs in appendix B to Part 60. The Permittee must operate, maintain, and quality assure a HCl CEMs installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of appendix F to Part 60 except that the Relative Accuracy Test Audit requirements of Procedure 1 must be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15. When promulgated, if the Permittee chooses to install and operate an HCl CEMs in accordance with PS 18 of appendix B to part 60 of this chapter, the Permittee must operate, maintain and quality assure the HCL CEMS using the associated Procedure 6 of appendix F to part 60 of this chapter. For any performance specification that the Permittee uses, the Permittee must use Method 321 of appendix A to part 63 of this chapter as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in paragraph (l)(1)(i) and (ii) of this section apply to HCL CEMS other than those installed and certified under PS 15. **[Reference: §63.1350(l)(1)]**

(3) If the Permittee chooses to monitor SO_2 emissions, monitor SO_2 emissions continuously according to the requirements of §60.63(e) through (f) of Part 60 Subpart F. If SO_2 levels increase above the 30-day rolling average SO_2 operating limit established during the performance test, the Permittee must: **[Reference: §63.1350(l)(3)]**

(a) As soon as possible but no later than 48 hours after the Permittee exceed the established SO_2 value conduct an inspection and take corrective action to return the SO_2 emissions to within the operating limit; and

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	(b) Within 60 days of the exceedance or at the time of the next compliance test, whichever comes first, conduct an HCl emissions compliance test to determine compliance with the HCl emissions limit and to verify or re-establish the SO_2 CEMs operating limit. L. GHG Emissions (1) For each cement kiln that meets the conditions specified in §98.33(b)(4)(ii) or (b)(4)(iii), you must calculate and report under this subpart the combined process and combustion CO2 emissions by operating and maintaining a CEMS to measure CO2 emissions according to the Tier 4 Calculation Methodology specified in §98.33(a)(4) and all associated requirements for Tier 4 in subpart C of this part (General Stationary Fuel Combustion Sources). **[Reference: 40 CFR 98.83]** (2) A complete record of all measured parameters used in the GHG emissions calculations in §98.83 is required. Therefore, whenever a quality-assured value of a required parameter is unavailable, a substitute data value for the missing parameter shall be used in the calculations. The owner or operator must document and keep records of the procedures used for all such estimates. (a) If the CEMS approach is used to determine combined process and combustion CO2 emissions, the missing data procedures in §98.35 apply. (b) For CO2 process emissions from cement manufacturing facilities calculated according to §98.83(d), if data on the carbonate content (of clinker or CKD), noncalcined content (of clinker or CKD) or the annual organic carbon content of raw materials are missing, facilities must undertake a new analysis. (c) For each missing value of monthly clinker production the substitute data value must be the best available estimate of the monthly clinker production based on information used for accounting purposes, or use the maximum tons per day capacity of the system and the number of days per month. (d) For each missing value of monthly raw material consumption the substitute data value must be the best available estimate of the monthly raw material consumption based on information used for accounting purposes (such as purchase records), or use the maximum tons per day raw material throughput of the kiln and the number of days per month.**[Reference: 40 CFR 98.85]**
7.4	**Record Keeping Requirements:** A, B, and C. The Permittee shall maintain all records for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

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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. **[40 CFR §63.1355]**

D & E.

The Permittee shall maintain all records 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. **[COMAR 26.11.03.06C]**

F. & G.

The following records with supporting documentation shall be maintained for at least 5 years and made available to the Department upon request:

(1) Emissions for each calendar month and each rolling 12-month period;
(2) Monthly usage of each raw material and each type of fuel used in the pyroprocessing plant;
(3) All required stack emission test reports;
(4) All processed CEM emission monitoring data;
(5) All CEM certification and calibration results; and
(6) Records of any repairs made to equipment affecting CO or THC emissions and to CEM for CO or THC.

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. **[New Source Review Approval #NSR-97-02 issued April 8, 1999 and Prevention of Significant Deterioration (PSD) Approval #PSD-97-01 issued April 8, 1999 and revised June 7, 2000]**

H. & I.

The Permittee shall maintain the records for at least 5 years to support compliance with the emission limits and shall make them available to the Department upon request.

L. GHG- Records that must be retained:

(1) If a CEMS is used to measure CO2 emissions, then in addition to the records required by §98.3(g), you must retain under this subpart the records required for the Tier 4 Calculation Methodology in §98.37.

(2) If a CEMS is not used to measure CO2 emissions, then in addition to the records required by §98.3(g), you must retain the records specified in this paragraph (b) for each portland cement manufacturing facility.

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(a) Documentation of monthly calculated kiln-specific clinker CO2 emission factor.

(b) Documentation of quarterly calculated kiln-specific CKD CO2 emission factor.

(c) Measurements, records and calculations used to determine reported parameters.

(3) Verification software records. You must keep a record of the file generated by the verification software specified in §98.5(b) for the applicable data specified in paragraphs (c)(1) through (17) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (c)(1) through (17) of this section.

7.5 **Reporting Requirements:**

A. Visible Emissions Limitations
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 Permittee shall submit an excess emissions and continuous monitoring system performance report along with the summary report.
[40 CFR §63.1354(b)(10)]

A & C.
The Company shall submit to the Department semiannually a Summary Report - *Gaseous and Opacity Excess Emissions and Continuous Monitoring System (CMS) Performance* on January 31st and July 31st of each year. The Summary Report shall include the following items:
(1) Company name and address;
(2) "Regulated Portland Cement MACT/NESHAP" pollutants;
(3) A brief description of the process;
(4) The emissions limit;
(5) Name, title and signature of responsible party;
(6) Date of report;
(7) All exceedances of the three hour average inlet temperature limit to the Particulate matter control device;
(8) All failures to calibrate thermocouples;
(9) Per Portland Cement MACT annual combustion system inspection performed;
(10) All failures to comply with the operations and maintenance plan;
(11) The date of the latest CMS certification or audit;
(12) The total operating time of the affected source during the reporting period; and
(13) A CMS performance summary, including:
(a) the total CMS downtime during the operating period (in minutes);
(b) the total CMS downtime expressed as a percent of the total operating time;

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and

(c) a breakdown of total CMS downtime into periods due to:

i. Monitoring equipment malfunctions,
ii. Non monitoring equipment malfunctions,
iii. Quality assurance/quality control calibrations,
iv. Other known causes, and
v. Other unknown causes.

[40 CFR §63.1354b(9) and §63.10(e)(3)(vi)]

D thru G.

(1) CEM System Downtime Reporting Requirements.

(a) All CEM system downtime that lasts or is expected to last more than 24 hours shall be reported to the Department by telephone before 10 a.m. of the first regular business day following the breakdown.

(b) The system breakdown report required by §E(1)(a) of this regulation shall include the reason, if known, for the breakdown and the estimated period of time that the CEM will be down. The owner or operator of the CEM shall notify the Department by telephone when an out-of-service CEM is back in operation and producing data that has met performance specifications for accuracy, reliability, and durability of acceptable monitoring systems, as provided in COMAR 26.11.31, and is producing data.

(2) CEM Data Reporting Requirements.

(a) All test results shall be reported in a format approved by the Department.

(b) Certification testing shall be repeated when the Department determines that the CEM data may not meet performance specifications because of component replacement or other conditions that affect the quality of generated data.

(c) A quarterly summary report shall be submitted to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the following:

i. The cause, time periods, and magnitude of all emissions which exceed the applicable emission standards;
ii. The source downtime including the time and date of the beginning and end of each downtime period and whether the source downtime was planned or unplanned;
iii. The time periods and cause of all CEM downtime including records of any repairs, adjustments, or maintenance that may affect the ability of the CEM to meet performance specifications of emission data;
iv. Quarterly totals of excess emissions, installation downtime, and CEM

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downtime during the calendar quarter;

v. Quarterly quality assurance activities;

vi. Daily calibration activities that include reference values, actual values, absolute or percent of span differences, and drift status; [Note: This information shall be maintained on-site and submitted to the Department upon request. The Permittee shall submit a daily calibration report for each day of the calendar quarter in the quarterly summary report.]

and

vii. Other information required by the Department that is determined to be necessary to evaluate the data, to ensure that compliance is achieved, or to determine the applicability of this regulation.

(d) All information required by this regulation to be reported to the Department shall be retained and made available for review by the Department for a minimum of 2 years from the time the report is submitted**. [COMAR 26.11.01.11E(2)]**

B & C.

(1) The Permittee shall submit the results of performance tests before the close of business on the 60th day following the completion of the performance test. **[40 CFR §63.1354(b)(1)] & [40 CFR §63.10(d)(2)]**

(2) At least 30 days prior to each stack emissions testing, the Permittee shall submit to the Department a stack test protocol for review and approval. **[Part D(7) of Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000]**

(3) The Permittee shall submit particulate matter stack test result to the Department within 45 days following the date of the stack test. **[Consent Decree, August 24, 2009 & COMAR 26.11.03.06]**

D. <u>NOx Emissions</u>

(1) The Permittee shall submit the NOx emissions data to the Department for each control period by November 30 beginning with the 2002 control period. **[COMAR 26.11.29.04A(3)]**

(2) The Permittee shall include the following information in the quarterly emissions report submitted to the Department for the Union Bridge Plant: **[Permit to Construct #06-6-0256 dated April 8, 1999 and revised June 7, 2000, August 7, 2009, and September 21, 2009]**

(a) the NOx emissions, pounds/ton of clinker, on a monthly average;

(b) the total kiln's operating hours during the month; and

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(c) Daily NOx and Hg 30-day rolling averages are routinely reported in the quarterly CEM report and the PC MACT semi-annual reports.

D & E.

The Permittee shall submit to the Department, a report no later than 30 days after the end of each calendar quarter, which shall include a summary of the following information:

(1) Emissions for each calendar month and each rolling 12-month period;
(2) All required stack emission test reports;
(3) All processed CEM emission monitoring data; and
(4) All CEM certification and calibration results.

[COMAR 26.11.03.06C]

F & G.

The Permittee shall submit to the Department, a report no later than 30 days after the end of each calendar quarter, which shall include a summary of the following information:

(1) Emissions for each calendar month and each rolling 12-month period;
(2) All required stack emission test reports;
(3) All processed CEM emission monitoring data; and
(4) All CEM certification and calibration results.

[New Source Review Approval #NSR-97-02 issued April 8, 1999 and Prevention of Significant Deterioration (PSD) Approval #PSD-97-01 issued April 8, 1999 and revised June 7, 2000]

H & I.

The Permittee shall include the following records in the quarterly emissions report submitted to the Department: Mercury emissions in pounds of mercury per million tons of clinker produced based on a 30-day rolling average during normal operation.

L. GHG

The Permittee shall quantify facility wide GHGs emissions and report them in accordance with 40 CFR 98.86.

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

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8.0 **Emissions Unit Numbers**

Area E – Clinker Burning and Cooling with Preheater Kiln

Baghouse	Emission Unit
E04-016	E03-001 – Clinker Cooler

Area G – Clinker Transport & Storage – Craneway Building

Baghouse	Emission Unit
E04-016	G01-001 - Main Pan Conveyor

The clinker cooler is used to cool the kiln product and exhaust from the clinker cooler is passed through the clinker cooler baghouse then to the cooler exhaust stack.

8.1 **Applicable Standards/Limits:**

A. Visible Emissions Limitations

(1) **COMAR 26.11.30.05(B)(2)**, which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

(2) On and after the date on which the performance test required to be conducted by §60.8 is completed, the Permittee may not discharge gases which exhibit 10 percent opacity or greater for clinker coolers constructed, reconstructed, or modified after August 17, 1971, but on or before June 16, 2008, except that this opacity limit does not apply to any clinker cooler subject to a PM limit in paragraph (b)(1) of this section that uses a PM continuous parametric monitoring system (CPMS). **[Reference: §60.62(b)(1)(iv)]**

B. Control of Particulate Matter

(1) **COMAR 26.11.30.04(B)(2)**, which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot dry.

(2) On and after the date on which the performance test required to be conducted by §60.8 is completed, the Permittee may not discharge PM into the atmosphere from the clinker cooler, which undergone a modification, in excess of 0.07 pound per ton of clinker. **[Reference: §60.62(b)(1)(ii)]**

(3) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000,** which limits particulate matter from the clinker cooler exhaust stack to 0.0129 gr/scfd (29.5 mg/dscm).

(4) The particulate matter emissions from the clinker cooler that has been constructed or reconstructed on or before May 6, 2009 during normal operation

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	shall not exceed 0.07 pounds per tons of clinker. **[Reference: Table 1-7. of §63.1343(b)(1)]**
8.2	**Testing Requirements:** A. Please see the monitoring requirements B. Control of Particulate Matters The Permittee shall conduct particulate matter emissions stack tests using Method 5 of 40 CFR Part 60, Appendix A, for particulate matter on the clinker cooler once per calendar year, allowing at least 180 days between each particulate matter stack test **[Consent Decree, August 24, 2009].** Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating under representative performance conditions in accordance with 40 CFR Part 63, Subpart LLL. Each run shall be conducted for at least one hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance. **[40 CFR §63.1349(b) and (c)]** C. Performance testing requirements **[40 CFR §63.1349(a)]** The Permittee must document performance test results in complete test reports that contain the information required by paragraphs (a)(1) through (10) of this section, as well as all other relevant information. As described in §63.7(c)(2)(i), the Permittee must make available to the Administrator prior to testing, if requested, the site-specific test plan to be followed during performance testing. For purposes of determining exhaust gas flow rate to the atmosphere from an alkali bypass stack or a coal mill stack, the Permittee must either install, operate, calibrate and maintain an instrument for continuously measuring and recording the exhaust gas flow rate according to the requirements in paragraphs §63.1350(n)(1) through (10) of this subpart or use the maximum design exhaust gas flow rate. (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.

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PM emissions tests. The owner or operator of a kiln subject to limitations on PM emissions shall demonstrate initial compliance by conducting a performance test using Method 5 or Method 5I at appendix A-3 to part 60 of this chapter. You must also monitor continuous performance through use of a PM continuous parametric monitoring system (PM CPMS). **[40 CFR §63.1349(b)(1)]**

(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 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 output and the establishment of its relationship to manual reference method measurements must be determined in units of milliamps.

(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 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 2-hour 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 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

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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 (a)(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 (a)(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, 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, your three run average PM

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CPMS milliamp value, and your three run PM compliance test average, determine a relationship of lb/ton-clinker per milliamp with Equation 4.

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

Where:

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

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

X_1 = The three run average milliamp output from you PM CPMS.

z = The milliamp 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 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.

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

Where:

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

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

z = Your instrument zero in milliamps, determined from (1)(i).

R = The relative lb/ton-clinker per milliamp 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 output corresponding to your three PM performance test runs that demonstrate compliance with the emission limit using Equation 6.

$$O_h = \frac{1}{n}\sum_{i=1}^{n} X_1 \qquad \text{(Eq. 6)}$$

Where:

X_1 = The PM CPMS data points for all runs i.

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n = The number of data points.

O_h = Your site specific operating limit, in milliamps.

(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) 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.

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

Where:

Hpvi = 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 under the conditions that exist when the affected source is operating at the highest load or capacity 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 average of the results from three consecutive runs, including applicable sources as required by (D)(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 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.

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(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.

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

Where:

E_C = 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.

(c) ***Performance Test Frequency****.* Tests for PM are repeated every 12 months.

(d) ***Performance Test Reporting Requirements****.* (1) You must submit the information specified in paragraphs (d)(1) and (2) of this section 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 this section.

(ii) The values for the site-specific operating limits or parameters established pursuant to paragraphs (b)(1), (3), (6), and (7) of this section, 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

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	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/*). (**e) *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.
8.3	Monitoring Requirements: A. Visible Emissions Limitations (1) **COMAR 26.11.30.05(D)**, which states that the owner or operator of a clinker cooler at a Portland cement manufacturing plant shall either: (a) Use a COM in accordance with the requirements of COMAR 26.11.01.10; or (b) Use a PM continuous parametric monitoring system (CPMS) to establish a site-specific operating parameter limit for continuous visible emission compliance determinations in accordance with Regulation COMAR 26.11.30.04C; (2) The Permittee shall comply with and update as needed the written operations and maintenance plan, which includes the following information: (a) 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 of §63.1345; (b) Corrective actions to be taken when required by §63.1350(e); and (c) Procedures to be used to periodically monitor affected sources subject to opacity standards under§63.1345. **[40 CFR §63.1350(a) and (b)]** B. Control of Particulate Matters (1) The exhaust gases from E-03-001-Clinker Cooler and G01-001- Main Pan Conveyor shall vent through a dust collector designed to meet the particulate matter emissions limit before discharging into the atmosphere. **[COMAR 26.11.03.06C]**

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Clinker Cooler and Main Pan Conveyor - (Subject to MACT requirements)

(2) On or after September 1, 2016, the owner or operator of a cement kiln or clinker cooler at a Portland cement manufacturing plant shall:

(a) Use a PM continuous parametric monitoring system (CPMS) to establish a site specific operating parameter limit corresponding to the results of the performance test as required in §B(3) of this regulation demonstrating compliance with the PM limits in §B(1) and (2) of this regulation;

(b) Conduct the performance test as required in §B(3) of this regulation using Method 5 or Method 5I of 40 CFR part 60;

(c) Use the PM CPMS to demonstrate continuous compliance with the site-specific operating parameter limit established in §C(1) of this regulation;

(d) Repeat the performance test as required in §B(3) of this regulation annually and reassess and adjust the site-specific operating parameter limit of §C(1) of this regulation in accordance with the results of the performance test using the procedures in 40 CFR §63.1349(b)(1)(i)—(ix); and

(e) Follow the procedures in 40 CFR §63.1350(b)(iii) and (iv) for any exceedance of the established operating parameter limit of §C(1) of this regulation on a 30 process operating day basis
[COMAR 26.11.30.04(C)]

(3) For the PM CPMS, the Permittee will establish a site-specific operating limit in accordance with §63.1349(b)(1)(i) through (iv). The Permittee shall conduct annual performance tests to reassess and adjust the site-specific operating limit as necessary. The Permittee shall follow the procedures in 40 CFR §63.1350(b)(iii) and (iv) for any exceedance of the established operating parameter limit of COMAR 26.11.30.04(C)(1) on a 30 process operating day basis. **[Reference: COMAR 26.11.30.04(C)(5)] [Reference: COMAR 26.11.30.04B(3), §60.63(c)(2) and §63.1349(b)(1)]**

(4) The Permittee shall comply with and update as needed the written operations and maintenance plan, which includes the following information:
(a) 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 of §63.1345;

(b) Corrective actions to be taken when required by §63.1350(e); and

(c) Procedures to be used to periodically monitor affected sources subject to opacity standards under§63.1345.
[40 CFR §63.1350(a) and (b)]

Table IV – 8 **Clinker Cooler and Main Pan Conveyor - (Subject to MACT requirements)**	
	Clinker Production Monitoring Requirements (1) The Permittee shall determine hourly clinker production by one of two methods: **[Reference: §60.63(b)(1) and §63.1350(d)(1)]** (a) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ±5 percent accuracy; : **[Reference: §60.63(b)(1)(i) and §63.1350(d)(1)(i)]** or (b) Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within ±5 percent accuracy. Calculate the Permittee's hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. Note that if this ratio changes at clinker reconciliation, the Permittee must use the new ratio going forward, but the Permittee does not have to retroactively change clinker production rates previously estimated. : **[Reference: §60.63(b)(1)(ii) and §63.1350(d)(1)(ii)]** (2) The Permittee shall determine, record, and maintain a record of the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before initial use (for new sources) or by the effective compliance date of this rule (for existing sources). During each quarter of source operation, the Permittee must determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow). **[Reference: §60.63(b)(2) and §63.1350(d)(2)]** (3) If the Permittee measure clinker production directly, record the daily clinker production rates; if the Permittee measure the kiln feed rates and calculate clinker production, record the hourly kiln feed and clinker production rates. **[Reference: §60.63(b)(3) and §63.1350(d)(3)]** (4) The Permittee shall develop an emissions monitoring plan in accordance with (p)(1) through (p)(4) of §63.1350(p). **[Reference: §63.1350(d)(4)]**
8.4	**Record Keeping Requirements:** A & B. The Permittee shall maintain all records for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report or record.

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Clinker Cooler and Main Pan Conveyor - (Subject to MACT requirements)

	At a minimum, the most recent two years of data shall be retained on site; 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 no microfiche. **[40 CFR §63.1355]**
8.5	**Reporting Requirements:** A. Visible Emissions Limitations (1) 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. **[40 CFR §63.1354(b)(10)]** (2) The Permittee shall submit to the Department, a report no later than 30 days after the end of each calendar quarter, which shall include a summary of the following information: (a) Emissions for each calendar month and each rolling 12-month period; (b) All required stack emission test reports; (c) All processed CEM emission monitoring data; (d) All CEM certification and calibration results**[COMAR 26.11.03.06]** (3) The Permittee shall submit a summary report semiannually which contains all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a). **[40 CFR §63.1354(b)(9)(v)]** B. Control of Particulate Matters (1) The Permittee shall submit the results of performance tests in accordance with the following: (a) before the close of business on the 60th day following the completion of the performance test. **[40 CFR §63.1354(b)(1)] & [40 CFR §63.10(d)(2)]** (b) within 45 days following the date of the stack test. **[Consent Decree, August 24, 2009 & COMAR 26.11.03.06C]** (2) At least 30 days prior to each stack emissions testing, the Permittee shall submit to the Department a stack test protocol for review and approval. **[Part D(7) of Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000]** (3) The Permittee shall submit a summary report semiannually which contains all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a). **[40 CFR §63.1354(b)(9)(v)]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 9
Clinker Handling and Craneway - Point Sources - (Subject to MACT requirements)

9.0 **Emissions Unit Numbers**

Area G – Clinker Transport & Storage

Baghouse	Emission Unit
G01-009	G01-012- Clinker Storage Silo
G02-047	G02-002-Transfer Tower #13 Belt Conveyor
G02-044	G02-002- Transfer Tower #12 Belt Conveyor
G02-021	G02-002-Transfer Tower #11 Belt Conveyor
G02-053	TL1- Clinker Truck/Rail Loadout
G03-011	TT9/10- Transfer Tower #9/10 G03-010- Clinker into Craneway
G03-004	TT7- Transfer Tower #7
G04-011	G04-010- Bucket Elevator G04-014- 450 MT Clinker Bin G04-020- Belt Conveyor
G04-034	G04-009 & G04-016 - Belt Conveyor G04-010- Bucket Elevator G04-016- Belt Feeder G04-056- 100 MT Clinker Bin Weighfeeder
H01-220 (G04-034)	G04-058- Clinker Bin, H01-006 Belt G04-059- H01-015 Clinker Feeder, G04-018 Belt

Area H – Clinker Finish Mill

Baghouse	Emission Unit
H09-051	H09-028- Bucket Elevator H09-062- Reversible Belt Conveyor H09-031- Belt Conveyor
H09-059	H09-047- Bucket Elevator H09-058- Belt Conveyor to 90 metric ton bin H09-000- Semifinish Grinding System
H09-025	H09-019- Weighfeeder H09-023- 100 MT Gypsum Bin Weighfeeder H09-024- Belt Conveyor (from Weighfeeder)
H09-073	H09-075- 90 Ton Bin
H09-082	H09-021- 100 MT Clinker Bin Weighfeeder H09-066- Belt Conveyor H09-020- 100 MT Slag/Clinker Bin Weighfeeder
H09-033	H09-031 & H09-046 - Belt Conveyor H09-036 & H09-041 - Bin & Roll Press
H09-094	H09-091- Metal Reclamation System Belt Conveyor

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Clinker Handling and Craneway - Point Sources - (Subject to MACT requirements)

9.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations (1) **COMAR 26.11.30.05(B)(2)**, which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers. (2) **Portland Cement MACT**- **40 CFR §63.1348** which limits opacity to 10% or less for each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading system. **Note: The Portland Cement MACT was revised effective November 8, 2010. The new citation for the above requirement is §63.1345.** B. Control of Particulate Matters (1) **COMAR 26.11.30.04(B)(2)**, which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot dry. (2) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000** – All emission units shall be equipped with a dust collector designed to reduce particulate matter emissions to 0.01 gr/SCFD (22.9 mg/dscm) except TT9/10 - Transfer Tower #9/10 which is required to meet 0.0108 gr/SCFD (24.7 mg/dscm).
9.2	**Testing Requirements:** A & B. Please see the monitoring requirements.
9.3	**Monitoring Requirements:** A. Visible Emissions Limitations (1) The Permittee shall conduct a monthly 1-minute visible emissions test of the exhaust stack of each emission unit in accordance with Method 22 of Appendix A to part 60. The test must be conducted while the emission unit is in operation. If no visible emissions are observed in six consecutive monthly tests for the exhaust stack of any emission unit, the Permittee may decrease the frequency of testing from monthly to semi-annually for that emission unit. If visible emissions are observed during any semi-annual test, the Permittee must resume testing of the exhaust stack of that emission unit 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 the exhaust stack of any emission unit, the Permittee may

Table IV – 9
Clinker Handling and Craneway - Point Sources - (Subject to MACT requirements)

	decrease the frequency of testing from semi-annually to annually for the exhaust stack of that emission unit. If visible emissions are observed during any annual test, the Permittee must resume testing of the exhaust stack of that emission unit 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 test, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions. **[40 CFR §63.1350(a)(4)(i)-(iv)]** (2) The Permittee shall comply with and update as needed the written operations and maintenance plan which includes the following information: (a) 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 of §§63.1348; and (b) Procedures to be used to periodically monitor affected sources. **[40 CFR §63.1350(a) and (b)]** B. <u>Control of Particulate Matters</u> The exhaust gas from each emissions unit shall vent a dust collector designed to reduce particulate matter emissions limits before discharging into the atmosphere. **[COMAR 26.11.03.06C]**
9.4	**<u>Record Keeping Requirements</u>:** A & B. The Permittee shall maintain needed the written operations and maintenance plan and all records for at least five years following the date of each inspection, 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 offsite. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or no microfiche. **[40 CFR §63.1355]**
9.5	**<u>Reporting Requirements</u>:** A & B. The Permittee shall submit a summary report semiannually which contains all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a). **[40 CFR §63.1354(b)(9)(v)]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 10
Finish Mill Systems - (Subject to MACT requirements)

10.0 **Emissions Unit Numbers**

Area H – Clinker Finish Mill

Baghouse	Emission Unit
H01-070	H01-040 – Finish Mill #1
	H01-061 – Cyclones and Belts
	H01-063 – Cyclone and Belts
	H01-090 – Finish Mill #1 Burner
H01-210	H01-105 – Belt Conveyor and Tipping Valves
	H01-110 – Bin
	H01-112 – Belt Conveyor and Tipping Valves
H01-230	H01-080 – Elevator and Tipping Valves
H01-240	H07-015 – Cement to Cement Cooler
	H07-016 - Airslide
H04-044	H04-006- Belt Conveyor
	H04-014- Finish Mill #4 System
H05-044	H05-014- Finish Mill #5 System
H06-044	H06-014- Finish Mill #6 System
	H06-017- Cyclone 642 (FM#6 System)
	H06-037- Separator 627 (FM#6 System)
H07-056	H07-014- Finish Mill #7 System, H07-018, H07-068, H07-070 – Finished Cement Transfer System
H07-057	H07-018, H07-068, & H07-070 – Finished Cement Transfer System
H08-056	H08-014- Finish Mill #8 System
	H08-017- Separator (FM#8 System)
	H08-037- Cyclone (FM#8 System)
	H08-038 – Cyclone (FM#8 System)

10.1 **Applicable Standards/Limits:**

A. Visible Emissions Limitations

(1) **COMAR 26.11.30.05(B)(2)**, which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

(2) Opacity for each finish mill, located at a major source, during all operating mode shall not exceed 10%. **[Reference: Table 1-13. of §63.1343(b)(1)]**

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

Table IV – 10 **Finish Mill Systems - (Subject to MACT requirements)**	
	B. Control of Particulate Matters (1) **COMAR 26.11.30.04(B)(2)**, which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot dry. (2) Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000**,** which limits particulate matter from each exhaust stack of H04-006 Belt Conveyor, H04-014 Finish Mill #4, H05-014 Finish Mill #5, H06-014 Finish Mill #6, H06-017 Cyclone 642, and H06-037 Separator 627 to 0.0132 gr/scfd (30.2 mg/dscm). (3) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000,** which limits particulate matter from each exhaust stack of H07-014 Finish Mill #7, H08-014 Finish Mill #8, and H07-018, & H07-070 – Finished Cement Transfer System to 0.01 gr/scfd (22.9 mg/dscm). (4) **Permit to Construct #013-6-0256M dated February 23, 2005,** which limits particulate matter to 0.0132 gr/scfd (30.2 mg/dscm). C. Greenhouse Gas (GHG) Emissions – There is no GHG emission limit specified in 40 CFR 98 Subpart H (Cement Production).
10.2	**Testing Requirements:** A. Please see the monitoring requirements. B. Control of Particulate Matters The Permittee shall conduct a particulate matter emissions test for each mill at least once every 5-year period in accordance with AMA Technical Memorandum 91-01 or using Method 5 of 40 CFR Part 60, Appendix A. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating under representative performance condition s in accordance with 40 CFR Part 63, Subpart LLL. Each run shall be conducted for at least one hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance. **[Part D(6) of Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000]** C. Please see the monitoring requirements.
10.3	**Monitoring Requirements:** A. Visible Emissions Limitations (1) The Permittee shall conduct daily visual emissions observations of each mill sweep and air separator PMCDs of each affected source in accordance with Method 22 of Appendix A to part 60. The Method 22 test shall be conducted while the affected source is operating under representative performance

Table IV – 10
Finish Mill Systems - (Subject to MACT requirements)

condition s in accordance with 40 CFR 63.7(e). The duration of the Method 22 test shall be six minutes. If visible emissions are observed during any Method 22 test, the Permittee shall:

(a) Initiate, within one-hour, the corrective actions specified in the site specific written operations and an maintenance plan required under 40 CFR §63.1350(a);

(b) Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a follow-up Method 22 test of any stack from which visible emissions were observed during the previous Method 22 test; and

(c) If visible emissions are observed during the follow-up Method 22 test, conduct a visual opacity test of any stack from which visible emissions were observed in accordance with Method 9 of appendix A of 40 CFR Part 60. The Method 9 test shall be conducted within one-hour of the end of the follow-up Method 22 test and the duration of the Method 9 test shall be at least thirty minutes.
[40 CFR §63.1350(f)]

(2) The Permittee shall comply with and update as needed the written operations and maintenance plan. The plan shall include the following information:

(a) 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 of §63.1347; and

(b) Procedures to be used to periodically monitor affected sources.
[40 CFR §63.1350(a) and (b)]

B. Control of Particulate Matters

(1) The exhaust gases from each emission unit shall vent through a dust collector designed to meet the particulate matter emissions limit before discharging to the atmosphere.
[COMAR 26.11.03.06C]

(2) The Permittee shall implement and comply with the requirements of the CAM plan submitted with the permit application. The compliance requirements are summarized in **Table IV-10a Finish Mill Systems CAM Plan. [40 CFR §64.7]**

C. Greenhouse Gases

GHG monitoring requirements specified in 40 CFR 98.34 and 98.35 for the Finish Mill No. 1 Air Heater are applicable.

Table IV – 10
Finish Mill Systems - (Subject to MACT requirements)

10.4	**Record Keeping Requirements:** A. Visible Emissions Limitations The Permittee shall maintain all records 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 offsite. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or no microfiche. **[40 CFR §63.1355]** B. Control of Particulate Matters The Permittee shall maintain all the records of particulate matter emissions test results for at least five years and make them available to the Department upon request. 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. **[COMAR 26.11.03.06C]** C. Greenhouse Gases GHG recordkeeping requirements specified in 40 CFR 98.37 for the Finish Mill No. 1 Air Heater are applicable.
10.5	**Reporting Requirements:** A. Visible Emissions Limit The Permittee shall submit a summary report semiannually which contains all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a). **[40 CFR §63.1354(b)(9)(v)]** B. Control of Particulate Matters (1) At least 30 days prior to each stack emissions testing, the Permittee shall submit to the Department a stack test protocol for review and approval. (2) Within 60 days after each stack emissions testing, the Permittee shall submit to the Department the stack emissions test reports and compliance demonstration with emissions limits. **[Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000]** C. Greenhouse Gases GHG reporting requirements specified in 40 CFR 98.36 for the Finish Mill No. 1 Air Heater are applicable.

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV-10a Finish Mill Systems CAM Plan	
10a.0 - Emission Units: **H01-040 Finish Mill #1 System** **H04-014 Finish Mill #4 System** **H05-014 Finish Mill #5 System** **H06-014 Finish Mill #6 System** **H07-014 Finish Mill #7 System** **H08-014 Finish Mill #8 System**	
10a.1 – Monitoring Approach	
10a.1-A – Indicator #1	Stack performance test
10a.1-B – Measurement Approach	PM emissions from the baghouses' exhaust will be tested in accordance with AMA Technical Memorandum 91-01 or using Method 5 of 40 CFR Part 60, Appendix A.
10a.1-C – Indicator Range	An excursion is defined as the test result is greater than the PM standard for individual stack specified in Table IV-10 10.1. Excursions trigger an inspection of the baghouse, corrective action, and a reporting requirement
10a.1-D – Performance Criteria **Data Representativeness:** **QA/QC Practices and Criteria:** **Monitoring Frequency and Data Collection Procedure:**	 Measurements are made at the baghouse exhaust while the finish mills are operating. Stack test proposal will be sent to the Department for approval before test. Each mill at least once every 5-year period. Test results will be documented and reports submitted to the Department.
10a.2-A – Indicator #2	Visible emissions
10a.2-B – Measurement Approach	Visible emissions from the baghouses' exhaust will be monitored daily using and EPA Reference Method 22 procedures.
10a.2-C – Indicator Range	An excursion is defined as the presence of visible emissions. Excursions trigger an inspection of the baghouse, corrective action, and a reporting requirement
10a.2-D – Performance Criteria **Data Representativeness:** **QA/QC Practices and Criteria:**	 Measurements are made at the baghouse exhaust while the finish mills are operating. The observer will be familiar with Reference Method 22 and will follow Method 22 procedures. A 6-minute Method 22 observation is performed daily. A

Table IV-10a Finish Mill Systems CAM Plan	
Monitoring Frequency and Data **Collection Procedure:**	follow-up six minutes Method 22 test will be performed within 24 hours of the end of the six-minute test in which the visible emission was observed. If visible emissions are observed during the follow-up Method 22 test, a 30-minute Method 9 test must be performed. The VE observation is documented by the observer.
10a.3-A – Indicator #3	Inspection/Maintenance
10a.3-B – Measurement Approach	Daily inspection according to checklist and maintenance performed in accordance with manufacturer's recommendations or as needed.
10a.3-C – Indicator Range	N/A
10a.3-D – Performance Criteria **Data Representativeness:** **QA/QC Practices and Criteria:** **Monitoring Frequency and Data Collection Procedure:**	 Inspections are performed on the baghouses: H01-070, H04-044, H05-044, H06-044, H07-056 & 057, and H08-014. Qualified personnel perform inspections and maintenance. Daily Records are maintained to document daily inspections and dates of the completion of any required maintenance.

Table IV – 11 **Miscellaneous Sources Venting Inside Building – Subject to MACT requirements**	
11.0	**Emissions Unit Numbers** **Area G – Clinker Transport & Storage – Craneway Building** Baghouse — Emission Unit G04-037 — G04-018-Belt Conveyor (Venting Inside Building) G04-019-CE2 Bucket Elevator (Venting Inside Building) H09-073 — G04-031-Drag Conveyor B3 (Venting Inside Building)

Table IV – 11
Miscellaneous Sources Venting Inside Building – Subject to MACT requirements

	Area H – Clinker Finish Mill Baghouse — Emission Unit H09-059 — H09-058-Belt Conveyor (Venting Inside Building) H09-073 — H09-058-Belt Conveyor and H09-075-90T Bin (Venting Inside Building)
11.1	**Applicable Standards/Limits:** A. Visible Emissions Limitations (1) **COMAR 26.11.30.05(B)(2)**, which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers. (2) **Portland Cement MACT- 40 CFR §63.1348** which limits opacity to 10% or less for each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading system. **Note: The Portland Cement MACT was revised effective November 8, 2010. The new citation for the above requirement is §63.1345.** B. Control of Particulate Matters (1) **COMAR 26.11.30.04(B)(2)**, which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot dry. (2) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000-** Each emissions unit shall be equipped with a dust collector designed to reduce particulate matter emissions to 0.01 gr/SCFD (22.9 mg/dscm).
11.2	**Testing Requirements:** A & B. Please see the monitoring requirements.
11.3	**Monitoring Requirements:** A. Visible Emissions Limitations (1) The Permittee shall conduct a monthly 1-minute visible emissions test of the exhaust stack of each emission unit in accordance with Method 22 of Appendix A to part 60. The test must be conducted while the emission unit is in operation. If no visible emissions are observed in six consecutive monthly tests for the exhaust stack of any emission unit, the Permittee may decrease the frequency of testing from monthly to semi-annually for the exhaust stack of that emission unit. If visible emissions are observed during any semi-annual test, the Permittee must resume testing of the exhaust stack of that emission unit 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 the exhaust stack of any emission unit, the

Table IV – 11
Miscellaneous Sources Venting Inside Building – Subject to MACT requirements

	Permittee may decrease the frequency of testing from semi-annually to annually for the exhaust stack of that emission unit. If visible emissions are observed during any annual test, the Permittee must resume testing of the exhaust stack of that emission unit 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 test, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions. **[40 CFR §63.1350(a)(4)(i)-(iv)]** The Permittee have the option to conduct a Method 22 visible emissions test according to the requirements of 40 CFR §63.1350(a)(4)(i)-(iv) for each emissions unit located within the building, or for the building itself. If visible emissions from the building are monitored, the requirements of 40 CFR §63.1350(a)(4)(i)-(iii) and (l) apply to monitoring the building, and the Permittee must also test visible emissions from each side, roof, and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions. **[40 CFR §63.1350(a)(4)(vi)-(vii)]** (2) The Permittee shall comply with and update as needed the written operations and maintenance plan which includes the following information: (a) 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 of §§63.1348; and (b) Procedures to be used to periodically monitor affected sources. **[40 CFR §63.1350(a) and (b)]** B. <u>Control of Particulate Matters</u> The exhaust gas from each emissions unit shall vent through a dust collector designed to meet the particulate matter emissions limit before discharging into the atmosphere. **[COMAR 26.11.03.06C]**
11.4	**<u>Record Keeping Requirements</u>:** A & B. The Permittee shall maintain the written operations and maintenance plan and all records for at least five years following the date of each inspection, 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

Table IV – 11 **Miscellaneous Sources Venting Inside Building – Subject to MACT requirements**	
	computer, on floppy disks, on magnetic tape, or on microfiche. **[40 CFR §63.1355]**
11.5	**Reporting Requirements:** A & B. The Permittee shall submit a summary report semiannually which contains all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a). **[40 CFR §63.1354(b)(9)(v)]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 12 **Dried BioSolids (DBS) Related Operations**	
12.0	**Emissions Unit Numbers** Product Collectors — Emission Unit F04-062 — F04-058 - DBS Storage Tank (Fluidized Coke Storage Tank) F04-064 — F04-058 - DBS Storage Tank (Fluidized Coke Storage Tank) F04-062 — F05-055 – Diverter Valve to Calciner F04-064 — F05-055 – Diverter Valve to Calciner F04-062 — F05-056 – Diverter Valve to Main Kiln Burner F04-064 — F05-056 – Diverter Valve to Main Kiln Burner F04-062 — F05-049 – Rotary Air Lock for Feeding DBS from Silo F04-064 — F05-049 – Rotary Air Lock for Feeding DBS from Silo F04-062 — F05-050 – Scale, Pfister Dosing System F04-064 — F05-050 – Scale, Pfister Dosing System G05-003 — G05-001 – Pneumatic baghouse dust (BD) transfer system F05-051 – Mobile DBS Conveyor for Rail Car Unloading Dried BioSolids (DBS) system - installed 2009, updated 2013
12.1	**Applicable Standards/Limits:** Control of Particulate Matters **COMAR 26.11.06.03D**- Particulate Matter from Materials Handling and Construction. A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

Table IV – 12 **Dried BioSolids (DBS) Related Operations**	
12.2	**<u>Testing Requirements</u>:** Please see the monitoring requirements.
12.3	**<u>Monitoring Requirements:</u>** The Permittee shall prepare and update as needed the best management plan that describes the procedures and methods that will be used to take reasonable precautions. **[COMAR 26.11.03.06C]**
12.4	**<u>Record Keeping Requirements</u>:** The Permittee shall maintain the best management plan and all supporting documentation of procedures and methods required in the plan for at least five (5) years and make them available to the Department upon request. 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. **[COMAR 26.11.03.06C]**
12.5	**<u>Reporting Requirements</u>:** Please see Record Keeping Requirements.

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 13 **Facility Wide Requirements**	
13.0	**<u>Emissions Units</u>** Facility Wide
13.1	**<u>Applicable Standards/Limits</u>:** A. <u>NOx Emissions</u> **Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000** which states that NOx emissions from the entire premises shall not exceed 4,871 tons for any 12-month period, rolling monthly. B. <u>Particulate Matter Emissions</u> **Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000** which states that emissions from the entire premises shall not exceed the following limits for any 12-month period, rolling monthly: (1) 925 tons of PM;

Table IV – 13 **Facility Wide Requirements**	
	(2) 716 tons of PM_{10}; and (3) 586 tons of PM_{10} stack emissions. C. Sulfur Emissions **Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000** which states that SO_2 emissions from the entire premises shall not exceed 1,041 tons for any 12-month period, rolling monthly. D. Carbon Monoxide Emissions **Prevention of Significant Deterioration (PSD) Approval #PSD-97-01R dated April 8, 1999** which states that the premises-wide carbon monoxide (CO) emissions from the Pyroprocessing Portland cement plant and the existing Portland cement plant shall not exceed 3,328 tons for any 12-month period, rolling monthly. E. VOC Emissions **New Source Review Approval #NSR-97-02 issued April 8, 1999** which states that premises-wide emissions shall not exceed 165 tons of VOC for any 12-month period, rolling monthly. In determining compliance with VOC emission limits, VOC emissions shall be determined by calculating the numerical difference between the measured values of total hydrocarbon (THC) emissions and non-VOC emissions. F. Lead Emissions **Permit to Construct #06-6-0256 dated April 8, 1999 and revised June 7, 2000** which states that the emissions from the entire premises, including the existing Portland cement plant and the Pyroprocessing Portland cement plant, shall not exceed 0.6 tons of lead for any 12-month period, rolling monthly. G. Fluoride Emissions (1) **Permit to Construct #06-6-0256 dated April 8, 1999 and revised June 7, 2000** which states that the emissions from the entire premises, including the existing Portland cement plant and the Pyroprocessing Portland cement plant, shall not exceed 3.0 tons of fluoride for any 12-month period, rolling monthly. (2) **COMAR 26.11.03.06C** which prevents the discharge of fluorides into the atmosphere that causes a violation of any applicable ambient air quality standards for fluorides set forth in COMAR 26.11.04.
13.2	**Testing Requirements:** General Testing Requirements: (1) The Permittee shall comply with the testing requirements of §60.8, §60.64, §60.255, §60.257, §60.675, and §63.7. (2) In conducting the performance tests and relative accuracy tests required in §60.8, the Permittee must use reference methods and procedures and the test methods in appendix A of this part or other methods and procedures as specified in §60.64, except as provided in §60.8(b). **[Reference: 40 CFR**

Table IV – 13
Facility Wide Requirements

	§60.64(a) and §60.675(a)] (3) The Permittee must demonstrate compliance with the PM standards in §60.62 and applicable PM bag filter emission limits using EPA method 5 or method 5I and use Method 9 and the procedures in §60.11 to determine opacity. For any sources other than kilns (including associated alkali bypass and clinker cooler) that are subject to the 10 percent opacity limit must follow the appropriate monitoring procedures in §63.1350(f), (m)(1)through (4), (10) and (11), (o), and (p) of this chapter. **[Reference: 40 CFR §60.64(b)]** (4) Unless being specified in other appropriate requirements, the Permittee must conduct stack emissions tests to demonstrate compliance with all applicable particulate matter emissions limits under 40 CFR 60, Subpart OOO within 60 days after achieving the maximum hourly production rate at which the affected facility will be operated, but not later than 180 days after initial startup. **[Reference: 40 CFR §60.672(a)]** (5) Unless being specified in other appropriate requirements, for each fugitive emissions unit, the Permittee must conduct opacity observations to demonstrate compliance with applicable opacity limits under 40 CFR 60, Subpart OOO within 60 days after achieving the maximum hourly production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under 40 CFR §60.11. **[Reference: 40 CFR §60.672(b)]** (6) Unless being specified in other appropriate requirements, during each stack emissions test or opacity observation, the affected equipment shall be operated at 90% or higher of its rated capacity. A. through G. Please see the monitoring requirements.
13.3	**<u>Monitoring Requirements:</u>** A. through G. (1) The Permittee shall calculate premises-wide emissions for each month and each 12-month period, rolling monthly, to demonstrate compliance with the emissions limits. **[COMAR 26.11.03.06C]** (2) The Permittee shall not use any alternative kiln raw material, fuel, or additive except the following: (a) Quarried stone, sand and shale; (b) Iron-bearing materials, such as pyrites and millscale; (c) Cat fines; (d) Bottom ash and fly ash from coal-fired fuel burning equipment; (e) Coal; (f) Scrap tires;

Table IV – 13
Facility Wide Requirements

	(g) Petroleum coke; (h) Used oil generated on site; (i) Class A Dried BioSolids (DBS); and (j) Other materials which are included in the Permittee's current operating permit or may have been approved by the Department in the past under separate action. Any alternative kiln raw material, fuel, or additive not approved under authority of this permit or under any previous action may not be used unless it is demonstrated to the Department's satisfaction that the use of any substitute raw material, fuel or additive does not violate the Department's air toxics screening levels and does not increase air emissions beyond the allowable limits stated in the permit to construct, the PSD approval, or the NSR approval. **[Permit to Construct #06-6-0256, 0331, and 0337 dated March 1, 2013]**
13.4	**Record Keeping Requirements:** A. through G. The Permittee shall maintain the following records with supporting documentation for at least five years and make these records available to the Department upon request: (1) Premises-wide emissions for each month and each 12-month period, rolling monthly; and (2) Any violation of any emission limit required for each rolling 12-month period. (3) Alternative kiln raw material, fuel, or additive used. 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. **[COMAR 26.11.03.06C]**
13.5	**Reporting Requirements:** A. through G. (1) The Permittee shall include the emissions of NOx, Particulate matter, SO_2, CO, VOC, Lead, and Fluoride for each month and each 12-month period, rolling monthly, in the required quarterly report, the semiannual summary report, and the annual emission certification. (2) The Permittee shall submit to the Department a written report, no later than 30 days after a detection of any violation of any emission limit required for each rolling 12-month period. **[COMAR 26.11.03.06C]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

Table IV – 14 **Emergency Generator**	
14.0	**Emissions Unit Number:** J08-532 One (1) Caterpillar diesel fired emergency generator rated at 2520 hp, 1750 kilowatts (ARMA Registration No. 013-0012-9-0186), installed in July 2001.
14.1	**Applicable Standards/Limits:** A. Visible Emissions (1) The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. **[Reference: COMAR 26.11.09.05E(2)]** (2) The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. **[Reference: COMAR 26.11.09.05E(3)]** **Exceptions.** COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods: (i) Engines that are idled continuously when not in service: 30 minutes (ii) All other engines: 15 minutes COMAR 26.11.09.05E(2) and (3) do not apply while maintenance, repair, or testing is being performed by qualified mechanics. B. Control of Sulfur Oxides The Permittee shall not burn any distillate fuel oil with a sulfur content of greater than 0.3% by weight. **[Reference: COMAR 26.11.09.07A(1)(c)]** C. Control of NOx – NOx RACT Requirements (1) A person who owns or operates fuel-burning equipment with a capacity factor (as defined in 40 CFR, Part 72.2) of 15 percent or less shall: (a) Provide certification of the capacity factor of the equipment to the Department in writing; (b) For fuel-burning equipment that operates more than 500 hours during a calendar year, perform a combustion analysis and optimize combustion at least once annually;

Table IV – 14 **Emergency Generator**	
	(c) Maintain the results of the combustion analysis at the site for at least 5 years and make these results available to the Department and the EPA upon request; (d) Require each operator of an installation, except combustion turbines, to attend operator training programs at least once every 3 years, on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors; and (e) Maintain a record of training program attendance for each operator at the site, and make these records available to the Department upon request. **[Reference: COMAR 26.11.09.08G]** (2) For the purposes of COMAR 26.11.09.08, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. **[Reference: COMAR 26.11.09.08B(5)]** D. Operational Limit The Permittee shall burn only diesel fuel (No. 2 fuel oil) that meets all applicable federal and state requirements in the generator unless the Permittee obtains an approval from the Department to burn alternate fuels. **[Reference: COMAR 26.11.02.09A]**
14.2	**Testing Requirements:** A. Visible Emissions See Monitoring, Record Keeping and Reporting Requirements. B. Control of Sulfur Oxides See Monitoring, Record Keeping and Reporting Requirements. C. Control of NOx – NOx RACT Requirements The Permittee shall perform combustion analysis and optimize combustion once each year, for each year that the emission unit operates more than 500 hours. **[Reference: COMAR 26.11.09.08G(1)(b)]** D. Operational Limit See Record Keeping and Reporting Requirements.
14.3	**Monitoring Requirements:** A. Visible Emissions The Permittee shall properly operate and maintain the emergency generator to minimize visible emissions. **[Reference: COMAR 26.11.03.06C]** B. Control of Sulfur Oxides The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. **[Reference: COMAR 26.11.03.06C]**

Table IV – 14 **Emergency Generator**	
	C. Control of NOx – NOx RACT Requirements Once every three years, each operator of the installation shall attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors. **[Reference: COMAR 26.11.09.08E(4)]** D. Operational Limit See Record Keeping and Reporting Requirements.
14.4	**Record Keeping Requirements:** A. Visible Emissions The Permittee shall maintain records at the premises of maintenance/repairs performed that relate to combustion performance. **[Reference: COMAR 26.11.03.06C]** B. Control of Sulfur Oxides The Permittee shall retain fuel supplier certifications at the premises stating that the fuel is in compliance with this regulation. **[Reference: COMAR 26.11.03.06C]** C. Control of NOx – NOx RACT Requirements The Permittee shall maintain the following records at the premises: (1) Records of the calculated capacity factors. **[Reference: COMAR 26.11.03.06C]** (2) Records of hours of operation. **[Reference: COMAR 26.11.02.19C]** (3) Records of combustion analysis performed if the hours of operation exceed 500. **[Reference: COMAR 26.11.09.08G(1)(c)]** (4) Record of training program attendance for each operator. **[Reference: COMAR 26.11.09.08G(1)(e)]** D. Operational Limits The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, annual records of the quantity and type of fuel combusted in the generator. **[Reference: COMAR 26.11.03.06C]**
14.5	**Reporting Requirements:** A. Visible Emissions The Permittee shall report incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.” **[Reference: COMAR 26.11.03.06C]** B. Control of Sulfur Oxides The Permittee shall report fuel supplier certification records to the Department upon request. **[Reference: COMAR 26.11.03.06C]** C. Control of NOx – NOx RACT Requirements The Permittee shall make all records (combustion analyses, emissions unit hours of

Table IV – 14 Emergency Generator	
	operation, and training program attendance) to meet the NOx RACT requirements, available to the Department upon request. The Permittee shall provide certification of the capacity factor of the equipment to the Department in writing as part of the April 1 emissions certification report. **[Reference: COMAR 26.11.09.08G, COMAR 26.11.02.19C, and COMAR 26.11.03.06C]** D. Operational Limits The Permittee shall submit records of the quantity and type of fuels burned with the annual emissions certification report. **[Reference: COMAR 26.11.02.19C&D]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

	Table IV – 15 Facility Wide – MACT Sources Only
15.0	**Emissions Unit Number(s)** Facility Wide- MACT Sources Only
15.1	**Applicable Standards/Limits and Operating Conditions:** (1) The Permittee must prepare a written operations and maintenance plan. The plan must be submitted to the Department, for review and approval, as part of the application for a Title V - Part 70 operating permit and must include the following information**: [Reference: §63.1347(a)]** (a) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emissions limits and operating limits, including fugitive dust control measures for open clinker piles, of §63.1343 through 63.1348. the Permittee's operations and maintenance plan must address periods of startup and shutdown; (b) Corrective actions to be taken when required by paragraph §63.1350(f)(3); and (c) 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. (2) Failure to comply with any provision of the operations and maintenance plan developed in accordance with this section is a violation of the standard. **[Reference: §63.1347(b)]** (3) In order to demonstrate continuous compliance during startup and shutdown, all air pollution control devices must be operating. **[Reference: §63.1348(b)(9)]**

	Table IV – 15 **Facility Wide – MACT Sources Only**
	(4) During periods of startup and shutdown, the kiln shall meet the following requirements: **[Reference: §63.1346(g)]** (a) During startup the Permittee 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; **[Reference: §63.1346(g)(1)]** (b) Combustion of the primary kiln fuel may commence once the kiln temperature reaches 1200 degrees Fahrenheit; **[Reference: §63.1346(g)(2)]** (c) 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; **[Reference: §63.1346(g)(3)]** and (d) The Permittee must keep records as specified in §63.1355 during periods of startup and shutdown. **[Reference: §63.1346(g)(4)]**
15.2	**<u>Testing Requirements</u>** General Testing Requirements: (1) The Permittee shall comply with the testing requirements of §60.8, §60.64, §60.255, §60.257, §63.7, and §63.1349. (2) In conducting the performance tests and relative accuracy tests required in §60.8, the Permittee must use reference methods and procedures and the test methods in appendix A of this part or other methods and procedures as specified in §60.64, except as provided in §60.8(b). **[Reference: 40 CFR §60.64(a) and §60.675(a)]** (3) The Permittee must demonstrate compliance with the PM standards in §60.62 and applicable PM bag filter emission limits using EPA method 5 or method 5I and use Method 9 and the procedures in §60.11 to determine opacity. For any sources other than kilns (including associated alkali bypass and clinker cooler) that are subject to the 10 percent opacity limit must follow the appropriate monitoring procedures in §63.1350(f), (m)(1)through (4), (10) and (11), (o), and (p) of this chapter. **[Reference: 40 CFR §60.64(b)]** (4) Initial Performance Test Requirements under 40 CFR Part 63, Subpart LLL - The Permittee must demonstrate compliance with the emissions standards and operating limits by using the test methods and procedures in §63.1349 and 63.7. Any cement kiln that has been subject to the requirements of subpart CCCC or subpart DDDD of

	Table IV – 15 **Facility Wide – MACT Sources Only**
	40 CFR Part 60, and is now electing to cease burning nonhazardous solid waste and become subject to this subpart, must meet all the initial compliance testing requirements each time it becomes subject to this subpart, even if it was previously subject to this subpart. **[Reference: §63.1348(a)]** Notes: The first day of the 30 operating day performance test is the first day after the compliance date following completion of the field testing and data collection that demonstrates that the CPMS or CEMS has satisfied the relevant CPMS performance evaluation or CEMS performance specification (e.g., PS 2, 12A, or 12B) acceptance criteria. The performance test period is complete at the end of 30th consecutive day. See §63.1341 for definition of operating day and §63.1348(b)(1) for the CEMS operating requirements. The Permittee has the option of performing the compliance test earlier than the compliance date if desired. (5) Unless being specified in other appropriate requirements, during each stack emissions test or opacity observation, the affected equipment shall be operated at 90% or higher of its rated capacity. Specific Testing Requirements: (6) The Permittee shall comply with the following test requirements: (a) **40 CFR 63.1349(c)** requires the Permittee to repeat performance test for particulate matter emissions required under 40 CFR 63.1349(b)(1) and (b)(2) at least once every five years. (b) **40 CFR 63.1349(d)** requires the Permittee to repeat performance test for dioxin/furan emissions required under 40 CFR 63.1349(b)(3) at least once every 30 months. (c) **40 CFR 63.1349(e)(1)** requires that if a source plans to undertake a change in operations that may adversely affect compliance with an applicable D/F standard under this subpart, the source must conduct a performance test and establish new temperature limit(s) as specified in paragraph (b)(3) of this section. (d) **40 CFR 63.1349(e)(2)** requires that If a source plans to undertake a change in operations that may adversely affect compliance with an applicable PM standard under § 63.1343, the source must conduct a performance test as specified in paragraph (b)(1) of this section. **[40 CFR 63.1349(c), (d), and (e)]** (7) The Permittee shall comply with the following compliance dates: (a) The compliance date for existing sources for all the requirements that became

	Table IV – 15 **Facility Wide – MACT Sources Only**
	effective on February 12, 2013, except for the open clinker pile requirements will be September 9, 2015; **[Reference: §63.1351(c)]** The Department has extended the compliance date of HCl to September 9, 2016. **[Reference: Department Letter dated July 15, 2015]** (b) The compliance date for new sources is February 12, 2013, or startup, whichever is later; **[Reference: §63.1351(d)]** (c) The compliance date for existing sources with the requirements for open clinker storage piles in §63.1343(c) is February 12, 2014; **[Reference: §63.1351(e)]** and (d) Emissions limits in effect prior to September 9, 2010. Any source defined as an existing source in §63.1351, and that was subject to a PM, mercury, THC, D/F, or opacity emissions limit prior to September 9, 2010, must continue to meet the limits shown in Table 2 to 40 CFR 63, Subpart LLL until September 9, 2015. **[Reference: §63.1343(d); Department Letter dated May 22, 2014]** (8) If an affected facility subject to 40 CFR 63, Subpart LLL has a different emissions limit or requirement for the same pollutant under another regulation in Title 40, the Permittee of the affected facility must comply with the most stringent emissions limit or requirement and is exempt from the less stringent requirement. **[Reference: §63.1356]**
15.3	**Monitoring Requirements** A. Parameter Monitoring requirements (1) If the Permittee has an operating limit that requires the use of a CMS, the Permittee must install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the procedures in (m)(1) through (4) of §63.1350 by the compliance date specified in §63.1351. The Permittee must also meet the applicable specific parameter monitoring requirements in (m)(5) through (11) that are applicable to the facility. **[Reference: §63.1350(m)]** (2) If the Permittee has an operating limit that requires the use of a pressure measurement device, the Permittee must meet the requirements in (m)(6)(i) through (vi) of §63.1350. **[Reference: §63.1350(m)(6)]** (3) If the Permittee elects to use a fabric filter bag leak detection system (BLDS) to comply with the requirements of Part 63, Subpart LLL, the Permittee must install, calibrate, maintain, and continuously operate a BLDS as specified in (m)(10)(i) through (viii) of §63.1350. **[Reference: §63.1350(m)(10)]** B. Continuous Flow Rate Monitoring System (1) The Permittee must install, operate, calibrate, and maintain instruments, according to the requirements in (n)(1) through (10) of §63.1350, for continuously measuring

	Table IV – 15 **Facility Wide – MACT Sources Only**
	and recording the stack gas flow rate to allow determination of the pollutant mass emissions rate to the atmosphere from sources subject to an emissions limitation that has a pounds per ton of clinker unit. **[Reference: §63.1350(n)]** (2) The Permittee 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. **[Reference: §63.1350(n)(1)]** (3) 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. **[Reference: §63.1350(n)(2)]** (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 (n)(2) of §63.1350. **[Reference: §63.1350(n)(4)]** (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. **[Reference: §63.1350(n)(5)]** (6) The flow rate monitoring system must be designed to complete a minimum of one cycle of operation for each successive 15-minute period. **[Reference: §63.1350(n)(6)]** (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 Part 60 for a discussion of CD), including the following: **[Reference: §63.1350(n)(7)]** (a) 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); and (b) 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) The Permittee 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 Part 60 with the following exceptions specified in (n)(8)(i) and (n)(8)(ii) of §63.1350: **[Reference: §63.1350(n)(8)]**

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	(a) The relative accuracy test is to evaluate the flow rate monitoring system alone rather than a continuous emission rate monitoring system; and (b) 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) The Permittee must verify the accuracy of the flow rate monitoring system at least once per year by repeating the relative accuracy test specified in (n)(8) of §63.1350. **[Reference: §63.1350(n)(9)]** (10) The Permittee 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). **[Reference: §63.1350(n)(10)]** C. Alternate monitoring requirements approval The Permittee may submit an application to the Department for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of Subpart LLL, except for emission standards for THC. The application for alternative monitoring requirements is subject to the provisions of (o)(1) through (6) of §63.1350. **[Reference: §63.1350(o)]** D. Development and submittal (upon request) of monitoring plans If the Permittee demonstrates compliance with any applicable emissions limit through performance stack testing or other emissions monitoring, the Permittee must develop a site-specific monitoring plan according to the requirements in (p)(1) through (4) of §63.1350. This requirement also applies to the facility if the Permittee petitions the Department for alternative monitoring parameters under (o) of §63.1350 and §63.8(f). If the Permittee uses a BLDS, the Permittee must also meet the requirements specified in (p)(5) of §63.1350. **[Reference: §60.63(i) and §63.1350(p)]** E. Operation and maintenance requirements At all times, including periods of startup, shutdown, and malfunction, the Permittee shall 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 to the levels required by the relevant standards, i.e., meet the emission standard or comply with the start-up, shutdown, and malfunction plan. Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the startup, shutdown, and malfunction plan. To the extent that an unexpected event arises during a start-up, shutdown, and malfunction, the Permittee shall comply by minimizing emissions during

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	such a startup, shutdown, or malfunction event consistent with safety and good air pollution control practices. **[40 CFR §63.6(e)(1)(i -ii)]**
15.4	**Record Keeping Requirements** (1) The Permittee shall comply with the recordkeeping requirements of §60.7, §60.65, §60.258, §63.10, and §63.1355. (2) The Permittee shall maintain files of all information (including all reports and notifications) required by §63.1355 recorded in a form suitable and readily available for inspection and review as required by §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. **[Reference: §63.1355(a)]** (3) The Permittee shall maintain the following records for each affected source as required by §63.10(b)(2) and (b)(3) of this part: **[Reference: §63.1355(b)]** (a) All documentation supporting initial notifications and notifications of compliance status under §63.9; (b) All records of applicability determination, including supporting analyses; and (c) If the Permittee has been granted a waiver under §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements. (4) In addition to the recordkeeping requirements in (b) of §63.1355, the Permittee of an affected source equipped with a continuous monitoring system shall maintain all records required by §63.10(c). **[Reference: §63.1355(c)]** (5) The Permittee must keep records of the daily clinker production rates and kiln feed rates. **[Reference: §63.1355(e)]** (6) The Permittee 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. **[Reference: §63.1355(f)]** (7) The Permittee must keep records of the date, time and duration of each

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	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. **[Reference: §63.1355(g)(1)]** (8) The Permittee 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. **[Reference: §63.1355(g)(2)]** (9) For each exceedance from an emissions standard or established operating parameter limit, the Permittee 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. **[Reference: §63.1355(h)]**
15.5	**Reporting Requirements** (1) The Permittee shall comply with the reporting requirements of §60.19, §60.65, §60.258, §60.676, §63.10, and §63.1354. (2) The Permittee shall comply with the following requirements: **[Reference: §60.64(d)]** (a) Within 60 days after the date of completing each performance test (see §60.8) as required by this subpart the Permittee must submit the results of the performance tests conducted to demonstrate compliance under this subpart to the EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (*http://www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/index.html*). Only data collected using test methods on the ERT Web site are subject to this requirement for submitting reports electronically to WebFIRE. The Permittee who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk, flash drive or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the

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	delegated authority, the Permittee must also submit these reports, including the CBI, to the delegated authority in the format specified by the delegated authority. For any performance test conducted using test methods that are not listed on the ERT Web site, the Permittee must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13. (b) Within 60 days after the date of completing each CEMs performance evaluation test as defined in §63.2, the Permittee must submit relative accuracy test audit (RATA) data to the EPA's CDX by using CEDRI in accordance with paragraph (d)(1) 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, the Permittee must submit the results of the performance evaluation to the Administrator at the appropriate address listed in §63.13. (c) 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. (d) All reports required by this subpart not subject to the requirements in paragraphs (d)(1) and (2) of §60.64 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 (d)(1) and (2) of §60.64 in paper format. (3) The Permittee shall submit reports of excess emissions. The content of these reports must comply with the requirements in §60.7(c). Notwithstanding the provisions of §60.7(c), such reports shall be submitted semiannually. **[Reference: §60.65(a)]** (4) The Permittee shall submit semiannual reports of the malfunction information required to be recorded by §60.7(b). These reports shall include the frequency, duration, and cause of any incident resulting in deenergization of any device controlling kiln emissions or in the venting of emissions directly to the atmosphere. **[Reference: §60.65(b)]**

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	(5) As required by §63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status. **[Reference: §63.1354(b)(1)]** (6) As required by §63.10(d)(3), the Permittee of an affected source shall report the opacity results from tests required by §63.1349. **[Reference: §63.1354(b)(2)]** (7) As required by §63.10(d)(4), the Permittee of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under §63.6(i) shall submit such reports by the dates specified in the written extension of compliance. **[Reference: §63.1354(b)(3)]** (8) As required by §63.10(e)(2), the Permittee shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by §63.8(e). The Permittee shall submit the report simultaneously with the results of the performance test. **[Reference: §63.1354(b)(6)]** (9) As required by §63.10(e)(2), the Permittee of an affected source using a continuous opacity monitoring system to determine opacity compliance during any performance test required under §63.7 and described in §63.6(d)(6) shall report the results of the continuous opacity monitoring system performance evaluation conducted under §63.8(e). **[Reference: §63.1354(b)(7)]** (10) As required by §63.10(e)(3), the Permittee 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. **[Reference: §63.1354(b)(8)]** (11) The Permittee shall submit a summary report semiannually which contains the information specified in §63.10(e)(3)(vi). In addition, the summary report shall include: **[Reference: §63.1354(b)(9)]** (a) All exceedances of maximum control device inlet gas temperature limits specified in §63.1346(a) and (b); (b) Notification of any failure to calibrate thermocouples and other temperature sensors as required under §63.1350(g)(1)(iii) of this subpart; (c) Notification of any failure to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under §63.1346(c)(2); (d) Notification of failure to conduct any combustion system component

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	inspections conducted within the reporting period as required under §63.1347(a)(3); (e) Any and all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1347(a); (f) 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; (g) 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; (h) 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; (i) 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; and (j) 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

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	format. (12) 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 Permittee shall submit an excess emissions and continuous monitoring system performance report along with the summary report. **[Reference: §63.1354(b)(10)]** (13) For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the Permittee must report the failure in the semi-annual compliance report required by §63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.1348(d), including actions taken to correct a malfunction. **[Reference: §63.1354(c)]** (14) Unless being specified in other appropriate requirements, the Permittee shall submit a stack emissions testing protocol to the Department for review and approval at least 30 days prior to each stack emissions test. (15) Unless being specified in other appropriate requirements, within 60 days after the last day of any required stack emissions test or opacity observation, the Permittee shall submit to the Department the results.
15.6	**Notification Requirements** (1) The Permittee shall comply with the notification requirements of §60.7, §60.19, §63.9, and §63.1353. (2) The Permittee shall notify the Department in writing of his or her intention to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin to allow the Department to review and approve the site-specific test plan required under §63.7(c), if requested by the Department, and to have an observer present during the test. **[Reference: §63.9(e) and §63.1353(b)(2)]** (3) The Permittee of an affected source shall notify the Department in writing of the anticipated date for conducting the opacity or visible emission observations specified in §63.6(h)(5), if such observations are required for the source by a relevant standard. The notification shall be submitted with the notification of the performance test date, as specified in paragraph (e) of 63.9, or if no performance test is required or

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	visibility or other conditions prevent the opacity or visible emission observations from being conducted concurrently with the initial performance test required under §63.7, the Permittee shall deliver or postmark the notification not less than 30 days before the opacity or visible emission observations are scheduled to take place. **[Reference: §63.9(f) and §63.1353(b)(3)]** (4) The Permittee of an affected source required to use a CMS by a relevant standard shall furnish the Department written notification as follows: **[Reference: §63.9(g) and §63.1353(b)(4)]** (a) A notification of the date the CMS performance evaluation under §63.8(e) is scheduled to begin, submitted simultaneously with the notification of the performance test date required under §63.7(b). If no performance test is required, or if the requirement to conduct a performance test has been waived for an affected source under §63.7(h), the Permittee shall notify the Department in writing of the date of the performance evaluation at least 60 calendar days before the evaluation is scheduled to begin; (b) A notification that COMS data results will be used to determine compliance with the applicable opacity emission standard during a performance test required by §63.7 in lieu of Method 9 or other opacity emissions test method data, as allowed by §63.6(h)(7)(ii), if compliance with an opacity emission standard is required for the source by a relevant standard. The notification shall be submitted at least 60 calendar days before the performance test is scheduled to begin; and (c) A notification that the criterion necessary to continue use of an alternative to relative accuracy testing, as provided by §63.8(f)(6), has been exceeded. The notification shall be delivered or postmarked no later than 10 days after the occurrence of such exceedance, and it shall include a description of the nature and cause of the increased emissions. (5) Before a title V permit has been issued to the affected facility, and each time a notification of compliance status is required under Part 63, the Permittee shall submit to the Department a notification of compliance status, signed by the responsible official who shall certify its accuracy, attesting to whether the source has complied with the relevant standard. The notification shall list at least the following: **[Reference: §63.9(h)(2)(i) and §63.1353(b)(5)]** (a) The methods that were used to determine compliance; (b) The results of any performance tests, opacity or visible emission observations, continuous monitoring system (CMS) performance

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	evaluations, and/or other monitoring procedures or methods that were conducted; (c) The methods that will be used for determining continuing compliance, including a description of monitoring and reporting requirements and test methods; (d) The type and quantity of hazardous air pollutants emitted by the source (or surrogate pollutants if specified in the relevant standard), reported in units and averaging times and in accordance with the test methods specified in the relevant standard; (e) If the relevant standard applies to both major and area sources, an analysis demonstrating whether the affected source is a major source (using the emissions data generated for this notification); (f) A description of the air pollution control equipment (or method) for each emission point, including each control device (or method) for each hazardous air pollutant and the control efficiency (percent) for each control device (or method); and (g) A statement by the Permittee of the affected existing, new, or reconstructed source as to whether the source has complied with the relevant standard or other requirements. (6) The notification must be sent before the close of business on the 60th day following the completion of the relevant compliance demonstration activity specified in the relevant standard (unless a different reporting period is specified in the standard, in which case the letter must be sent before the close of business on the day the report of the relevant testing or monitoring results is required to be delivered or postmarked). For example, the notification shall be sent before close of business on the 60th (or other required) day following completion of the initial performance test and again before the close of business on the 60th (or other required) day following the completion of any subsequent required performance test. If no performance test is required but opacity or visible emission observations are required to demonstrate compliance with an opacity or visible emission standard under Part 63, the notification of compliance status shall be sent before close of business on the 30th day following the completion of opacity or visible emission observations. Notifications may be combined as long as the due date requirement for each notification is met. **[Reference: §63.9(h)(2)(ii) and §63.1353(b)(5)]** (7) Any change in the information already provided under §63.9 shall be provided to the Department in writing within 15 calendar days after the change. **[Reference: §63.9(j) and §63.1353(b)(5)]**

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	(8) Within 48 hours of an exceedance that triggers retesting to establish compliance and new operating limits, the Permittee shall 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 Subpart LLL. **[Reference: §63.1353(b)(6)]**

A permit shield shall cover the applicable requirements of the Clean Air Act that are listed in the table above.

MACT Requirements - (Applies to MACT Sources Only)

Applicable Standards and Regulations

The Permittee shall comply with the following sections of the General Provisions. The provisions, wwhich do not apply, have been deleted.

Table IV-15a to Subpart LLL of Part 63—Applicability of General Provisions

General Provisions 40 CFR Citation	**Requirement**	**Comment**
63.1(a)(1)-(4)	Applicability	
63.1(a)(6)-(8)	Applicability	
63.1(a)(10)-(14)	Applicability	
63.1(b)(2)-(3)	Initial Applicability Determination	
63.1(c)(1)	Applicability After Standard Established	
63.1(c)(2)	Permit Requirements	Area sources must obtain Title V permits.
63.1(c)(4)-(5)	Extensions, Notifications	
63.1(e)	Applicability of Permit Program	
63.2	Definitions	Additional definitions in §63.1341.
63.3(a)-(c)	Units and Abbreviations	
63.4(a)(1)-(3)	Prohibited Activities	
63.4(a)(5)	Compliance date	
63.4(b)-(c)	Circumvention, Severability	
63.5(a)(1)-(2)	Construction/Reconstruction	
63.5(b)(1)	Compliance Dates	
63.5(b)(3)-(6)	Construction Approval, Applicability	
63.5(d)(1)-(4)	Approval of Construction/Reconstruction	

63.5(e)	Approval of Construction/Reconstruction	
63.5(f)(1)-(2)	Approval of Construction/Reconstruction	
63.6(a)	Compliance for Standards and Maintenance	
63.6(b)(1)-(5)	Compliance Dates	
63.6(b)(7)	Compliance Dates	
63.6(c)(1)-(2)	Compliance Dates	
63.6(c)(5)	Compliance Dates	
63.6(f)(2)-(3)	Compliance with Emission Standards	
63.6(g)(1)-(3)	Alternative Standard	
63.6(h)(2)	Opacity/VE Standards	
63.6(h)(4)-(h)(5)(i)	Opacity/VE Standards	
63.6(h)(6)	Opacity/VE Standards	
63.6(h)(7)	Opacity/VE Standards	
63.6(i)(1)-(14)	Extension of Compliance	
63.6(i)(16)	Extension of Compliance	
63.6(j)	Exemption from Compliance	
63.7(a)(1)-(3)	Performance Testing Requirements	§63.1349 has specific requirements.
63.7(b)	Notification period	Except for repeat performance test caused by an exceedance. See §63.1353(b)(6).
63.7(c)	Quality Assurance/Test Plan	
63.7(d)	Testing Facilities	
63.7(e)(2)-(4)	Conduct of tests	
63.7(f)	Alternative Test Method	
63.7(g)	Data Analysis	
63.7(h)	Waiver of Tests	
63.8(a)(1)	Monitoring Requirements	
63.8(b)(1)-(3)	Conduct of Monitoring	
63.8(c)(1)-(8)	CMS Operation/Maintenance	Temperature and activated carbon injection monitoring data reduction requirements given in subpart LLL.

63.8(d)	Quality Control	
63.8(e)	Performance Evaluation for CMS	
63.8(f)(1)-(5)	Alternative Monitoring Method	Additional requirements in §63.1350(l).
63.8(f)(6)	Alternative to RATA Test	
63.8(g)	Data Reduction	
63.9(a)	Notification Requirements	
63.9(b)(1)-(5)	Initial Notifications	
63.9(c)	Request for Compliance Extension	
63.9(d)	New Source Notification for Special Compliance Requirements	
63.9(e)	Notification of performance test	Except for repeat performance test caused by an exceedance. See §63.1353(b)(6).
63.9(f)	Notification of VE/Opacity Test	Notification not required for VE/opacity test under §63.1350(e) and (j).
63.9(g)	Additional CMS Notifications	
63.9(h)(1)-(3)	Notification of Compliance Status	
63.9(h)(5)-(6)	Notification of Compliance Status	
63.9(i)	Adjustment of Deadlines	
63.9(j)	Change in Previous Information	
63.10(a)	Recordkeeping/Reporting	
63.10(b)(1)	General Recordkeeping Requirements	
63.10(b)(2)(iii)	General Recordkeeping Requirements	
63.10(b)(2)(vi)-(ix)	General Recordkeeping Requirements	
63.10(c)(1)	Additional CMS Recordkeeping	PS-8A supersedes requirements for THC CEMS.
63.10(c)(1)	Additional CMS Recordkeeping	PS-8A supersedes requirements for THC CEMS.
63.10(c)(5)-(8)	Additional CMS Recordkeeping	PS-8A supersedes requirements for THC CEMS.

63.10(c)(10)-(15)	Additional CMS Recordkeeping	PS-8A supersedes requirements for THC CEMS.
63.10(d)(1)	General Reporting Requirements	
63.10(d)(2)	Performance Test Results	
63.10(d)(3)	Opacity or VE Observations	
63.10(d)(4)	Progress Reports	
63.10(e)(1)-(2)	Additional CMS Reports	
63.10(e)(3)	Excess Emissions and CMS Performance Reports	Exceedances are defined in subpart LLL.
63.10(f)	Waiver for Recordkeeping/Reporting	
63.12(a)-(c)	State Authority and Delegations	
63.13(a)-(c)	State/Regional Addresses	
63.14(a)-(b)	Incorporation by Reference	
63.15(a)-(b)	Availability of Information	

SECTION V INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) No. 3 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The engines are subject to the following requirements:

(A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(C) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(a) Engines that are idled continuously when not in service: 30 minutes
(b) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

(2) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

(3) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(4) No. 3 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The containers are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

(a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;

(b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;

(c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

(a) Monthly records of the total VOC degreasing materials used; and

(b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.

(5) Containers, reservoirs, or tanks used exclusively for:

(a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;

(b) No. 2 Storage of lubricating oils;

(c) No. 4 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

(6) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;

(7) ✓ Potable water treatment equipment, not including air stripping equipment;

(8) ✓ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;

(9) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act; and

(10) ✓ Laboratory fume hoods and vents.

SECTION VI STATE-ONLY ENFORCEABLE CONDITIONS

The Permittee is subject to the following state-only enforceable requirements:

A. Applicable Regulations

(1) COMAR 26.04.10, which provides requirements for management of coal combustion byproducts.

(2) COMAR 26.11.01.11B, which provides general requirements for CEMs.

(3) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

(4) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

(5) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.

(6) COMAR 26.11.36.03A, which provides requirements for emissions of oxides of nitrogen (NOx) from emergency generators.

B. Compliance Demonstration

The Permittee shall submit to the Department by April 1 of each year a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. Such analysis shall include either:

(1) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

(2) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

Emergency Generator

A. Applicable Requirements - Operating Conditions:

(1) The Permittee may not operate the emergency generator registered under ARMA Registration No. 013-0012-9-0186 except for emergencies, testing, and maintenance purposes. **[Reference: COMAR 26.11.36.03A(1)]**

(2) The Permittee may not operate the emergency generator registered under ARMA Registration No. 013-0012-9-0186 for testing and maintenance purposes between 12:01 a.m. and 2 p.m. on any day on which the Department forecasts that the air

quality will be code orange, code red, or code purple. **[Reference: COMAR 26.11.36.03A(5)]**

B. Compliance Demonstration

The Permittee shall record the date and time of operating hours used for emergency, testing and maintenance purposes and shall make them available to the Department upon request.

LEHIGH CEMENT COMPANY LLC
675 QUAKER HILL ROAD, UNION BRIDGE, MARYLAND 21791
PERMIT NO. 24-013-0012
PART 70 OPERATING PERMIT FACT SHEET

BACKGROUND

Lehigh Cement Company LLC (LCC) owns and operates a Portland cement manufacturing plant at 675 Quaker Hill Road in Union Bridge, Maryland 21791. The plant is located in both Carroll and Frederick Counties. The Union Bridge Quarry is located in Frederick County (Maryland Air Quality Region II), while the main part of the plant, including the New Windsor Quarry, is located in Carroll County (Maryland Air Quality Region III). The original plant at Union Bridge was built in 1910 and has been modernized several times including the recent modernization/expansion where the four long-dry kilns were replaced with one pre-heater/pre-calciner kiln system. A permit to construct and New Source Review (NSR) and Prevention of Significant Deterioration (PSD) Approvals were issued on April 8, 1999 and revised on June 7, 2000 for the plant modernization and expansion.

On March 14, 2014, The Department issued a Permit to Construct for the installation of quarrying operations consisting of crushers, conveyors, and transfer towers associated with the expansion of operations at the existing LCC New Windsor Quarry, which is located in New Windsor, Carroll County, Maryland. A five-mile long covered conveyor system is currently being constructed to transfer materials from the New Windsor Quarry to the Union Bridge Plant. The expanded use of the New Windsor Quarry will support future cement production at the Plant. The New Windsor Quarry will ultimately replace the majority of limestone used by the Plant to produce Portland cement. The majority of the limestone currently used by the Plant is at present obtained from the Union Bridge Quarry.

PROCESS DESCRIPTION

The following is a description of the processes at the Union Bridge facility.

Quarry

The principal raw materials used for the Union Bridge plant are limestone, shale, sand, and mill scale. The limestone and shale are taken from the Union Bridge quarry site near the crushing plant and are processed through the same crushing plant. The sand, mill scale and fly ash/bottom ash are received from outside sources. A new raw material storage pile (SP10) near New Windsor will be established at a later date.

Rock Crushing

Trucks dump the rock into the hopper of an apron feeder, which feeds a gyratory crusher where it is broken down into fragments less than six inches in size. The crushed rock is conveyed to a surge bin that provides a steady feed for a series of two cone crushers. The cone crushers are enclosed with vibrating screens so that all the material that leaves the crushing plant is finer than one inch. Each of the three crushers are controlled by a baghouse.

Rock Storage

After the rock has been crushed, it travels on a system of belt conveyors to the storage/blending dome. The dome is 400 feet in diameter and 126 feet high and has a storage capacity of 50,000 metric tons of rock.

Raw Material Storage and Handling
Iron-based and silica based raw materials are housed on a partially enclosed raw material storage building. Solid fossil fuels (coal) are located in outdoor storage piles. Alumina-bearing ash (fly ash) raw materials are pneumatically conveyed to a storage tank. Alumina-bearing ash (bottom ash) raw materials are stored in a covered structure near the kiln. Raw material transfer throughout the plant is done by covered conveyor systems and transfer towers, which have dust collectors venting all transfers.

Vertical Roller Mill (Raw Mill)
The LCC plant includes an in-line Loesche vertical raw mill system. The in-line raw mill utilizes recycled heated gases from the precalciner exhaust to dry the raw material ground into raw meal. The raw meal is conveyed from the raw mill to the preheater/precalciner and ultimately to the feed end of the kiln. This provides for greater fuel efficiency in the kiln system. An additional benefit of an in-line raw mill is that the limestone (in the raw materials) acts as a scrubber to remove some of the sulfur compounds from the precalciner exhaust gases. The exhaust gases from the raw mill are vented through a main kiln dust collector to the main kiln stack. The raw mill runs most, but not all, of the time the kiln operates.

Blending Silo
In this operation, all the raw materials are blended to the proper proportions for introduction into the preheater tower/kiln system. Particulate emissions from the silos and raw material handling systems are controlled with baghouses.

Coal Storage
Coal is the primary fuel and is stockpiled outside on the ground near the preheater tower/kiln system.

Coal Mill
LCC primarily fires coal and other approved solid fuels in both the kiln and the preheater/precalciner tower. Coal from the stockpiles is crushed for use in the preheater tower/kiln system. The coal mill utilizes heated gases from the precalciner exhaust to dry and separate the coal. Milled coal is blown into the firing end of the kiln and the preheater/precalciner. Exhaust gases from the coal mill are vented through a coal mill only dust collector to the main kiln stack.

Kiln, Raw Meal Feed, and Coal Mill Feed Systems
The preheater/precalciner kiln system, consisting of one rotary kiln and a 5-stage cyclonic preheater/precalciner, allows higher production with a smaller kiln and more efficient fuel use. The process of making cement involves chemical reactions in three zones: preheating, calcining, and sintering. The primary combustion air system provides combustion air to burn fuel used in the kiln. The primary fuel used in the kiln is coal, which is supplemented with dried biolsolids (DBS). The combustion gases from the rotary kiln vent through the calciner and the precalciner. The secondary combustion air system provides combustion air to burn fuel introduced directly into the precalciner to reduce NOx emissions. In the preheater section, the heated combustion gases from the precalciner are used to warm the feed and evaporate any remaining water.

The plant has a precalciner located at the base of the preheater tower. The function of the calciner is to allow the majority of the calcination reaction of the raw meal to occur before the feed enters the kiln. Calcination is the process by which carbon dioxide is driven from the limestone leaving lime. In the sintering, or burning zone, the lime combines with other raw materials to form clinker.

LCC monitors the emissions of NOx, SO2, CO, THC, CO2, mercury (Hg), and hydrogen chloride (HCl) with continuous emissions monitors that are installed on the main kiln stack. There are also exhaust gas flow and PM continuous parametric monitoring systems (CPMS) installed in the stack. Particulate matter emissions are controlled by a baghouse.

Clinker Cooler

As clinker from the kiln drops into reciprocating grate coolers, cooling air blows up through the clinker. The clinker is then transported to the clinker storage silo. Prior to discharge, the hot exhaust gases pass through a heat exchanger to preheat the kiln combustion air, thereby increasing the efficiency of the kiln. The cooled clinker is loaded into the clinker silo and conveyed to the roll press. Emissions are controlled by a baghouse. There is a PM continuous parametric monitoring system (CPMS) installed in the stack from the cooler.

Roll Press

The roll press is used to pre-grind the clinker for feeding to the finish mills. The product from the press is a flat powdery cake form, rather than the clinker, which was in the form of a ball. The finished product from the roll press is conveyed to the finish mills for further grinding and size reduction. The system is controlled by baghouses.

Finish Mill System

This is the final grinding operation for the cement. Just before the finish grinding, gypsum, grinding aids, and/or limestone are mixed with the cement to control the rate at which the cement will set after it is mixed into concrete. Cement kiln baghouse dust is also mixed in to remove mercury from the kiln system. The finished cement is pneumatically conveyed to the storage silo. The finish mill system includes a semi finishing grinding system, finish mills #1, #4, #5, #6, and #7, in addition to the conversion of the old raw mill system to #8 finish mill. The semi finishing grinding system and the finish mills are controlled by baghouses.

Cement Loadout

A total of 32 product silos are used at the plant. Cement is shipped offsite by trucks and rail. Both packaged and bulk products are shipped.

EMISSIONS INFORMATION

The following table summarizes the actual emissions from LCC based on its Annual Emission Certification Reports:

Table 1: Actual Emissions

Year	NO_x (TPY)	SO_x (TPY)	PM_{10} (TPY)	CO (TPY)	VOC (TPY)	Total HAP (TPY)
2011	2,623	18	113	780	28	10
2012	2,888	13	127	737	29	11
2013	3,067	18	129	1,053	46	7
2014	2,902	19	83	1,224	46	10
2015	2,936	12	84	1,429	40	11

The major source threshold for triggering Title V permitting requirements in Carroll County is 25 tons per year for VOC, 25 tons for NOx, and 100 tons per year for any other criteria pollutants and 10 tons for a single HAP or 25 tons per year for total HAPS. Since the actual emissions of NOx, PM10, and CO, and potential emissions of HAPs from the facility are greater than the major source threshold, LCC is required to obtain a Title V – Part 70 Operating Permit under COMAR 26.11.03.01.

The renewal application for the Part 70 permit was received by the Department on September 28, 2015. An administrative completeness review was conducted and the application was deemed to be administratively complete. A letter was sent to LCC on December 1, 2015 granting an application shield.

RECENT PLANT MODIFICATIONS

The following changes and modifications have occurred since the issuance of the last Part 70 permit:

(1) On August 31, 2010, LCC received a Permit to Construct for the addition of one SNCR system to its preheater/precalciner kiln system.

(2) On October 22, 2010, LCC received a Permit to Construct for an after the fact installation of one Caterpillar 2520 horsepower (1750 kw) diesel generator.

(3) On October 5, 2011, LCC received a Permit to Construct for the installation of one powdered activated carbon (PAC) injection system to its preheater/precalciner kiln system.

(4) On March 1, 2013, LCC received a Permit to Construct for the modification of the existing DBS system.

(5) On June 19, 2013, LCC received administratively amended T5 operating permit to include revisions to the state only conditions for dried bio-solid (DBS) operations.

(6) On March 14, 2014, LCC received a Permit to Construct for the installation of quarrying operations consisting of crushers, conveyors, and transfer towers at the New Windsor Quarry to support cement production at LCC's cement plant located at Union Bridge, MD.

RECENT STACK TEST DATA FOR 2011, 2012, 2013, 2014 and 2015:

Table 2: Stack Test Data

Date	Process	Pollutant	Results	Limit
May 9, 2011	Kiln- RM ON	PM	0.0035 gr/dscf	0.0158 gr/dscf
June 15, 2011		PM	0.0113 gr/dscf	0.0158 gr/dscf
June 13, 2011		PM	0.0020 gr/dscf	0.0129 gr/dscf
May 12, 2011	Finish Mill #1	PM	0.0004 gr/dscf	0.0132 gr/dscf
May 12, 2011	Finish Mill #7	PM	0.0020 gr/dscf	0.0132 gr/dscf
May 12, 2011	Finish Mill #8	PM	0.0020 gr/dscf	0.0132 gr/dscf
May 12, 2011	SFG 033	PM	0.0065 gr/dscf	0.01 gr/dscf
May 12, 2011	SFG 059	PM	0.0015 gr/dscf	0.01 gr/dscf
May 20, 2011	Kiln- RM ON	PM Condens	10,239 ug/dscm	n/a
May 20, 2011	Kiln- RM OFF	PM Condens	1,870 ug/dscm	n/a
May 20, 2011	Cooler	PM Condens	1,732 ug/dscm	n/a
Oct 13, 2011	Kiln – RM ON	Cadmium	0.0004 lbs/hr	n/a
		Chromium	0.0019 lbs/hr	n/a
		Lead	0.0045 lbs/hr	n/a
		Nickel	0.0028 lbs/hr	n/a
		Selenium	0.0009 lbs/hr	n/a
		Zinc	0.0131 lbs/hr	n/a
		Meth Chloride	0.8900 lbs/hr	n/a
Oct 13, 2011	Kiln – RM OFF	Cadmium	0.0003 lbs/hr	n/a
		Chromium	0.0022 lbs/hr	n/a
		Lead	0.0043 lbs/hr	n/a
		Nickel	0.0025 lbs/hr	n/a
		Selenium	0.0029 lbs/hr	n/a
		Zinc	0.0118 lbs/hr	n/a
		Meth Chloride	0.5140 lbs/hr	n/a
May 16, 2012	Kiln – RM OFF	Dioxin/Furan	0.0237×10^{-10} gr/dscf	1.7×10^{-10} gr/dscf
May 16, 2012	Kiln – RM ON	Dioxin/Furan	0.0848×10^{-10} gr/dscf	1.7×10^{-10} gr/dscf
May 16, 2012	Kiln – RM OFF	H_2S	1.74 lb/hr	n/a
May 16, 2012	Kiln – RM ON	H_2S	1.81 lb/hr	n/a
Jul 10, 2012	Kiln – RM ON	PM	0.0062 gr/dscf	0.0158 gr/dscf
Jul 11, 2012	Kiln – RM OFF	PM	0.0008 gr/dscf	0.0158 gr/dscf
Jul 12, 2012	Cooler	PM	0.0006 gr/dscf	0.0129 gr/dscf

Date	Process	Pollutant	Results	Limit
Jun 26, 2013	Kiln – RM ON	PM	0.0062 gr/dscf	0.0158 gr/dscf
Jun 27, 2013	Kiln – RM OFF	PM	0.0022 gr/dscf	0.0158 gr/dscf
Jun 27, 2013	Cooler	PM	0.0015 gr/dscf	0.0129 gr/dscf
Jul 17, 2014	Kiln – RM ON	PM	0.0060 gr/dscf	0.0158 gr/dscf
Jul 17, 2014	Kiln – RM OFF	PM	0.0016 gr/dscf	0.0158 gr/dscf
Jul 17, 2014	Cooler	PM	0.0015 gr/dscf	0.0129 gr/dscf
Oct 7, 2014	Kiln – RM ON	D/F	0.0015 ng/DSCM TEQ, 7% O_2, @160 C	0.4 ng/DSCM TEQ, 7% O_2 @ <204 C
Oct 7, 2014	Kiln – RM OFF	D/F	0.031 ng/DSCM TEQ, 7% O_2, @193 C	
April 16, 2015	Kiln – RM ON	PM	0.0007 gr/dscf	PSD std 0.0158 gr/dscf, COMAR std 0.03 gr/dscf
		PM	0.0048 lbs/ton of feed	MACT std 0.3 lbs/ton of feed
	Kiln – RM OFF	PM	0.0052 gr/dscf	PSD std. 0.0158 gr/dscf, COMAR std 0.03 gr/dscf
		PM	0.030 lbs/ton of feed	MACT std 0.3 lbs/ton of feed
	Cooler	PM	0.0003 gr/dscf	PSD std. 0.0129 gr/dscf, COMAR std 0.03 gr/dscf
		PM	0.0007 lbs/ton of feed	MACT std 0.1 lbs/ton of feed
June 16, 2015	Kiln – RM ON	Initial MACT PM stack test	0.0009 gr/dscf	PSD std 0.0158 gr/dscf, COMAR std 0.03 gr/dscf
		Initial MACT PM stack test	0.0087 lbs/ton of clinker (9.3566 mA weighted)	MACT std 0.07 lbs/ton of clinker
	Kiln – RM OFF	Initial MACT PM stack test	0.0049 gr/dscf	PSD std 0.0158 gr/dscf,

Date	Process	Pollutant	Results	Limit
				COMAR std 0.03 gr/dscf
		Initial MACT PM stack test	0.0403 lbs/ton of clinker (9.3566 mA weighted)	MACT std 0.07 lbs/ton of clinker
	Cooler	Initial MACT PM stack test	0.0013 gr/dscf	PSD std 0.0129 gr/dscf, COMAR std 0.03 gr/dscf
		Initial MACT PM stack test	0.0030 lbs/ton of clinker (9.2150 mA weighted)	MACT std 0.07 lbs/ton of clinker
Nov 6, 2015	Kiln	THC	Highest 30-day rolling value- 7.7 ppm	MACT limit- 24.0 ppm
	Kiln	PM (CPMS)	Highest 30-day rolling value- 6.96 mA	Plant limit- 9.36 mA
	Cooler	PM (CPMS)	Highest 30-day rolling value- 4.49 mA	Plant limit- 9.22 mA

The test results of the last five years showed that the LCC is in compliance with applicable regulations.

GREENHOUSE GAS (GHG) EMISSIONS

LCC emits the following greenhouse gases (GHGs) related to Clean Air Act requirements: carbon dioxide, methane, and nitrous oxide. These GHGs originate from various processes (i.e., combustion source such as kiln, internal combustion engines, and boilers) contained within the facility premises applicable to LCC. Emission certifications reports for the years 2013, 2014, and 2015, showed that LCC is a major source (threshold: 100,000tpy CO_2e) for GHGs. The facility is an existing major source but has not triggered Prevention of Significant Deterioration (PSD) requirements for GHG emissions; therefore, there are no applicable GHG Clean Air Act requirements. While there may be no applicable requirements as a result of PSD, the Permittee shall quantify facility wide GHGs emissions and report them in accordance with Section 3 of the Part 70 permit. The following table summarizes the actual emissions from LCC based on its Annual Emission Certification Reports:

Table 3: Greenhouse Gases Emissions Summary

GHG	Conversion factor	2013 tpy CO_2e	2014 tpy CO_2e	2015 tpy CO_2e
Carbon dioxide CO_2	1	1,510,953	1,856,438	2,007,939
Methane CH_4	25	2,175	1,950	1,975
Nitrous Oxide N_2O	300	3,900	102	3,300
Total GHG CO_{2eq}		**1,517,028**	**1,858,490**	**2,013,214**

EMISSION UNIT IDENTIFICATION

LCC has identified the following emission units as being subject to Title V permitting requirements and having applicable requirements.

Emission Unit Table 1-1: Area A-1 – Union Bridge Quarry Operations
(SCC 3-05-006-09)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Not Subject to MACT Requirements			
HR1	6-0027	Quarry haul roads	Modified – 2002
SP1	6-0027	Limestone Storage Pile	Modified – 2002
TLU1	6-0027	Limestone Truck Loading	1970
TLU2	6-0027	Limestone Truck Loading/Unloading	2002
SP8	6-0327	Iron B02-001 Surge Storage Pile	2002
SP9	6-0327	Silica B02-001 Surge Pile	2002
SP11	6-0027	Overburden Storage Pile	1911 & 1957
A01-009	6-0027	Gyratory Crusher – Primary crushing – Baghouse A01-012	1957
B01-017	6-0327	Belt Conveyor #8 - Baghouse A02-025	1970, moved from Area B
A01-018	6-0027	Belt Conveyor #1 – Baghouse A01-012	1957
A01-021	6-0027	Surge Bin/#8 Belt - Baghouse A01-025	1955
A02-005	6-0027	Belt Conveyor #2 - Baghouse A02-008, A02-003	1970
A02-006	6-0027	Secondary Crusher – Baghouse A02-008	1970
A02-010	6-0027	Belt Conveyor #3 – Baghouse A02-008	1970
A02-017	6-0027	Belt Conveyor #6 – Baghouse A02-008	1970
A02-018	6-0027	Belt Conveyor #5 – Baghouse A02-008	1970
A02-019	6-0027	Tertiary Crusher – Baghouse A02-008	1970
A02-021	6-0027	Belt Conveyor #4 – Baghouse A02-008	1970
A02-011	6-0027	Vibrating Screen and Transfer System – Baghouses A02-012, A01-015, A02-025	1970
A02-022	6-0027	Vibrating Screen and Transfer System - Baghouses A02-012. A01-015, A02-025	1970
A02-023	6-0027	Vibrating Screen and Transfer System - Baghouses A02-012, A02-015 and A02-025	1970
A02-024	6-0027	Belt Conveyor #7 – Baghouses A02-012, A02-015	1970
A03-022	6-0352	Masonry Hauling at Union Bridge (paved)	To be installed
SP13	6-0327	Bottom Ash Storage Pile	2011
A02-026	6-0327	Screen for processing wet bottom ash	2011

Emission Unit Table 1-2: Area A-2 – New Windsor Quarry Operations
(SCC 3-05-006-09)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Not Subject to NSPS Requirements			
A03-001A	6-0352	Waste Rock Hauling (Segment A)	To be installed
A03-001B	6-0352	Waste Rock Hauling (Segment B)	To be installed
A03-001C	6-0352	Waste Rock Hauling (Segment C)	To be installed
A03-002A	6-0352	Limestone Hauling (Segment A)	To be installed
A03-002C	6-0352	Limestone Hauling (Crusher Segment)	To be installed
A03-003	6-0352	Front End Loader to Limestone Truck	To be installed
A03-004	6-0352	Truck to Primary Hopper	To be installed
Sources Subject to NSPS 40 CFR 60, Subpart OOO Requirements			
A03-005	6-0352	Primary Crusher for calcium, silica, alumina, and iron bearing raw materials	To be installed
A03-006	6-0352	Primary Crusher for to Belt #1	To be installed
A03-008	6-0352	Belt #1 to Belt #2 Transfer	To be installed
A03-010	6-0352	Transfer from Belt #2 to Belt #3 or to Masonry Pile	To be installed
SP10	6-0352	New Windsor Storage Pile	To be installed
SP12	6-0352	Masonry Storage Pile	To be installed
A03-012	6-0352	Belt #2 to Limestone Overland Conveyor (Belt #4)	To be installed
A03-014	6-0352	Overland Conveyor (Belt #4) Transfer to Belt #5 to New Transfer Tower	To be installed
A03-016	6-0352	New Transfer Tower	To be installed
A03-018	6-0352	Masonry Transfer to Crusher	To be installed
A03-019	6-0352	Masonry Portable Crusher	To be installed
A03-020	6-0352	Transfer from Masonry Crusher to Truck	To be installed
A03-021	6-0352	Masonry Hauling at New Windsor (unpaved)	To be installed

Emission Unit Table 2: Area B – Raw Material Transport and Storage
(SCC 3-05-006-12)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Not Subject to MACT Requirements			
TU1	6-0327	Iron and Silica Truck Unloading	2002
SP4	6-0327	Silica Storage Pile	2002
SP5	6-0327	Iron Storage Pile	2002
B03-031	6-0256	Activated Carbon Injection (ACI) system tank controlled by a bin vent	2011

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
B01-011	6-0327	Enclosed Limestone Dome	2001
B02-007	6-0327	Belt Conveyor – Baghouse B02-008	2001
B02-011	6-0327	Silica Bearing Material Bin – Baghouse B02-008	2001
B02-012	6-0327	Iron Bearing Material Bin – Baghouse B02-008	2001
B02-017	6-0327	Reversible Belt Conveyor – Baghouse B02-008	2001
B03-004	6-0327	Fly Ash Blending Silo System - Baghouse B03-008	2002
B04-019	6-0327	Limestone Bin - Baghouse B04-016	2002
TT3	6-0327	Transfer Tower #3 – Baghouses B04-011, B04-016	2002
TT4	6-0327	Transfer Tower #4 - Baghouse B02-019)	2002

Emission Unit Table 3: Area C – Raw Grinding
(SCC 3-05-006-13)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
C01-002	6-0328	Limestone Weighfeeder- Baghouse C01-007	2001
C01-004	6-0328	Iron Weighfeeder - Baghouse C01-007	2001
C01-006	6-0328	Silica Weighfeeder - Baghouse C01-007	2001
C01-011	6-0328	Belt Conveyor – Baghouse C01-007, C02-021	2001
C01-015	6-0328	Fly Ash Weigh Bin – Baghouse C01-019	2001
C02-001	6-0328	Bucket Elevator – Baghouse C02-011, C02-021	2001
C02-006	6-0328	100 Ton Bin – Baghouse C02-011	2001
C04-068	6-0328	Airslide – Baghouse C04-050, C04-075	2002
C04-070	6-0328	Airslide – Baghouse C04-075	2002
C04-072	6-0328	Airslide – Baghouse C04-075	2002
C04-074	6-0328	Airslide – Baghouse C04-075	2002
C04-037	6-0328	Bucket Elevator – Baghouses C04-050, C04-075	2002
C04-038	6-0328	600 Ton Bin – Baghouse C04-075, C04-050	2002
C02-038	6-0328	Rejects Belt Conveyor - Baghouse C02-021	2001

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
C02-060	6-0328	Reversible Belt Conveyor (to Raw Mill) - Baghouse C02-011	2001
C03-034	6-0328	Airslide – Baghouse C03-001	2002
C03-035	6-0328	Airslide – Baghouse C03-001	2002
C03-040	6-0328	Airslide – Baghouse C03-001	2002
C03-042	6-0328	Airslide – Baghouse C03-001	2002
C03-045	6-0328	Airslide – Baghouses C03-047, C03-050	2002
C03-008	6-0328	Airslide – Baghouse C03-050	2002
C03-054	6-0328	Airslide – Baghouse C03-050	2002
C03-046	6-0328	Bucket Elevator – Baghouse C03-030, D01-037	2002
C03-017	6-0328	Airslide – D01-037	2002
C03-010	6-0328	Airslide – Baghouse C03-030	2002
C03-013	6-0328	Airslide – Baghouse C03-030	2002
C02-025	6-0328	Raw Mill – Baghouse C04-014	2001
C04-066	6-0328	Airslide – C03-050	2002

Emission Unit Table 4: Area D – Raw Meal – Kiln Feed
(SCC 3-05-006-23)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
D01-001	6-0329	Blending Silo – Baghouse D01-037	2002
D01-002	6-0329	Recirculation Airslide – Baghouse D01-037	2002
D01-003	6-0329	Recirculation Airslide – Baghouse D01-037	2002
D01-020	6-0329	185 Metric Ton Feed Bin – Baghouse D01-034	2002
D02-004	6-0329	Airslide – Baghouse D01-034	2002
D02-006	6-0329	Flow Meter – Baghouse D01-034	2002
D02-017	6-0329	Airslide – Baghouse D01-034	2002
D02-019	6-0329	Flow Meter – Baghouse D01-034	2002
D01-023	6-0329	Airslide – Baghouse D01-040	2002
D01-026	6-0329	Airslide – Baghouse D01-040	2002
D02-007	6-0329	Airslide – Baghouse D01-040	2002
D02-020	6-0329	Airslide – Baghouse D01-040	2002
D02-010	6-0329	Airslide – Baghouse D02-041	2002
D02-023	6-0329	Airslide – Baghouse D02-041	2002
D02-049	6-0329	Airslide – Baghouse D02-041	2002

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
D02-025	6-0329	Bucket Elevator – Baghouse D02-041, D02-027	2002
D02-026	6-0329	Bucket Elevator – Baghouse D02-041, D02-027	2002
D02-033	6-0329	Airslide – Baghouse D02-027	2002
D02-045	6-0329	Airslide – Baghouse D02-027	2002
D02-047	6-0329	Airslide – Baghouse D02-027	2002

Emission Unit Table 5: Area E – Kiln and Clinker Cooler
(SCC 3-05-006-23)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
E01-001	6-0256	Kiln – Baghouse C04-014	2001
E02-001	6-0256	Preheater / Precalciner – baghouse C04-014	2001
E03-001	6-0256	Clinker Cooler – Baghouse E04-016	2001

Emission Unit Table 6: Area F – Coal Grinding Mill for Kiln
(SCC 3-05-006-21)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Not Subject to MACT Requirements			
F01-034	6-0330	Belt Conveyor #11/14	1970
F01-037	6-0330	Belt Conveyor #11/14	1970
SP2	6-0330	Coal Storage Pile	2002
SP3	6-0330	Coal Storage Pile	2002
TT2	6-0330	Transfer Tower #2	2002
TU2	6-0330	Truck Unloading	2002
F02-006	6-0330	Reclaim Elevator	2002
F02-018	6-0330	Belt Conveyor	2002
F03-001	6-0330	Belt Conveyor	2002
F03-002	6-0330	Coal Bin Weighfeeder	2002
F03-003	6-0330	Coke Bin Weighfeeder	2002
Sources Subject to MACT Requirements			
F02-007	6-0330	Belt Conveyor	2002
F03-016	6-0330	Coal Mill System – Baghouses F03-	2001

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
		028,F03-032, F03-036, F03-040, F03-044, F03-048 (Associated with kiln)	
F04-009	6-0330	Pneumatic Pump for Fine Coal Dust Bin – Baghouse F04-010	2002
F04-018	6-0330	Kiln Fuel Bin Pressure Relief - Baghouse C04-014	2002
F04-026	6-0330	Calciner Fuel Bin Pressure Relief - Baghouse C04-014	2002
TT5	6-0330	Transfer Tower #5 – baghouse F02-027	2002

Emission Unit Table 7: Area G – Clinker Transport & Storage – Craneway Building ***(SCC 3-05-006-16)***

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
TT8/9	6-0125	Transfer Tower #8/9 – Baghouse G02-041, Baghouse B01-018	2004
TT6	6-0125	Transfer Tower #6 – Baghouse G02-025	2004
G01-001	6-0125	Main Pan Conveyor – Baghouse E04-016	2001
G03-010	6-0125	Clinker into Craneway – Baghouse G03-011	2001
CWAY	6-0125	Craneway	1970
SP6	6-0125	Gypsum Stockpile	2015
TU3	6-0125	Gypsum Truck Unloading	2004
G04-014	6-0125	450 Metric Ton Clinker Bin – Baghouse G04-011	2001
G04-020	6-0125	Belt Conveyor - Baghouse G04-011	2001
G04-010	6-0125	Bucket Elevator - Baghouse G04-011	2001
G04-009	6-0125	Belt Conveyor - Baghouse G04-034	2002
G04-016	6-0125	Belt Feeder – Baghouse G04-034	2002
G04-056	6-0125	Belt Feeder – Baghouse G04-034	2002
G04-058	6-0125	Clinker Bin, H01-006 Belt - Baghouse H01-210	2002
G04-059	6-0125	H01-015 Clinker Feeder, G04-018 Belt – Baghouse H01-210	2002
G01-012	6-0125	Clinker Storage Silo – Baghouse G01-009	2002
G02-002	6-0125	Transfer Tower #11, #12, #13 Belt	2002

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
		Conveyors – Baghouse G02-047, G02-044, G02-021	
G04-018	6-0125	Belt Conveyor – Baghouse G04-037	2004
G04-019	6-0125	CE2 Bucket Elevator – Baghouse G04-037	1970
G04-031	6-0125	Drag Conveyor B3 – Baghouse H09-073	1970
G05	6-0125	Off Loading Trucks Preheater Dust Silo	2004
TL1	6-0125	Clinker Truck/Rail Loadout – Baghouse G02-053	2004
TT7	6-0125	Transfer Tower #7 – Baghouse G03-004	2004
TT9/10	6-0125	Transfer Tower #9/10 – Baghouse G03-011	2004

Emission Unit Table 8: Area H – Clinker Finish Mills
(SCC 3-05-006-17)

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
H04-001	6-0331	Gypsum Bin 409	2002
H04-003	6-0331	Limestone Tank 416	2002
H05-001	6-0331	Gypsum Bin 509	2002
H06-001	6-0331	Gypsum Bin 609	2002
H07-001	6-0331	Gypsum Bin	2002
H08-001	6-0331	Gypsum Bin	2002
H04-004	6-0331	Clinker Bin 403	1970
H05-004	6-0331	Gypsum Bin 503	1970
H06-004	6-0331	Clinker Bin 603	1970
H07-004	6-0331	Gypsum Bin	2004
H01-040	6-0331	Finish Mill #1 – Baghouse H01-070	2002
H01-061	6-0331	Cyclone and Belts – Baghouse H01-070	2002
H01-063	6-0331	Cyclone and Belts – Baghouse H01-070	2002
H01-080	6-0331	Elevator and Tipping Valves – Baghouse H01-230	2002
H01-090	6-0331	Finish Mill #1 Burner – Baghouse H01-070	2002
H01-105	6-0331	Belt Conveyor and Tipping Valves – Baghouse H01-210	2002
H01-110	6-0331	Bin – Baghouse H01-210	2002

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
H01-112	6-0331	Belt Conveyor and Tipping Valves – Baghouse H01-210	2002
H07-015	6-0331	Cement to Cement Cooler – Finish Mill #7 – Baghouse H01-240	2002
H07-016	6-0331	Airslide – Baghouse H01-240	2002
H04-006	6-0331	Belt Conveyor – Finish Mill #4 System – Baghouse H04-044	1970
H04-014	6-0331	Finish Mill #4 System – Baghouse H04-044	1970
H05-014	6-0331	Finish Mill #5 System – Baghouse H05-044	1970
H06-014	6-0331	Finish Mill #6 System – Baghouse H06-044	1970
H06-017	6-0331	Cyclone 642 – Finish Mill #6 System - Baghouse H06-044	1970
H06-037	6-0331	Separator 627 – Finish Mill #6 System - Baghouse H06-044	1970
H07-014	6-0331	Finish Mill #7 System – Baghouses H07-056, H07-057	2002
H07-018	6-0331	Finished Cement Transfer System – Baghouses H07-056, H07-057	2001
H07-068	6-0331	Finished Cement Transfer System – Baghouses H07-056, H07-057	2001
H07-040	6-0331	Cement Cooler – Baghouse H10-113	2002
H07-070	6-0331	Airslide – Baghouses H07-056, H07-057	2001
H07-071	6-0331	Airslide – Baghouse H10-113	2002
H08-014	6-0331	Finish Mill #8 System – Baghouse H08-056	2002
H08-017	6-0331	Separator – Finish Mill #8 System – Baghouse H08-056	2002
H08-037	6-0331	Cyclone – Finish Mill #8 System – Baghouse H08-056	2002
H08-038	6-0331	Cyclone – Finish Mill #8 System – Baghouse H08-056	2002
H08-040	6-0331	Cement Cooler – Baghouse H10-113	2002
H08-064	6-0331	Airslide – Baghouse H10-113	2002
H09-000	6-0331	Semi Finishing Grinding System – Baghouse H09-059	2001
H09-019	6-0331	Weighfeeder (from 750 ton Clinker Bin) – Baghouse H09-025	2001
H09-020	6-0331	100 Metric Ton Slag/Clinker Bin Weighfeeder – Baghouse H09-082	2002

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
H09-021	6-0331	100 Metric Ton Clinker Bin Weighfeeder – Baghouse H09-082	2002
H09-023	6-0331	100 Metric Ton Gypsum Bin Weighfeeder – Baghouse H09-025	2001
H09-024	6-0331	Belt Conveyor (from weigh feeders) – Baghouse H09-025	2001
H09-028	6-0331	Bucket Elevator – Baghouse H09-051	2000
H09-031	6-0331	Belt Conveyor – Baghouses H09-051, H09-033	2000
H09-036	6-0331	Bin – Baghouses H09-059, H09-033	2004
H09-041	6-0331	Roll Press – Baghouse H09-033	2004
H09-046	6-0331	Belt Conveyor – Baghouse H09-033	2002
H09-047	6-0331	Bucket Elevator – Baghouse H09-059	2000
H09-058	6-0331	Belt Conveyor to 90 Metric Ton Bin - Baghouse H09-073, H09-059	2000
H09-062	6-0331	Reversible Belt Conveyor – Baghouse H09-051, H09-082	2000
H09-066	6-0331	Belt Conveyor – Baghouse H09-082	2002
H09-075	6-0331	90 Ton Bin – Baghouse H09-073	2000
H09-091	6-0331	Clinker Belt – Baghouse H09-094	2000
H10-001	6-0331	Airslide – Baghouse H10-113	2002
H10-006	6-0331	Bucket Elevator – Baghouse H10-113	2002
H10-007	6-0331	Airslide – Baghouse H10-119	2001
H10-010	6-0331	Bucket Elevator – Baghouse H10-119	2001
H10-124	6-0331	Airslide – Baghouse H10-119	2001
H10-125	6-0331	Airslide – Baghouse H10-119	2001
H10-167	6-0331	Airslide – Baghouse H10-181	2002
H10-176	6-0331	Bucket Elevator – Baghouse H10-181	2002
H10-177	6-0331	Airslide – Baghouse H10-179	2002

Emission Unit Table 9: Area I – Cement Storage and Shipping with Bag Packing *(SCC 3-05-006-18)*

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Subject to MACT Requirements			
I01-033	6-0039	Day Tank – Baghouse H10-179	2002
I02-289	6-0039	Feed Bin – Baghouse I02-290	2002
I03/I04	6-0039	Packaging and Palletizing – Pack house Collector	1970
TL2	6-0039	Truck Day Tank Loadout – Baghouse I02-290	2002

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
I02-001 to I02-032	6-0039	Product Silos – Baghouses H10-224, H10-252, H10-254, H10-221,	1970 and 2003
TL4 (F6/F5/H7/J6/ J3/J4/E7/H3)	6-0039	Bulk Loadout System – Baghouses I11-180, I11-190, I12-180, I12-190, I13-180, I13-190, I14-180, I14-190	1970 and 2003

Emission Unit Table 10: Dried BioSolids (DBS) Related Processes

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
Sources Not Subject to MACT Requirements			
F04-058	6-0330	DBS Storage Tank (Fluidized Coke Storage Tank) – Baghouses F04-062 & F04-064	2007
F05-049	6-0330	Rotary Air Lock for Feeding DBS from Silo – Baghouses F04-062, F04-064	2007
F05-050	6-0330	Scale, Pfister Dosing System – Baghouses F04-062, F04-064	2007
F05-051	6-0337	Mobile DBS Conveyor	2007
F05-055	6-0330	Diverter Valve to Calciner – Baghouses F04-062, F04-064	2007
F05-056	6-0330	Diverter Valve to Main Kiln Burner – Baghouses F04-062, F04-064	2007
G05-001	6-0331	Pneumatic baghouse dust (BD) transfer system – Baghouse G05-003	2009

Emission Unit Table 11: Emergency Generator

Emissions Unit Designation	MDE-ARMA Registration No.	Emissions Unit Name and Control(s)	Date of Installation
J08-532	9-0186	Caterpillar 2520 horsepower emergency generator	2001

AN OVERVIEW OF THE PART 70 PERMIT

The Fact Sheet is an informational document. If there are any discrepancies between the Fact Sheet and the Part 70 permit, the Part 70 permit is the enforceable document.

Section I of the Part 70 Permit contains a brief description of the facility and an inventory list of the emissions units for which applicable requirements are identified in Section IV of the permit.

Section II of the Part 70 Permit contains the general requirements that relate to administrative permit actions. This section includes the procedures for renewing, amending, reopening, and transferring permits, the relationship to permits to construct and approvals, and the general duty to provide information and to comply with all applicable requirements.

Section III of the Part 70 Permit contains the general requirements for testing, record keeping and reporting; and requirements that affect the facility as a whole, such as open burning, air pollution episodes, particulate matter from construction and demolition activities, asbestos provisions, ozone depleting substance provisions, general conformity, and acid rain permit. This section includes the requirement to report excess emissions and deviations, to submit an annual emissions certification report and an annual compliance certification report, and results of sampling and testing.

Section IV of the Part 70 Permit identifies the emissions standards, emissions limitations, operational limitations, and work practices applicable to each emissions unit located at the facility. For each standard, limitation, and work practice, the permit identifies the basis upon which the Permittee will demonstrate compliance. The basis will include testing, monitoring, record keeping, and reporting requirements. The demonstration may include one or more of these methods.

Section V of the Part 70 Permit contains a list of insignificant activities. These activities emit very small quantities of regulated air pollutants and do not require a permit to construct or registration with the Department. For insignificant activities that are subject to a requirement under the Clean Air Act, the requirement is listed under the activity.

Section VI of the Part 70 Permit contains State-only enforceable requirements. Section VI identifies requirements that are not based on the Clean Air Act, but solely on Maryland air pollution regulations. These requirements generally relate to the prevention of nuisances and implementation of Maryland's Air Toxics Program.

REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE METHODOLOGY

Overview

Portland Cement MACT- 40 CFR Part 63 Subpart LLL

The LCC – Union Bridge plant is a major hazardous air pollutant (HAP) emission source. The plant is subject to the Portland Cement MACT standards found at 40 CFR Part 63, Subpart A and Subpart LLL, which was finalized February 12, 2013, with Final Technical Amendments published July 27, 2015 and corrections to the Final Technical Amendments published on September 11, 2015. Since the current kiln was constructed at the same premises as the old

plant, the current kiln is considered a Brownfield site, not a Greenfield site. The following sources at a Portland cement plant are subject to Subpart A and Subpart LLL:

(1) Each kiln including alkali bypasses and inline coal mills, except for kilns that burn hazardous waste and are subject to and regulated under 40 CFR 63 subpart EEE;
(2) Each clinker cooler at any portland cement plant;
(3) Each raw mill at any portland cement plant;
(4) Each finish mill at any portland cement plant;
(5) Each raw material dryer at any portland cement plant;
(6) Each raw material, clinker, or finished product storage bin at any portland cement plant that is a major source;
(7) Each conveying system transfer point including those associated with coal preparation used to convey coal from the mill to the kiln at any portland cement plant that is a major source;
(8) Each bagging and bulk loading and unloading system at any portland cement plant that is a major source; and
(9) Each open clinker storage pile at any portland cement plant.

Onsite sources that are subject to standards for nonmetallic mineral processing plants in 40 CFR 60, Subpart OOO are not subject to 40 CFR 63, Subpart LLL. Crushers are not covered by Subpart LLL regardless of their location.

The first affected source in the material handling sequence, at a plant with on-site mineral processing, is the first transfer point associated with the conveyor transferring material from the raw material storage bins immediately prior to the raw mill. Crushers and any other equipment which precede the raw material storage are not subject to this rule. The first affected source at the plant is the transfer of material from the 100-ton bin (C02-006) to the belt conveyor (C02-060) that brings the material to the raw mill, controlled by dust collector C02-011. The first conveyor system transfer point subject to the MACT is the transfer point associated with the conveyor that transfers material from the raw material storage to the raw mill. Conveyor system transfer points prior to this conveyor are not affected sources. The MACT does not apply to emissions from cement kiln dust storage facilities and coal conveyance equipment before the coal mill. LCC has on-site mineral processing (the quarry). Operations at the quarry are not subject to the MACT.

Under the MACT, LCC was required to prepare for each affected source, a written operations and maintenance plan and include it in the Title V permit application.

Portland cement plants (constructed or reconstructed after March 24, 1998) must demonstrate compliance with Subpart LLL. LCC is an existing source with respect to Subpart LLL. The compliance date for existing sources with the PM, mercury, THC, and HCl emission limits in 63.1343(b) which became effective in February 12, 2013 was September 9, 2015.

LCC is required to continuously monitor the emissions of mercury, total hydrocarbons, and particulate matter. The amended rules also establish methods and criteria for installing and certifying the accuracy of continuous emissions monitoring systems for mercury. The particulate matter monitoring requirement in the amended rule replaces existing opacity (visual evaluation) standards with a more accurate means of demonstrating compliance with the particulate matter emission limit.

New Source Performance Standards (NSPS)
Certain raw material handling constructed or modified after August 31, 1983, which are not subject to the Portland cement MACT, is subject to Subparts OOO- Standards of Performance for Nonmetallic Mineral Processing Plant. The raw material storage equipment constructed or modified after August 17, 1971 is subject to Subparts F - Standards of Performance for Portland Cement Plant. Under 40 CFR §63.1356, the coal feed system including the coal mill is subject to Subpart Y of Part 60 - Standards of Performance for Coal Preparation Plants.

Operations at the Union Bridge quarry are not subject to the NSPS requirements of Subpart OOO (nonmetallic mineral processing plants) since these standards only apply to facilities which commenced construction, reconstruction, or modification after August 31, 1983. The Union Bridge quarry operations date back to the 1950's. The New Windsor quarry, which are currently under construction, will be subject to the more stringent requirements under Subpart OOO applicable to any affected facility commenced construction, reconstruction, or modification on or after April 22, 2008.

The conveying system transfer points used to convey coal from the mill to the kiln are subject to 40 CFR 63 Subpart LLL. (See § 63.1340(b)(7))

Prevention of Significant Deterioration (PSD)/Non-Attainment New Source Review (NSR) Approvals
On April 8, 1999, the Department issued Permit to Construct #06-6-0256, PSD Approval #PSD-97-01, and NSR Approval #97-02 to LCC for the modernization and expansion of the LCC facility. The PSD Approval and the permit to construct were modified on June 7, 2000. Conditions from these permits are included in the Title V operating permit.

The modernization and expansion project triggered PSD for carbon monoxide (CO) and triggered non-attainment major NSR for volatile organic compounds (VOC). LCC submitted a netting analysis for PM, PM_{10}, SO_2, and NOx that demonstrated that the net increase in emissions of these pollutants did not exceed the PSD/NSR significant level. In addition, the potential emissions of lead and fluorides were less than the PSD significance level.

COMPLIANCE ASSURANCE MONITORING (CAM) REQUIREMENTS

Compliance Assurance Monitoring (CAM) is intended to provide a reasonable assurance of compliance with applicable requirements under the Clean Air Act for large emission units that rely on air pollution control (APC) equipment to achieve compliance. The CAM approach establishes monitoring for the purpose of:

(1) documenting continued operation of the control measures within ranges of specified indicators of performance (such as emissions, control device parameters, and process parameters) that are designed to provide a reasonable assurance of compliance with applicable requirements;

(2) indicating any excursions from these ranges; and

(3) responding to the data so that the cause or causes of the excursions are corrected.

Per 40 CFR 64.2(a), the CAM requirements are applicable to a unit which is located at a major source and subject to an emission limitation or standard; uses a control device to achieve compliance; has pre-control emissions of at least 100% of the major source amount; and must not otherwise be exempt from CAM under 40 CFR 64.2(b)(1)(i). 40 CFR 64.2(b)(1)(i) exempts all *emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to Section 111 or 112 of the Act*. Applicability determinations are made on a pollutant-by-pollutant basis for each emissions unit.

Emission Units Subject to CAM Requirements

Finish mills - Although the finish mills are subject to MACT requirements for opacity limit only, they are also subject to the particulate emission limit, 0.01 grains per standard cubic foot of dry air under Permit to Construct #06-6-0256 issued in 1999 to preclude applicability of a PSD review, which is more stringent than the MACT requirements. Therefore, the finish mills are subject to the CAM requirements.

Other Potential Emission Units Not Subject to CAM Requirements

The preheater/precalciner kiln, the in-line raw mill and the in-line coal mills are all exhausted through a common stack and their potential emissions exceed the CAM triggering levels for PM_{10}, NOx, VOC and SO_2. But they are not subject to the CAM requirements for the following reasons:

(1) The continuous emission monitoring system have been implemented to monitor NOx, VOC and SO_2 emissions; and

(2) As to PM_{10} emission, they are subject to MACT emission limits which are more stringent than all applicable emission standards including the limit under Permit to Construct #06-6-0256 issued in 1999 to escape PSD review. In addition, the Permittee had implemented CPMS for PM compliance demonstration.

(3) The clinker cooler is a potential major PM_{10} emission unit and is subject to a MACT PM_{10} standard that is more stringent than all other applicable standards including the limit under Permit to Construct #06-6-0256 issued in 1999 to escape PSD review. In addition, the Permittee had implemented CPMS for PM compliance demonstration. Therefore, the clinker cooler is exempt from the CAM requirements.

REGULATORY REVIEW/TECHNICAL REVIEW/COMPLIANCE METHODOLOGY

Compliance Tables of Section IV of the Part 70 permit:

1. Quarry Fugitive Sources (Not subject to MACT Requirements)

A. The Union Bridge quarry located in Frederick County

HR1- Quarry Haul Roads
SP1- Limestone Storage Pile
TLU1- Limestone truck loading/unloading
TLU2- Truck loading/unloading
SP8 – Iron B01-001 Surge Storage Pile
SP9 – Silica B02-001 Storage Pile
SP11 – Overburden Storage Pile
A03-022 Masonry Hauling at Union Bridge (paved) (Estimated to be installed 2016)

B. The New Windsor quarry located in Carroll County
A03-001A - Waste Rock Hauling (Segment A; Estimated to be installed 2016)
A03-001B - Waste Rock Hauling (Segment B; Estimated to be installed 2016)
A03-001C - Waste Rock Hauling (Segment C; Estimated to be installed 2016)
A03-002A - Limestone Hauling (Segment A; Estimated to be installed 2016)
A03-002C - Limestone Hauling (Crusher Segment; Estimated to be installed 2016)
A03-003 - Front End Loader to Limestone Truck (Estimated to be installed 2016)
A03-004 - Truck to Primary Hopper (Estimated to be installed 2016)
SP10 – New Windsor Storage Pile (Estimated to be installed 2016)
SP12 - Masonry Storage Pile (Estimated to be installed 2016)
A03-018- Masonry Transfer to Crusher (Estimated to be installed 2016)
A03-019- Masonry Portable Crusher (Estimated to be installed 2016)
A03-020- Transfer from Masonry Crusher to Truck (Estimated to be installed 2016)
A03-021- Masonry Hauling at New Windsor (unpaved) (Estimated to be installed 2016)

Applicable Standards and Regulations

(1) COMAR 26.11.06.03D - Particulate matter from Materials Handling and Construction. A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

(2) New Source Performance Standards (NSPS) for nonmetallic mineral processing plants 40 CFR 60 Subpart OOO (New Windsor Quarry Only) -
(a) The fugitive emissions from crushers at which a capture system is not used shall not exceed 12% opacity; [Reference 40 CFR §60.672(b) & (e)(2)]
(b) The fugitive emissions from each vent or each transfer point on a belt conveyor shall not exceed 7% opacity; and [Reference 40 CFR §60.672(b) & (e)(2)]
(c) Fugitive emissions from the building openings (except for vents as defined in 40 CFR §60.671) shall not exceed 7% opacity. [Reference 40 CFR §60.672(e)(1)]

Compliance Demonstration

The Permittee shall comply with and update as needed the best management plan that describes the procedures and methods that will be used to take reasonable precautions. The best management plan may be included in the written operation and maintenance plan required under the Portland Cement MACT. The Permittee shall keep the plan on-site and maintain records to demonstrate compliance with the procedures outlined in the plan. In addition, for the New Windsor Quarry, the Permittee shall comply with the initial opacity testing requirements within 180 days of start-up and perform monthly wet suppression system inspections as

required by NSPS 40 CFR 60, Subpart OOO. All NSPS requirements should be incorporated into the best management plan.

Rationale for Compliance Demonstration

The best management plan is reviewed and approved by the Department and contains the methods and procedures that the Permittee uses to minimize emissions from these fugitive sources, including federal NSPS monitoring requirements. Documentation that the procedures in the plan are followed is sufficient to demonstrate that the Permittee is using reasonable precautions to minimize fugitive emissions.

2. Union Bridge Quarry - Point Sources **(Area A-1)**

Note: The Union Bridge quarry is located in Frederick County

Baghouse	Emission Unit
A01-012	A01-009- Gyratory Crusher; A01-018- Belt Conveyor #1
A01-025	A01-021- Surge Bin
A02-008	A02-005- Belt Conveyor #2; A02-006- Secondary Crusher; A02-010- Belt Conveyor #3; A02-017-Belt; Conveyor #6; A02-018- Belt Conveyor #5; A02-019- Tertiary Crusher and A02-021- Belt Conveyor #4
A02-012 & 015	A02-011; A02-022 and A02-023 - Vibrating Screens and Transfer Systems and A02-024- Belt Conveyor #7
A02-025	A02-011; A02-022; and A02-023 - Vibrating Screens and Transfer Systems and B01-017- Belt Conveyor #8

Applicable Standards and Regulations

(1) COMAR 26.11.30.05(B)(1), which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is greater than 20 percent opacity.

(2) COMAR 26.11.30.04B(1) - A person may not cause or permit particulate matter to be discharged from any installation in excess of 0.05 gr/SCFD (114.5 mg/dscm).

(3) Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000 –The following equipment shall be equipped with a dust collector designed to reduce particulate matter emissions to 0.01 gr/SCFD (22.9 mg/dscm):
   (a) A01-021 – Surge Bin;
   (b) A02-024 & B01-017 - Raw Material Transfer; and
   (c) A02-011, A02-023, and A02-022 - Vibrating Screens and Transfer System.

(4) Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000 - The following equipment shall be equipped with a dust collector designed to reduce particulate matter emissions to 0.015 gr/SCFD (34.3 mg/dscm):
   (a) A01-009- Gyratory Crusher;
   (b) A01-018- Belt Conveyor #1;
   (c) A02-005- Belt Conveyor #2;
   (d) A02-006- Secondary Crusher;
   (e) A02-010- Belt Conveyor #3;
   (f) A02-017-Belt Conveyor #6;
   (g) A02-018- Belt Conveyor #5;
   (h) A02-019- Tertiary Crusher; and

(i) A02-021- Belt Conveyor #4.

Compliance Demonstration

(1) The Permittee shall conduct a monthly 1-minute visible emissions test of the exhaust stack of each emission unit in accordance with Method 22 of Appendix A to part 60. The frequency of the tests may be reduced to semiannually or annually as specified in the permit.

(2) The exhaust gas from each equipment shall vent through a dust collector designed to meet the particulate matter emissions before discharging into the atmosphere. [Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000]

(3) The Permittee shall comply with and update, as needed, the preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. [COMAR 26.11.03.06C]

(4) The Permittee shall maintain records of the results of the monthly inspections for at least five (5) years and make them available to the Department upon request 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. [COMAR 26.11.03.06C]

The log of inspection and maintenance records shall be kept for at least five (5) years and shall be made available to the Department upon request. 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. [COMAR 26.11.03.06C]

Rationale for Compliance Demonstration:

Each emission unit is controlled by a bag filter which is the most effective control for visible emissions and particulate matter. In addition to the preventive maintenance plan used for bag filters, the Permittee should use Method 22 tests to monitor the visible emissions situation and to keep each bag filter in a good operating condition. Reporting and record keeping requirements are sufficient documentation of the tests and results.

3. **New Windsor *Quarry - Point Sources (Area A-2)***

Note: The New Windsor quarry is located in Carroll County

Baghouse	Emission Unit
A01-012	A03-005- Primary Crusher for Ca, silica, alumina, and Fe bearing raw materials A03-006- Primary Crusher for to Belt #1
A01-025	A03-008- Belt #1 to Belt #2 Transfer
A02-003	A03-010 - Transfer from Belt #2 to Belt #3 or to Masonry Pile
A02-008	A03-012- Belt #2 to Limestone Overland Conveyor (Belt #4); A03-014- Overland Conveyor (Belt #4) Transfer to Belt #5 to New Transfer Tower; A03-016- New Transfer Tower

The New Windsor quarry is expected to commence construction, modification, or reconstruction in 2016, which is after August 31, 1983, will be subject to New Source Performance Standards (NSPS) for nonmetallic mineral processing plants 40 CFR 60 Subpart OOO.

Applicable Standards and Regulations

(1) COMAR 26.11.30.05(B)(2), which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

(3) COMAR 26.11.30.04(B)(2), which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot of dry air.

(4) Particulate matter emissions from each baghouse shall not exceed 0.014 grains per standard cubic foot of dry air (0.014 gr/dscf); [Reference 40 CFR §60.672(a)]

(5) Particulate matter emissions from each bag filter shall not exceed 0.010 grains per standard cubic foot of dry air (0.010 gr/dscf). [Permit to Construct #013-0012-6-0352 dated March 13, 2014]

Compliance Demonstration

(1) The Permittee shall comply with the following operating requirements: [Permit to Construct #013-0012-6-0352 dated March 13, 2014]

(a) The limestone mined from both the Union Bridge Quarry and the New Windsor Quarry shall be used only to support the Union Bridge Portland Cement Plant.

(b) The limestone crushing throughput from the New Windsor Quarry is limited to 3.65 million short tons for any rolling 12-month period.

(c) The combined limestone crushing throughput from the Union Bridge Quarry and the New Windsor Quarry is limited to 3.70 million short tons for any rolling 12-month period.

(d) The Union Bridge Quarry crushing system and the New Windsor Quarry crushing system shall not operate at the same time.

(e) A combined annual hours of operation, on a calendar year basis, for Union Bridge Quarry crushing system and the New Windsor Quarry crushing system is limited to 3,952 hours.

(f) The limestone withdrawal rate from the Union Bridge Limestone Storage Dome is limited to 3.53 million short tons for any rolling 12-month period.

(g) The throughput for the portable crusher A03-049 is limited to 86,000 short tons of limestone for any rolling 12-month period.

(h) Beginning with the calendar month in which the New Windsor Quarry crushing system produces 811,100 annual short tons of limestone, when rolled monthly, the Union Bridge Quarry crushing system shall be limited to 2,615,942 short tons for any rolling 12-month period. The production of limestone from the Union Bridge Quarry crushing system shall be permanently reduced from the 2,615,942 short ton limit by at least 0.9 short tons for every short ton produced by the New Windsor Quarry crushing system above 811,100 annual short tons, rolled monthly.

(2) The following equipment shall vent through a bag filter prior to discharging to the atmosphere to meet all applicable particulate matter emissions limits:
[Permit to Construct #013-0012-6-0352 dated March 13, 2014]

(a) Primary Crusher operations to Belt Conveyor #1;

(b) limestone transport operations from Belt Conveyor #1 to Belt Conveyor #2;

(c) limestone transport operations from Belt Conveyor #2 to the New Windsor Transfer Tower and from the New Windsor Transfer Tower to Belt Conveyor #3;

(d) limestone transport operations from the New Windsor Transfer Tower to Belt Conveyor #4 (the Overland Conveyor);

(e) limestone transport operations from Belt Conveyor #4 (the Overland Conveyor) to Belt Conveyor #5 at the Union Bridge Portland Cement Plant; and

(f) limestone transport operations from Belt Conveyor #5 to the Union Bridge Transfer Tower and from the Union Bridge Transfer Tower to the modified Belt Conveyor B01-002.

(3) The Permittee must conduct an initial stack emissions test to demonstrate compliance with all applicable particulate matter emissions limits within 60 days after achieving the maximum hourly production rate at which the affected facility will be operated, but not later than 180 days after initial startup. [Reference 40 CFR § 60.672(a)]

(4) The Permittee must conduct initial opacity observations using Method 9 as specified in 40 CFR 60, Subpart OOO. For continuous compliance, the Permittee must conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR, Part 60, Appendix A-7) in accordance with Subpart OOO.

Rationale for Compliance Demonstration:
The New Windsor quarry is still under construction, but it will be subject to post-April 2008 NSPS Subpart OOO requirements. Before commencing operation, the Permittee must apply for and obtain a temporary operating permit from the Department which will allow LCC to conduct initial particulate matter and opacity testing to demonstrate initial compliance.

Each emission unit is controlled by a bag filter which is the most effective control for visible emissions and particulate matter. Subsequent quarterly 30-minute visible emissions inspections using Method 22 observations as specified in Subpart OOO are sufficient to ensure that the baghouses are operating properly to ensure continuous compliance with applicable particulate matter standards.

The operation and maintenance plan including each bag filter and best management plan for fugitive emissions updated to include New Windsor Quarry operation will minimize the emissions from Quarry operation.

The record keeping and reporting requirements for throughput and annual hours of operation of both Union Bridge and New Windsor Quarry are to ensure the facility is in compliance with operating requirements specified in Permit to Construct #013-0012-6-0352 dated March 13, 2014.

4. Material Handling - Fugitive Sources (Not subject to MACT Requirements)

Area A – Union Bridge Quarry Operations
SP13 – Bottom Ash Storage Pile
A02-026 – Screen

Area B – Raw Material Transport and Storage
TU1- Iron and silica truck unloading
SP4- Silica Storage Pile
SP5- Iron Ore Storage Pile

Area F – Coal Grinding Mill for Kiln
F01-034 – Belt Conveyor #11
F01-037 – Belt Conveyor #14
SP2 – Coal Storage Pile
SP3 – Coal Storage Pile
TT2 – Transfer Tower #2
TU2 – Truck Unloading
F02-018 - Belt Conveyor
F03-001 - Belt Conveyor
F03-002 – Coal Weigh feeder
F03-003 – Coke Weigh feeder

Applicable Standards and Regulations
COMAR 26.11.06.03D - Particulate Matter from Materials Handling and Construction. A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

Compliance Demonstration
The Permittee shall comply with and update as needed the best management plan that describes the procedures and methods that will be used to take reasonable precautions. The best management plan may be included in the written operation and maintenance plan required under the Portland Cement MACT. The Permittee shall keep the plan on-site and maintain records to demonstrate compliance with the procedures outlined in the plan.

Rationale for Compliance Demonstration
The best management plan is reviewed and approved by the Department and contains the methods and procedures that the Permittee uses to minimize particulate matter from these fugitive sources. Documentation that the procedures in the plan are followed is sufficient to demonstrate that the Permittee is using reasonable precautions to minimize fugitive particulate matter.

5. Material Handling - Fugitive Sources (Subject to MACT Requirements)

Area B – Raw Material Transport and Storage
B01-011 – Enclosed Limestone Dome

Area F – Coal Grinding Mill for Kiln
F02-007 – Belt Conveyor

Area G – Clinker Transport & Storage – Craneway Building
CWAY – Craneway
TU3 – Gypsum Truck Unloading

Area H – Clinker Finish Mill
H04-001 – Gypsum Bin 409
H04-003 – Limestone Tank 416
H04-004 – Clinker Bin 403
H05-001 – Gypsum Bin 509
H05-004 – Clinker Bin 503
H06-001 – Gypsum Bin 609
H06-004 – Clinker Bin 603
H07-001 – Gypsum Bin
H07-004 – Clinker Bin
H08-001 – Gypsum Bin

Applicable Standards/Limits:
(1) 40 CFR §63.1345 which limits opacity to 10% or less for each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading system.

(2) COMAR 26.11.06.03D - Particulate Matter from Materials Handling and Construction. A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

Compliance Demonstration
The Permittee must comply with and update as necessary, an opacity monitoring plan to demonstrate continuous compliance as specified in 40 CFR 63, Subpart LLL. The plan shall be incorporated into the required Operations and Maintenance Plan for Subpart LLL affected sources. The Permittee shall keep the plan on-site and maintain records to demonstrate compliance with the procedures outlined in the plan.

Rationale for Compliance Demonstration
The operations and maintenance plan is reviewed and approved by the Department and contains the methods and procedures that the Permittee uses to minimize opacity and particulate matter from these fugitive sources. Documentation that the procedures in the plan are followed is sufficient to demonstrate that the Permittee is using reasonable precautions to comply with the opacity limitation and minimize fugitive particulate matter.

6. Material Handling- Point Sources (Subject to MACT Requirements)

Area B - Raw Material Transport and Storage

Baghouse	Emission Unit
B02-008	B02-007- Belt Conveyor; B02-011- Silica Bearing Material Bin;

	B02-012- Iron Bearing Material Bin; and B02-017- Reversible Belt Conveyor
B03-008	B03-004- Fly ash Blending System
B04-016	TT3- Transfer Tower #3
B04-011	TT3- Transfer Tower #3
B04-016	B04-019 Limestone bin
B02-019	TT4- Transfer Tower #4

Area C – Raw Grinding

Baghouse	Emission Unit
C02-021	C02-038- Rejects Belt Conveyor
C02-011	C02-060- Reversible Belt Conveyor (to Raw Mill)
C03-001	C03-034, C03-035, C03-040, & C03-042 - Airslides
C03-047	C03-045- Airslides
C03-050	C03-008, C03-045, C03-054, & C04-066 - Airslides
C03-030	C03-010 & C03-013 - Airslides and C03-046- Bucket Elevator
C01-007	C01-002- Limestone Weighfeeder; C01-004- Iron Weighfeeder; C01-006- Silica Weighfeeder; and C01-011- Belt Conveyor
C01-019	C01-015- Fly ash Weigh bin
C02-011	C02-001- Bucket elevator
C02-011	C02-006- 100 T Bin
C04-050	C04-037- Bucket Elevator
C04-075	C04-037- Bucket Elevator
C04-050	C04-038- 600T Bin and C04-068- Airslide
C04-075	C04-070, C04-072, and C04-074- Airslide

Area D – Raw Meal - Kiln Feed

Baghouse	Emission Unit
D01-037	C03-046- Bucket Elevator; C03-017-Airslide; D01-001- Blending Silo; and D01-003 & D01-002 - Recirculation Airslides
D01-034	D01-020- 185 MT Feed Bin; D02-004 & D02-017- Airslides and D02-006 & D02-019- Flow Meters
D01-040	D01-023, D01-026, D02-007, & D02-020 - Airslides
D02-041	D02-010, D02-023, & D02-049 - Airslides
D02-041	D02-025- Bucket Elevator and D02-026- Bucket Elevator
D02-027	D02-033, D02-045 & D02-047 – Air Slides

Area F – Coal Grinding Mill for Kiln

Baghouse	Emission Unit
F02-027	TT5- Transfer Tower #5
	F02-006 Reclaim Elevator
	F02-007 Belt Conveyor

Area G – Clinker Transport & Storage – Craneway Building

Baghouse	Emission Unit
B01-018	TT8/9- Transfer Tower #8/9
G02-041	TT8/9- Transfer Tower #8/9
G02-025	TT6 – Transfer Tower #6
G04-037	G04-018 – Belt Conveyor

Area H – Clinker Finish Mill

Baghouse	Emission Unit
G05-003	G05-001 Dust System
H10-113	H07-040- Cement Cooler; H07-071- Airslide; H08-040-Cement Cooler; H08-064-Airslide; H10-001- Airslide; and H10-006- Bucket Elevator
H10-119	H10-007, H10-124, and H10-125- Airslides; and H10-010 - Bucket Elevator
H10-181	H10-167- Airslide; and H10-176- Bucket Elevator
H10-179	H10-177- Airslide

Area I – Cement Storage and Shipping with Bag Packing

Baghouse	Emission Unit
H10-179	H10-177
	I01-033- Day Tank
I02-290	I02-289 – Feed Bin
	TL2 – Truck Day Tank Loadout
H10-221	Product Silos (I02-001 to I02-032)
H10-224	Product Silos (I02-001 to I02-032)
H10-252	Product Silos (I02-001 to I02-032)
H10-254	Product Silos (I02-001 to I02-032)
Pack house	I03/I04 - Packaging and Palletizing
I11-180; -190	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)
I12-180; -190	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)
I13-180; -190	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)
I14-180; -190	TL4 - Truck/ Rail and Bulk Loadout System – (F6/F5/H7/J6/J3/J4/E7/H3)

Applicable Standards and Regulations

(1) COMAR 26.11.30.05(B)(2), which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

(2) 40 CFR Part 60, Subpart F, §60.62(c) - Which limits the opacity of any gas from raw material storage to 10 percent for facility that commences construction or modification after August 17, 1971. Note: This condition is equivalent to the requirements of §63.1345 for the same affected facilities, therefore as long as the Company complies with §63.1345, it meets this requirement.

(3) 40 CFR Part 60, Subpart Y, §60.254(a) - which limits 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 to 20 percent opacity.

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

(5) COMAR 26.11.30.04B(2) - Particulate Matter Emissions. A person may not cause or permit to be discharged in to the outdoor atmosphere from any other installation, particulate matter in excess of 0.03 gr/SCFD (68.7 mg/dscm).

(6) Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000 – Each equipment shall be equipped with a dust collector designed to reduce particulate matter emissions to 0.01 gr/SCFD (22.9 mg/dscm).

Compliance Demonstration

(1) The Permittee must comply with and update as necessary, an opacity monitoring plan to demonstrate continuous compliance as specified in 40 CFR 63, Subpart LLL. The plan shall be incorporated into the required Operations and Maintenance Plan for Subpart LLL affected sources. The Permittee shall keep the plan on-site and maintain records to demonstrate compliance with the procedures outlined in the plan.

(2) The exhaust gases from each emissions unit shall vent a dust collector designed to meet the particulate matter emissions limit before discharging into the atmosphere.
[Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000]

(3) The Permittee shall comply with and update, as needed, the preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. [COMAR 26.11.03.06C]

Rationale for Compliance Demonstration:

The opacity monitoring plan and preventive maintenance plan are reviewed and approved by the Department and contain the methods and procedures that the Permittee uses to comply with the opacity and particulate matter limitations. Each emission unit is controlled by a bag filter which is the most effective control for visible emissions and particulate matter. Reporting and record keeping requirements are sufficient documentation that the procedures are followed.

7. Kiln, Raw and Coal Mills - (Subject to MACT requirements)

Area C – Raw Grinding

Baghouse	Emission Unit
C04-014	C02-025- Raw Mill

Area E – Clinker Burning and Cooling with Preheater Kiln

Baghouse	Emission Unit
C04-014	E01-001/E02-001- Preheater-Precalciner/Kiln System

Area F – Coal Grinding Mill for Kiln

Baghouse	Emission Unit
F03-028	F03-016- Coal Mill
F03-032	F03-016- Coal Mill
F03-036	F03-016- Coal Mill
F03-040	F03-016- Coal Mill
F03-044	F03-016- Coal Mill
F03-048	F03-016- Coal Mill
F04-010	F04-009-Pneumatic Pump for Fine Coal Dust Bin

C04-014 F04-018-Kiln Fuel Pressure Relief
C04-014 F04-026-Calciner Fuel Bin Pressure Relief

Note: These emission units discharge through a common stack.

The pyroprocessing system consists of an in-line raw mill and 5-stage preheater kiln system. The kiln line consists of an in-line raw mill, preheater-precalciner, kiln, clinker cooler, baghouse, stack and associated duct work. A portion of the kiln flue gas is pulled off for the coal mill system and the raw mill system for drying. Gases from the kiln not needed for the mill processes, as well as the raw mill gases, are vented through the main baghouse and stack. Gases from the coal mill are vented through a separate baghouse before entering the main stack. Although the coal mill feed system is not subject to MACT requirements, the coal mills are addressed here with Preheater-Precalciner/Kiln system because they utilize the exhaust gases from the Preheater-Precalciner/Kiln system for coal drying and the exhaust gases vent through the main stack. The startup and shutdown work practices - 40 CFR 63.1346(g) are listed separately in section 14.1 Applicable standards /Limits and operating conditions on Table IV-14 Facility Wide-MACT sources only.

Applicable Regulations and Standards

A&B
Visible and Particulate Matter Emissions

(1) COMAR 26.11.30.05(B)(2), which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

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

(3) The Permittee 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. **[Reference: §60.254(a)]**

(4) **COMAR 26.11.30.04B(2)** - A person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 gr/SCFD (68.7 mg/dscm).

(5) **T**he Permittee may not discharge particulate matter (PM) into the atmosphere from the kiln in excess of 0.07 pound per ton of clinker. **[Reference: §60.62(a)(1)(iii)] and Table 1-1 of §63.1343(b)(1)]**

(6) If the Permittee has an affected source subject to 40 CFR 60, Subpart F with a different emissions limit or requirement for the same pollutant under another regulation in Title 40, the Permittee must comply with the most stringent emissions limit or requirement and is not subject to the less stringent requirement. **[Reference: §60.62(d)]**

(7) When there is an alkali bypass and/or an inline coal mill with a separate stack associated with a kiln, the combined PM emissions from the kiln and the alkali bypass stack and/or the inline coal mill stack are subject to the PM emissions limit. Existing kilns that combine the clinker cooler exhaust and/or coal mill exhaust with the kiln exhaust and send the combined exhaust to the PM control device as a single stream may meet an alternative PM emissions limit. This limit is calculated using the following equation:

$$PM_{alt} = (0.0060 \times 1.65) \times (Q_k + Q_c + Q_{ab} + Q_{cm})/7000$$

Where:
PM_{alt} = Alternative PM emission limit for commingled sources.
0.006 = The PM exhaust concentration (gr/dscf) equivalent to 0.070 lb per ton clinker where clinker cooler and kiln exhaust gas are not combined.
1.65 = The conversion factor of ton feed per ton clinker.
Q_k = The exhaust flow of the kiln (dscf/ton feed).
Q_c = The exhaust flow of the clinker cooler (dscf/ton feed).
Q_{ab} = The exhaust flow of the alkali bypass (dscf/ton feed).
Q_{cm} = The exhaust flow of the coal mill (dscf/ton feed).
7000 = The conversion factor for grains (gr) per lb.

(8) **Permit to Construct #06-6-**0256 **dated April 8, 1999 and revised June 7, 2000** which limits particulate matter emissions from the main exhaust stack to 0.0158 gr/scfd (36.2 mg/dscm).

Compliance Demonstration

(1) The Permittee shall comply with and update, as needed, the preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. **[COMAR 26.11.03.06C]**

(2) For affected sources subject to opacity requirements under §63.1345, the Permittee must develop an opacity monitoring plan in accordance with §63.1350(p)(1) through (4) and (o)(5), if applicable, and conduct required opacity monitoring in accordance with the plan and the requirements listed in 40 CFR 64.1350(f)(1)(i)-(iv). For a raw mill or finish mill, the Permittee must monitor opacity in accordance with 40 CFR 64.1350(f)(2)(i)-(iii) **[Reference: §63.1350(f)]**

(3) The Permittee shall, for Cement Kilns and Clinker Coolers, uses a PM continuous parametric monitoring system (CPMS) to establish a site-specific operating parameter limit for continuous visible emissions and particulate matter compliance determinations in accordance with COMAR 26.11.30.04C(1) and .05C(2).

(4) For the PM CPMS, the Permittee will establish a site-specific operating limit in accordance with §60.63(c)(2) through (5) and §63.1349(b)(1)(i) through (iv). The Permittee shall conduct annual performance tests to reassess and adjust the site-specific operating limit as necessary. The Permittee shall follow the procedures in 40 CFR §63.1350(b)(iii) and (iv) for any exceedance of the established operating parameter limit of COMAR 26.11.30.04(C)(1) on a 30 process operating day basis. **[Reference: COMAR 26.11.30.04(C)(5)] [Reference: COMAR 26.11.30.04B(3), §60.63(c)(2) and §63.1349(b)(1)]**

(5) The Permittee shall maintain all records collected from both testing and monitoring requirements 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 offsite. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. **[40 CFR §63.1355]**

(6) 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 Permittee shall submit an excess emissions and continuous monitoring system performance report along with the summary report. **[40 CFR §63.1354(b)(10)]**

(7) The Company shall submit to the Department semiannually a Summary Report - *Gaseous and Opacity Excess Emissions and Continuous Monitoring System (CMS) Performance* on January 31st and July 31st of each year. The Summary Report shall include the information specified in the permit. **[40 CFR §63.1354b(9) and §63.10(e)(3)(vi)]**

(8) The Permittee shall submit a quarterly summary report of all emissions which exceed the applicable emission standards to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the information specified in the permit. **[COMAR 26.11.01.11A(3) and COMAR 26.11.01.10G(2)(d)]**

(9) The Permittee shall submit the results of performance tests before the close of business on the 60th day following the completion of the performance test. **[40 CFR §63.1354(b)(1)] & [40 CFR §63.10(d)(2)]**

(10) At least 30 days prior to each stack emissions testing, the Permittee shall submit to the Department a stack test protocol for review and approval. **[Part D(7) of Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000]**

Rationale of Compliance Demonstration

The kiln and coal mills are controlled by baghouses which are the most effective control for visible emissions and particulate matter. In accordance with its O & M plan and SSP plan, Lehigh calibrates, operates and maintains its CPMS in a manner consistent with good air pollution control. The PM CPMS output signal (in milliamps) is used, along with corresponding Method 5 stack test results (performed annually), to establish a site-specific operating limit for each stack. The CPMS with a data acquisition system (DAS) is in continuous operation except for periods of malfunctions, out-of-control, repairs, maintenance, and calibration checks. Any malfunction of the CPMS shall be identified and corrective actions will be implemented, as soon as practicable. Lehigh will perform preventative maintenance on each baghouse as specified in the baghouse preventive maintenance plan. All periods of CPMS downtime, QA/QC activities and corrective measures are recorded and reported to show compliance status.

C. Dioxins/Furans (D/F)

(1) **40 CFR §63.1343(b)(1)** which prohibits D/F in excess of
   (a) 0.2 ng per dscm (8.7 X 10^{-11} gr per dscf)(TEQ) corrected to seven percent oxygen; or
   (b) 0.4 ng per dscm (1.7 x 10^{-10} gr dscf)(TEQ) corrected to seven percent oxygen, when the temperature at the inlet to the particulate matter air pollution control device is 204°C (400° F) or less.

(2) The Permittee, subject to a D/F emissions limitation under §63.1343, must operate the kiln such that the temperature of the gas at the inlet to the kiln PM control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in paragraph (b) of §63.1346. The Permittee must operate the in-line kiln/raw mill as specified in the permit. **[Reference: §63.1346(a)]**

Compliance Demonstration

(1) The Permittee must conduct a performance test using Method 23 of appendix A-7 to 40 CFR, Part 60. If the kiln or in-line kiln/raw mill is equipped with an alkali bypass, the Permittee must conduct simultaneous performance tests of the kiln or in-line kiln/raw mill exhaust and the alkali bypass. The Permittee shall conduct a performance test of the alkali bypass exhaust when the raw mill of the in-line kiln/raw mill is operating and not operating. Subsequent performance tests must be performed within 30 months of the last performance test. **[Reference: §63.1349(b)(3)]**

(2) The Permittee shall comply with the monitoring requirements of (g)(1) through (g)(6) and (m)(1) through (m)(4) of §63.1350 to demonstrate continuous compliance with the D/F emissions standard. The Permittee shall also develop an emissions monitoring plan in accordance with (p)(1) through (p)(4) of §63.1350. **[Reference: §63.1350(g)]**

(3) The Permittee shall calibrate, maintain, and continuously operate a CMS to record the temperature of the exhaust gases from the kiln and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln and/or alkali bypass PMCDs. **[Reference: §63.1350(g)(1)]**

(4) The Permittee shall maintain all records collected from both testing and monitoring requirements 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 offsite. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. **[40 CFR §63.1355]**

(5) The Company shall submit to the Department semiannually a Summary Report - *Gaseous and Opacity Excess Emissions and Continuous Monitoring System (CMS) Performance* on January 31st and July 31st of each year. The Summary Report shall include the information specified in the permit. **[40 CFR §63.1354b(9) and §63.10(e)(3)(vi)]**

Rationale for Compliance Demonstration

The Permittee has demonstrated initial compliance with the D/F emission limits. The CMS with a data acquisition system (DAS) is used to monitor the flue gas temperature entering the baghouse and is in continuous operation except for periods of malfunctions, out-of-control, repairs, maintenance, and calibration checks. Any malfunction of the CPMS shall be identified and corrective actions will be implemented, as soon as practicable. All periods of CMS downtime, QA/QC activities and corrective measures are recorded and reported to show compliance status. Subsequent performance tests will ensure continuous compliance.

D to G

NOx, SOx, CO, and VOC/THC Emissions

(1) **Permit to Construct #06-6-0256, 0331, and 0337 September 21, 2009** - NOx emission limits shall not exceed 3.85 pounds per tons of clinker on a monthly average only if the number of hours of the Pyroprocessing Portland cement plant burning DBS is greater than 25% of the kiln operating hours during the month.

(2) The Permittee shall operate the Selective Non-catalytic Reduction System (SNCR) to reduce NOx emissions in order to comply with a NOx emission limit of 2.4 pounds per ton of clinker produced on a 30-day rolling average in accordance with COMAR 26.11.30.07C(2) & 26.11.30.07D.

(3) **COMAR 26.11.30.07A(2)** - For pre-heater/pre-calciner or pre-calciner kilns, maximum emissions of 2.8 pounds of NOx per ton of clinker produced. Compliance with the emission standards, in accordance with COMAR 26.11.30.07D, shall be demonstrated as a 30-day rolling average.

(4) **COMAR 26.11.30.07B(2)** - On and after April 1, 2017, the requirements in COMAR 26.11.30.07A(2) no longer apply and cement kilns shall meet the applicable NO_x emission standards in COMAR 26.11.30.07C(2), which limits the maximum emissions of 2.4 pounds of NO_x per ton of clinker produced for pre-calciner kilns. Compliance with the emission standards, in accordance with COMAR 26.11.30.07D, shall be demonstrated as a 30-day rolling average.

(5) **COMAR 26.11.30.06A(1)** and **26.11.30.06C**, which limit the sulfur dioxide concentration in the exhaust gases not to exceed 500 parts per million by volume corrected to 7 percent oxygen.

(6) **COMAR 26.11.30.06B(1)** and **26.11.30.06C**, which limits the content of sulfuric acid, sulfur trioxide, or any combination not to exceed 35 milligrams reported as sulfuric acid per cubic meter of gas corrected to 7 percent oxygen.

(7) **Prevention of Significant Deterioration (PSD) Approval #PSD-97-01R dated April 8, 1999 and revised June 7, 2000** which states that the premises-wide carbon monoxide (CO) emissions from the Pyroprocessing Portland cement plant and the existing Portland cement plant shall not exceed 3,328 tons for any 12-month period, rolling monthly.

(8) The emissions limits of total hydrocarbons (THC) is 24 parts per million by volume dry (ppmvd) measured as propane and corrected to 7% O_2. Any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic hazardous air pollutants (HAP). [**Table 1-1. of 40 CFR 63.1343(b)(1)]**

Compliance Demonstration

(1) The Permittee must operate, calibrate, and maintain CEMs to continuously monitor and record the emissions of NO_X, CO, SO_2 and VOC/THC emissions into the atmosphere for the kiln as specified in the permit. [Reference: Permit to construct and Prevention of Significant Deterioration (PSD) Approval #PSD-97-01 issued April 8, 1999 and revised June 7, 2000 and COMAR 26.11.01.11C]

(2) The Permittee shall monitor NOx emissions, pounds per ton of clinker, on a monthly average, the total operating hours of the kiln, and the total operating hour of the Pyroprocessing Portland cement plant burning DBS for each month. **[Permit to Construct #06-6-0256 dated April 8, 1999 and revised June 7, 2000, August 7, 2009, and September 21, 2009]**

(3) The Permittee shall operate the Selective Non-catalytic Reduction System (SNCR) to reduce NOx emissions in order to comply with a NOx emission limit of 2.4 pounds per ton of clinker produced on a 30-day rolling average. **[COMAR 26.11.30.07C(2) & 26.11.30.07D]**

(4) The Permittee shall continuously monitor NOx emissions with a continuous emissions monitor ("CEM") certified in accordance with COMAR 26.11.01.11B(1) and (4) and C or use an alternative method approved by the Department and the EPA for compliance determination. **[COMAR 26.11.30.08A & B]**

(5) The Permittee shall maintain all records collected from both testing and monitoring requirements 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. **[COMAR 26.11.03.06C]**

(6) For each CEM used to monitor a gas concentration, the Permittee shall equip the CEM to record not less than four equally spaced data points per hour and to automatically reduce data in terms of averaging times consistent with applicable emission standard. **[COMAR 26.11.01.11D(3)]**

(7) For THC Emission, the Permittee must demonstrate comply with the information specified in 40 CFR §63.1349(b)(4)(i), (ii), (iii), (iv) and (v), §63.1350(i) and §63.1350(i)(1) and (2).

(8) The information with supporting documentation specified in the permit shall be maintained for at least 5 years and made available to the Department upon request**. [New Source Review Approval #NSR-97-02 issued April 8, 1999 and Prevention of Significant Deterioration (PSD) Approval #PSD-97-01 issued April 8, 1999 and revised June 7, 2000]**

(9) The Permittee shall submit to the Department, a report no later than 30 days after the end of each calendar quarter, which shall include a summary of the information specified in the permit. **[New Source Review Approval #NSR-97-02 issued April 8, 1999 and Prevention of Significant Deterioration (PSD) Approval #PSD-97-01 issued April 8, 1999 and revised June 7, 2000] and [COMAR 26.11.03.06C]**

Rationale of Compliance Demonstration

The Permittee has demonstrated initial compliance with the emission limits for NOx, SO_2, CO and VOC through the use of continuous emission monitoring systems (CEMs). The add-on control devices are used to control NOx (Non-selective catalytic convertor) and SO_2 (Lime and limestone injection) emissions. The SO_2 standard is more stringent than the limits of the content of sulfuric acid, sulfur trioxide, or any combination, therefore as long as the facility meet the SO_2 requirement, it meets the applicable requirements of sulfuric acid, sulfur trioxide, or any combination. CEMs and the good combustion practices including kiln temperature, carbon monoxide, and oxygen monitoring are used to reduce CO and VOC emission. All emissions are continuously monitored by CEMs. In accordance with the O & M plan and SSMP, each CEMs with a data acquisition system (DAS) is in continuous operation except for periods of malfunctions, out-of-control, repairs, maintenance, and calibration checks. Any malfunction of the CEMs is identified and corrective actions will be implemented, as soon as practicable. All periods of CEMs downtime, QA/QC activities and corrective measures are recorded and reported to show compliance status.

H. Lead Emissions

Permit to Construct #06-6-0256 dated April 8, 1999 and revised June 7, 2000 which states that the emissions from the entire premises, including the existing Portland cement plant and the Pyroprocessing Portland cement plant, shall not exceed 0.6 tons of lead for any 12-month period, rolling monthly.

Note: The majority of facility's lead emissions are exhausted through the main kiln stack. Since 12-month rolling lead emissions are about 0.02 tons per year, well below the PSD significant net emission increase of 0.6 tons per year, any further lead emission testing is not meaningful.

Compliance Demonstration

The Permittee shall follow the required compliance demonstration for visible and particulate matters emissions to also demonstrate compliance with the lead emissions limit.

Rationale for Compliance Demonstration

The Permittee has demonstrated initial compliance with the lead emission limit through stack testing. As long as the Permittee complies with the requirements for visible emissions and particulate matter, the Permittee will not exceed the lead emission limit.

I. Fluoride Emissions

(1) COMAR 26.11.06.07B(1)(a), which states that a person may not cause or permit the discharge of fluorides into the atmosphere that causes a violation of any applicable air quality standards for fluorides set forth in COMAR 26.11.04.

(2) COMAR 26.11.06.07B(1)(b), which states that the Department, after written notice to a person discharging fluorides to the atmosphere, may require the person to conduct a surveillance to determine whether ambient air quality standards for fluorides are violated. The manner, scope, and duration of the surveillance program will be determined by the Department.

Note: The majority of facility's fluoride emissions are exhausted through the main kiln stack. (For the compliance demonstration, see the discussion below.) Since 12-month rolling fluoride emissions are about 1.5 tons per year, well below the PSD significant net emission increase of 3.0 tons per year, any further fluoride emission testing is not meaningful.

Compliance Demonstration

The Permittee shall maintain the records of 12-month rolling fluoride emissions for at least 5 years and shall make them available to the Department upon request and include fluoride emissions in its annual emission certification.

Rationale of Compliance Demonstration

The kiln stack baghouse would reduce fluoride emissions to an insignificant level and the Permittee had demonstrated compliance with premises-wide emission limits through stack emissions testing. Since 12- month rolling fluoride emissions are about 1.5 tons per year, well below the PSD significant net emission increase of 3.0 tons per year, any further fluoride emission testing is not meaningful. The record keeping requirements and annual emission certification are sufficient for compliance demonstration.

J. Mercury Emissions

The mercury emissions limit is 55 pounds per million tons (lb/MM tons) of clinker. **[Reference: Table 1-1. of §63.1343(b)(1)]**

Compliance Demonstration

(1) The Permittee 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)). **[Reference: §63.1349(b)(5)]**

(2) The Permittee must 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). **[Reference: §63.1349(b)(5)(i)]**

(3) The Permittee shall monitor the following operating data: **[Permit to Construct No. 013-0012-6-0256, 0331, and 0337 issued March 1, 2013]**

(a) Mercury emissions in pounds per million tons of clinker produced based on a 30-day rolling average during normal operation by using the mercury CEMs; and
(b) Work Practices required under §63.1346(g) during periods of startup and shutdown.

(4) The Permittee shall maintain all records collected from both testing and monitoring requirements 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. **[COMAR 26.11.03.06C]**

(5) As applicable, the Permittee shall equip the CEM to record not less than four equally spaced data points per hour and to automatically reduce data in terms of averaging times consistent with applicable emission standard. **[COMAR 26.11.01.11D(3)]**

(6) The information with supporting documentation specified in the permit shall be maintained for at least 5 years and made available to the Department upon request**. [New Source Review Approval #NSR-97-02 issued April 8, 1999 and Prevention of Significant Deterioration (PSD) Approval #PSD-97-01 issued April 8, 1999 and revised June 7, 2000]**

(7) The Permittee shall submit to the Department, a report no later than 30 days after the end of each calendar quarter, which shall include a summary of the information specified in the permit. **[COMAR 26.11.03.06C]**

Rationale for Compliance Demonstration
The Permittee has demonstrated initial compliance with the emission limit for mercury through the use of continuous emission monitoring systems (CEMs). Mercury is controlled through the use of an activated carbon injection system and baghouse dust removal and finish mill reuse process. Mercury emissions are continuously monitored by a CEMs. In accordance with the O & M plan and SSMP, the CEMs with a data acquisition system (DAS) is in continuous operation except for periods of malfunctions, out-of-control, repairs, maintenance, and calibration checks. Any malfunction of the CEMs is identified and corrective actions will be implemented, as soon as practicable. All periods of CEMs downtime, QA/QC activities and corrective measures are recorded and reported to show compliance status.

K. Hydrogen Chloride (HCl) Emissions
The emissions limit for hydrogen chloride (HCl) is 3 parts per million by volume dry (ppmvd) measured as propane and corrected to 7% O2. **[Reference: Table 1 of §63.1343(b)(1)]**

Compliance Demonstration
The Permittee has installed a CEMs to continuously monitor and record HCl emissions. The initial certification compliance date for the CEMs has been extended until September 15, 2016.

The Permittee must conduct performance testing using Method 321 of appendix A to Part 63 unless the Permittee 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. **[Reference: §63.1349(b)(6)(i)(A)]**

(1) If the CPMS is chosen instead of a CEM, for a dry scrubber, the Permittee must 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. **[Reference: §63.1349(b)(6)(i)(B)]**

(2) The initial compliance test must be based on the 30 kiln operating days that occur after the compliance date of this rule in which the affected source operates using a HCl CEMs. Hourly HCl concentration data must be obtained according to §63.1350(l). **[Reference: §63.1349(b)(6)(ii)(B)]**

(3) As an alternative to §63.1349(b)(6)(i)(B), the Permittee may choose to monitor SO_2 emissions using a CEMs in accordance with the requirements of §63.1350(l)(3). The Permittee must establish an SO_2 operating limit equal to the average recorded during the HCl stack test where the HCL stack test run result demonstrate compliance with the emission limit. This operating limit will apply only for demonstrating HCl compliance. **[Reference: §63.1349(b)(6)(iii)]**

(4) If kiln gases are diverted through an alkali bypass or to a coal mill and exhausted through a separate stack, the Permittee must calculate a kiln-specific HCl limit using Equation 11of §63.1349(b)(6)(iv). **[Reference: §63.1349(b)(6)(iv)]**

Rationale for Compliance Demonstration
Upon certification, the Permittee will demonstrate initial compliance with the emission limit for HCl through the use of continuous emission monitoring systems (CEMs). Lehigh uses a pre-heater/pre-calciner kiln that inherently controls acid gases prior to discharging to the atmosphere. HCl emissions are continuously monitored by a CEMs. In accordance with the O & M plan and SSMP, the CEMs with a data acquisition system (DAS) is in continuous operation except for periods of malfunctions, out-of-control, repairs, maintenance, and calibration checks. Any malfunction of the CEMs is identified and corrective actions will be implemented, as soon as practicable. All periods of CEMs downtime, QA/QC activities and corrective measures are recorded and reported to show compliance status.

L. Greenhouse Gas (GHG) Emissions
There is no GHG emission limit specified in 40 CFR 98 Subpart H (Cement Production).

Compliance Demonstration
For each cement kiln that meets the conditions specified in §98.33(b)(4)(ii) or (b)(4)(iii), the Permittee must calculate and report under this subpart the combined process and combustion CO2 emissions by operating and maintaining a CEMS to measure CO2 emissions according to the Tier 4 Calculation Methodology specified in §98.33(a)(4) and all associated requirements for Tier 4 in subpart C of this part (General Stationary Fuel Combustion Sources). **[Reference: 40 CFR 98.83]**

If a CEMS is used to measure CO2 emissions, then in addition to the records required by §98.3(g), the Permittee must retain under this subpart the records required for the Tier 4 Calculation Methodology in §98.37. If a CEMS is not used to measure CO2 emissions, then in addition to the records required by §98.3(g), the Permittee must retain the records specified in this paragraph (b) for each portland cement manufacturing facility. The Permittee must keep a record of the file generated by the verification software specified in

§98.5(b) for the applicable data specified in paragraphs (c)(1) through (17) of this section. Retention of this file satisfies the recordkeeping requirement for the data in paragraphs (c)(1) through (17) of this section. **[Reference: 40 CFR 98.87]**

Rationale for Compliance Demonstration
While there may be no applicable requirements as a result of PSD, the Permittee shall quantify facility wide GHGs emissions and report them in accordance with 40 CFR 98 Subpart H.

8. Clinker Cooler and Main Pan Conveyor (Subject to MACT Requirements)

Area E – Clinker Burning and Cooling with Preheater Kiln

Baghouse	Emission Unit
E04-016	E03-001 - Clinker Cooler

Area G – Clinker Transport & Storage – Craneway Building

Baghouse	Emission Unit
E04-016	G01-001 - Main Pan Conveyor

Majority of the clinker cooler exhaust is used as combustion air for the kiln and the calciner. The rest vents through the clinker cooler baghouse before discharging into the atmosphere.

Applicable Regulations and Standards
Visible and Particulate Matter Emissions

(1) **COMAR 26.11.30.05(B)(2)**, which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

(2) **COMAR 26.11.30.04(B)(2)**, which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot dry.

(3) The Permittee may not discharge PM into the atmosphere from the clinker cooler in excess of 0.07 pound per ton of clinker. **[Reference: §60.62(b)(1)(ii) and Table 1-7. of §63.1343(b)(1)]**

(4) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000,** which limits particulate matter from the clinker cooler exhaust stack to 0.0129 gr/scfd (29.5 mg/dscm).

Compliance Demonstration

(1) The Permittee shall conduct particulate matter emissions stack tests using Method 5 of 40 CFR Part 60, Appendix A, for particulate matter on the clinker cooler once per calendar year, allowing at least 180 days between each particulate matter stack test **[Consent Decree, August 24, 2009].** Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating under representative performance conditions in accordance with 40 CFR Part 63, Subpart LLL. Each run shall

be conducted for at least one hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance. **[40 CFR §63.1349(b) and (c)]**

(2) The Permittee uses a PM continuous parametric monitoring system (CPMS) to establish a site-specific operating parameter limit for continuous visible emissions and particulate matter compliance determinations in accordance with **COMAR 26.11.30.04C(1) and .05C(2).**

(3) For the PM CPMS, the Permittee will establish a site-specific operating limit in accordance with §63.1349(b)(1)(i) through (iv). The Permittee shall conduct annual performance tests to reassess and adjust the site-specific operating limit as necessary. The Permittee shall follow the procedures in 40 CFR §63.1350(b)(iii) and (iv) for any exceedance of the established operating parameter limit of COMAR 26.11.30.04(C)(1) on a 30 process operating day basis. **[Reference: COMAR 26.11.30.04(C)(5)] [Reference: COMAR 26.11.30.04B(3), §60.63(c)(2) and §63.1349(b)(1)]**

(4) The Permittee shall comply with and update as needed the written operations and maintenance plan, which includes the following information:
(a) 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 of §63.1345;
(b) Corrective actions to be taken when required by §63.1350(e); and
(c) Procedures to be used to periodically monitor affected sources subject to opacity standards under§63.1345.
[40 CFR §63.1350(a) and (b)]

(5) The exhaust gases from E03-001-Clinker Cooler and G01-001- Main Pan Conveyor shall vent through a dust collector designed to meet the particulate matter emissions limit before discharging into the atmosphere. **[COMAR 26.11.03.06C]**

(6) The Permittee shall comply with and update, as needed, the preventative maintenance plan for each baghouse that describes the maintenance activity and time schedule for completing each activity. **[COMAR 26.11.03.06C]**

(7) The Permittee shall maintain all records collected from both testing and monitoring requirements 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 offsite. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche. [**40 CFR §63.1355]**

(8) 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 Permittee shall submit an excess emissions and continuous monitoring system performance report along with the summary report. **[40 CFR §63.1354(b)(10)]**

(9) The Company shall submit to the Department semiannually a Summary Report - *Gaseous and Opacity Excess Emissions and Continuous Monitoring System (CMS) Performance* on January 31st and July 31st of each year. The Summary Report shall include the information specified in the permit. [**40 CFR §63.1354b(9) and §63.10(e)(3)(vi)]**

(10) The Permittee shall submit a quarterly summary report to the Department not later than 30 days following each calendar quarter. The report shall be in a format approved by the Department, and shall include the information specified in the permit. **[COMAR 26.11.01.11A(3) and COMAR 26.11.01.10G(2)(d)]**

(11) The Permittee shall submit the results of performance tests before the close of business on the 60th day following the completion of the performance test. **[40 CFR §63.1354(b)(1)] & [40 CFR §63.10(d)(2)]**

(12) At least 30 days prior to each stack emissions testing, the Permittee shall submit to the Department a stack test protocol for review and approval. **[Part D(7) of Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000]**

(13) The Permittee shall calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln as specified in the permit. **[Reference: §60.63(b)(1)(i) and (ii) and §63.1350(d)(1)(i) and (ii)]**

(14) The Permittee shall measure the kiln feed rates and calculate clinker production, record the hourly kiln feed and clinker production rates. During each quarter of source operation, the Permittee must determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow). **[Reference: §60.63(b)(2) and §63.1350(d)(2) and (3)]**

Rationale for Compliance Demonstration:
The clinker cooler is controlled by a baghouse which is the most effective control for visible emissions and particulate matter. In accordance with its O & M plan and SSP plan, Lehigh calibrates, operates and maintains its CPMS in a manner consistent with good air pollution control. The PM CPMS output signal (in milliamps) is used, along with corresponding Method 5 stack test results (performed annually), to establish a site-specific operating limit for each stack. The CPMS with a data acquisition system (DAS) is in continuous operation except for periods of malfunctions, out-of-control, repairs, maintenance, and calibration checks. Any malfunction of the CPMS shall be identified and corrective actions will be implemented, as soon as practicable. Lehigh will perform preventative maintenance on each baghouse as specified in the baghouse preventive maintenance plan. All periods of CPMS downtime, QA/QC activities and corrective measures are recorded and reported to show compliance status.

9. Clinker Handling and Craneway - Point Sources (Subject to MACT Requirements)

Area G – Clinker Transport & Storage

Baghouse	Emission Unit
G01-009	G01-012- Clinker Storage Silo
G02-047	G02-002-Transfer Tower #13 Belt Conveyor
G02-044	G02-002- Transfer Tower #12 Belt Conveyor

G02-021	G02-002-Transfer Tower #11 Belt Conveyor
G02-053	TL1- Clinker Truck/Rail Loadout
G03-011	TT9/10- Transfer Tower #9/10 and G03-010- Clinker into Craneway
G03-004	TT7- Transfer Tower #7
G04-011	G04-010- Bucket Elevator; G04-014- 450 MT Clinker Bin; and G04-020- Belt Conveyor
G04-034	G04-009 & G04-016 - Belt Conveyor; G04-010- Bucket Elevator; G04-016- Belt Feeder; and G04-056- 100 MT Clinker Bin Weighfeeder
H01-220	G04-058- Clinker Bin, H01-006 Belt
(G04-034)	G04-059- H01-015 Clinker Feeder, G04-018 Belt

Area H – Clinker Finish Mill

Baghouse	Emission Unit
H09-051	H09-028- Bucket Elevator and H09-062- Reversible Belt Conveyor
H09-059	H09-047- Bucket Elevator; H09-058- Belt Conveyor; H09-000- Semifinish Grinding System; and H09-031- Belt Conveyor
H09-025	H09-019- Weighfeeder; H09-023- 100 MT Gypsum Bin Weighfeeder; and H09-024- Belt Conveyor (from Weighfeeder)
H09-073	H09-075- 90 Ton Bin
H09-082	H09-021- 100 MT Clinker Bin Weighfeeder; H09-066- Belt Conveyor; and H09-020- 100 MT Slag/Clinker Bin Weighfeeder
H09-033	H09-031 & H09-046 - Belt Conveyor and H09-036 & H09-041 - Bin & Roll Press
H09-094	H09-091- Metal Reclamation System Belt Conveyor

Applicable Regulations and Standards

(1) **COMAR 26.11.30.05(B)(2)**, which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

(2) **Portland Cement MACT**- **40 CFR §63.1348** which limits opacity to 10% or less for each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading system.

(3) **COMAR 26.11.30.04(B)(2)**, which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot dry.

(4) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000** – All emission units shall be equipped with a dust collector designed to reduce particulate matter emissions to 0.01 gr/SCFD (22.9 mg/dscm) except TT9/10 - Transfer Tower #9/10 which is required to meet 0.0108 gr/SCFD (24.7 mg/dscm).

Compliance Demonstration

(1) The Permittee shall conduct a monthly 1-minute visible emissions test of the exhaust stack of each emission unit in accordance with Method 22 of Appendix A to part 60. The frequency of the tests may be reduced to semiannually or annually as specified in the permit.

(2) The Permittee shall comply with and update as needed the written operations and maintenance plan which includes the following information:
   (a) 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 of §§63.1348; and
   (b) Procedures to be used to periodically monitor affected sources.
   [40 CFR §63.1350(a) and (b)]

(3) The exhaust gas from each emissions unit shall vent a dust collector designed to reduce particulate matter emissions limits before discharging into the atmosphere.
[COMAR 26.11.03.06C]

(4) The Permittee shall maintain all records for at least five years following the date of each inspection, 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 offsite. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or no microfiche. **[40 CFR §63.1355]**

(5) The Permittee shall submit a summary report semiannually which contains all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a). **[40 CFR §63.1354(b)(9)(v)]**

Rationale for Compliance Demonstration:
The opacity monitoring plan and preventive maintenance plan under the site specific monitoring plan and the operation and maintenance plan are reviewed and approved by the Department and contain the methods and procedures that the Permittee uses to comply with the opacity and particulate matter limitations. Each emission unit is controlled by a bag filter which is the most effective control for visible emissions and particulate matter. Reporting and record keeping requirements are sufficient documentation that the procedures are followed.

Historical Stack Test Results
LCC conducted compliance testing for particulate matter emissions from Dust Collector #H09-033 (Emission Units #H09-031, #H09-036, #H09-041, and #H09-046) on September 4 and 6, 2002, which indicated a particulate matter emission concentration of 0.0038 gr/dscf. LCC conducted compliance testing for particulate matter emissions from Dust Collector #H09-082 (Emission Units #H09-021, #H09-020, #H09-062, and #H09-066) on September 19, 2002, which indicated a particulate matter emission concentration of 0.0004 gr/dscf. These stack tests on this representative set of dust collectors demonstrated that the dust collectors used throughout the plant were all designed to meet the emissions limits of 0.01 gr/dscf.

10. Finish Mill Systems (Subject to MACT Requirements)

Area H – Clinker Finish Mill

Baghouse	Emission Unit
H01-070	H01-040 – Finish Mill #1; H01-061 – Cyclones and Belts; H01-063 – Cyclone and Belts and H01-090 – Finish Mill #1 Burner
H01-210	H01-105 – Belt Conveyor and Tipping Valves; H01-110 – Bin and H01-112 – Belt Conveyor and Tipping Valves
H01-230	H01-080 – Elevator and Tipping Valves

H01-240	H07-015 – Cement to Cement Cooler and H07-016 - Airslide
H04-044	H04-006- Belt Conveyor and H04-014- Finish Mill #4 System
H05-044	H05-014- Finish Mill #5 System
H06-044	H06-014- Finish Mill #6 System; H06-017- Cyclone 642 (FM#6 System); and H06-037- Separator 627 (FM#6 System)
H07-056	H07-014- Finish Mill #7 System, H07-018, H07-068, H07-070 – Finished Cement Transfer System
H07-057	H07-018, H07-068, & H07-070 – Finished Cement Transfer System
H08-056	H08-014- Finish Mill #8 System; H08-017- Separator (FM#8 System); H08-037- Cyclone (FM#8 System) and H08-038 – Cyclone (FM#8 System)

Applicable Regulations and Standards

Visible and Particulate Matter Emissions

(1) **COMAR 26.11.30.05(B)(2)**, which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

(2) Opacity for each finish mill, located at a major source, during all operating mode shall not exceed 10%. **[Reference: Table 1-13. of §63.1343(b)(1)]**

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

(3) **COMAR 26.11.30.04(B)(2)**, which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot dry.

(4) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000,** which limits particulate matter from each exhaust stack of H04-006 Belt Conveyor, H04-014 Finish Mill #4, H05-014 Finish Mill #5, H06-014 Finish Mill #6, H06-017 Cyclone 642, and H06-037 Separator 627 to 0.0132 gr/scfd (30.2 mg/dscm).

(5) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000,** which limits particulate matter from each exhaust stack of H07-014 Finish Mill #7, H08-014 Finish Mill #8, and H07-018, & H07-070 – Finished Cement Transfer System to 0.01 gr/scfd (22.9 mg/dscm).

(6) **Permit to Construct #013-6-0256M dated February 23, 2005,** which limits particulate matter to 0.0132 gr/scfd (30.2 mg/dscm)

Greenhouse Gas (GHG) Emissions

There is no GHG emission limit specified in 40 CFR 98 Subpart H (Cement Production).

Compliance Demonstration

(1) The Permittee shall conduct a particulate matter emissions test for each mill at least once every 5-year period in accordance with AMA Technical Memorandum 91-01 or using Method 5 of 40 CFR Part 60, Appendix A. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating under representative performance conditions in accordance with 40 CFR Part 63, Subpart LLL. Each run shall be conducted for at least one hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance. At least 30 days prior to each stack emissions testing, the Permittee shall submit to the Department a stack test protocol for review and approval. Within 60 days after each stack emissions testing, the Permittee shall submit to the Department the stack emissions test reports and compliance demonstration with emissions limits.
[Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000]

(2) The Permittee shall conduct daily visual emissions observations of each mill sweep and air separator PMCDs of each affected source in accordance with Method 22 of Appendix A to part 60. The Method 22 test shall be conducted while the affected source is operating under representative performance conditions in accordance with 40 CFR 63.7(e). The frequency of the tests may be reduced as specified in the permit. **[40 CFR §63.1350(f)]**

(3) The Permittee shall comply with and update as needed the written operations and maintenance plan. The plan shall include the following information:
(a) 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 of §63.1347; and
(b) Procedures to be used to periodically monitor affected sources.
[40 CFR §63.1350(a) and (b)]

(4) The exhaust gases from each emission unit shall vent through a dust collector designed to meet the particulate matter emissions limit before discharging to the atmosphere. [COMAR 26.11.03.06C]

(5) The Permittee shall monitor, record, and report GHGs in accordance with 40 CFR 98.34, 98.35, 98.36, and 98.37 for the Finish Mill No. 1 Air Heater.

(6) The Permittee shall implement and comply with the requirements of the CAM plan as specified in the permit.

(7) The Permittee shall maintain all records, including particulate matter emissions test results, 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 offsite. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or no microfiche.
[40 CFR §63.1355 and COMAR 26.11.03.06C]

(8) The Permittee shall submit a summary report semiannually which contains all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a). **[40 CFR §63.1354(b)(9)(v)]**

From the historical and recent stack test results (Table 2) for finish mill systems, all the finish mills and finished cement transfer systems have been operated in compliance with the emission limit of 0.0132 gr/scfd (30.2 mg/dscm) for finish mill # 4, 5, and 6 and 0.01 gr/scfd (22.9 mg/dscm) for finish mill #7 and 8 and the finished cement transfer systems.

Rationale for compliance demonstration:
The permit requires that the exhaust gases from each emission unit vent through a baghouse, which is the most effective control for visible emissions and particulate matter, before discharging into the atmosphere for compliance with the emissions limits of visible emissions and particulate matter. The Permittee shall quantify GHGs emissions and report them in accordance with 40 CFR 98.36. The implementation of the CAM plan would ensure that each piece baghouse functions in accordance with the established operating criteria. Reporting and record keeping requirements are sufficient documentation that the procedures are followed.

11. Miscellaneous Sources Venting Inside Building (Subject to MACT Requirements)

Area G – Clinker Transport & Storage – Craneway Building

Baghouse	Emission Unit
G04-037	G04-018-Belt Conveyor (Venting Inside Building)
	G04-019-CE2 Bucket Elevator (Venting Inside Building)
H09-073	G04-031-Drag Conveyor B3 (Venting Inside Building)

Area H – Clinker Finish Mill

Baghouse	Emission Unit
H09-059	H09-058-Belt Conveyor (Venting Inside Building)
H09-073	H09-058-Belt Conveyor (Venting Inside Building) & H09-075-90T Bin (Venting Inside Building)

Applicable Standards and Regulations

(1) **COMAR 26.11.30.05(B)(2)**, which states that a person may not cause or permit the discharge of emissions from any installation or building, other than water in an uncombined form, which is visible to human observers.

(2) **40 CFR §63.1348** which limits opacity to 10% or less for each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading system.

(3) **COMAR 26.11.30.04(B)(2)**, which states that a person may not cause or permit particulate matter to be discharged from any installation in excess of 0.03 grains per standard cubic foot dry.

(4) **Permit to Construct #06-6-0256N dated April 8, 1999 and revised June 7, 2000**- Each emissions unit shall be equipped with a dust collector designed to reduce particulate matter emissions to 0.01 gr/SCFD (22.9 mg/dscm).

Compliance Demonstration

(1) The Permittee shall conduct a monthly 1-minute visible emissions test of the exhaust stack of each emission unit in accordance with Method 22 of Appendix A to part 60. The frequencies of the test are specified in the permit. **[40 CFR §63.1350(a)(4)(i)-(iii) and (l)]**

(2) The Permittee has the option to conduct a Method 22 visible emissions test according to the requirements of 40 CFR §63.1350(a)(4)(i)-(iii) and (l) for each emissions unit located within the building, or for the building itself. If visible emissions from the building are monitored, the requirements of 40 CFR §63.1350(a)(4)(i)-(iii) and (l) apply to monitoring the building, and the Permittee must also test visible emissions from each side, roof, and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions. **[40 CFR §63.1350(a)(4)(vi)-(vii)]**

(3) The Permittee shall comply with and update as needed the written operations and maintenance plan which includes the following information:

(a) 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 of §§63.1348; and

(b) Procedures to be used to periodically monitor affected sources.
[40 CFR §63.1350(a) and (b)]

(4) The exhaust gas from each emissions unit shall vent through a dust collector designed to meet the particulate matter emissions limit before discharging into the atmosphere.
[COMAR 26.11.03.06C]

(5) The Permittee shall maintain all records for at least five years following the date of each inspection, 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.
[40 CFR §63.1355]

(6) The Permittee shall submit a summary report semiannually which contains all failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a).
[40 CFR §63.1354(b)(9)(v)]

Rationale for compliance demonstration:

The opacity monitoring plan and preventive maintenance plan under the site specific monitoring plan and the operation and maintenance plan are reviewed and approved by the Department and contain the methods and procedures that the Permittee uses to comply with the opacity and particulate matter limitations. Each emission unit is controlled by a bag filter which is the most effective control for visible emissions and particulate matter. Reporting and record keeping requirements are sufficient documentation that the procedures are followed.

12. **Dried BioSolids (DBS) Related Operations**

Product Collectors	Emission Unit
F04-062	F04-058 - DBS Storage Tank (Fluidized Coke Storage Tank); F05-049 – Rotary Air Lock for Feeding DBS from Silo; F05-050 – Scale, Pfister Dosing System; F05-055 – Diverter Valve to Calciner; F05-056 – Diverter Valve to Main Kiln Burner.
F04-064	F04-058 - DBS Storage Tank (Fluidized Coke Storage Tank); F05-049 – Rotary Air Lock for Feeding DBS from Silo; F05-050 – Scale, Pfister Dosing System; F05-055 – Diverter Valve to Calciner; F05-056 – Diverter Valve to Main Kiln Burner.
G05-003	G05-001 - Pneumatic baghouse dust (BD) transfer system F05-051 – Mobile DBS Conveyor for Rail Car Unloading

Dried BioSolids (DBS) system was installed 2009 and updated 2013.

Applicable Standards and Regulations

COMAR 26.11.06.03D - Particulate Matter from Materials Handling and Construction. A person may not cause or permit any material to be handled, transported, or stored, or a building, its appurtenances, or a road to be used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne.

Compliance Demonstration

The product collectors F04-062, F04-064, and G05-003, either vent through kiln or back to the storage devices to recover products. The Permittee shall comply with and update as needed the best management plan that describes the procedures and methods that will be used to take reasonable precautions. The best management plan may be included in the written operation and maintenance plan required under the Portland Cement MACT. The Permittee shall keep the plan on-site and maintain records to demonstrate compliance with the procedures outlined in the plan.

Rationale for Compliance Demonstration

The best management plan is reviewed and approved by the Department and contains the methods and procedures that the Permittee uses to minimize particulate matter from these fugitive sources. Documentation of corrective measures taken in accordance with the plan is sufficient to demonstrate that the Permittee is using reasonable precautions to minimize fugitive particulate matter.

13. Facility-Wide Requirements

Applicable Standards/Limits:

(1) **Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000** which states that NOx emissions from the entire premises shall not exceed 4,871 tons for any 12-month period, rolling monthly.

(2) Particulate Matter Emissions

Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000 which states that emissions from the entire premises shall not exceed the following limits for any 12-month period, rolling monthly:
(a) 925 tons of PM;
(a) 716 tons of PM_{10}; and
(b) 586 tons of PM_{10} stack emissions.

(3) **Permit to Construct #06-6-0256 issued April 8, 1999 and revised June 7, 2000** which states that SO_2 emissions from the entire premises shall not exceed 1,041 tons for any 12-month period, rolling monthly.

(4) **Prevention of Significant Deterioration (PSD) Approval #PSD-97-01R dated April 8, 1999** which states that the premises-wide carbon monoxide (CO) emissions from the Pyroprocessing Portland cement plant shall not exceed 3,328 tons for any 12-month period, rolling monthly.

(5) **New Source Review Approval #NSR-97-02 issued April 8, 1999** which states that premises-wide emissions shall not exceed 165 tons of VOC for any 12-month period, rolling monthly. In determining compliance with VOC emission limits, VOC emissions shall be determined by calculating the numerical difference between the measured values of total hydrocarbon (THC) emissions and non-VOC emissions.

(6) **Permit to Construct #06-6-0256 dated April 8, 1999 and revised June 7, 2000** which states that the lead emissions from the entire premises, including the existing Portland cement plant and the Pyroprocessing Portland cement plant, shall not exceed 0.6 tons of lead for any 12-month period, rolling monthly.

(7) **Permit to Construct #06-6-0256 dated April 8, 1999 and revised June 7, 2000** which states that the emissions from the entire premises shall not exceed 3.0 tons of fluoride for any 12-month period, rolling monthly.

Compliance Demonstration
(1) The Permittee shall submit quarterly emission reports for emissions of each regulated pollutant on a rolling 12-month basis.

(2) The Permittee shall submit an annual emission certification report for each regulated pollutant and shall use the premises-wide actual emissions, which does not exceed the allowable emission limits, as its emission baseline for future modifications.

(3) The Permittee shall not use any alternative kiln raw material, fuel, or additive except the following**: [Permit to Construct #06-6-0256, 0331, and 0337 dated March 1, 2013]**
(a) Quarried stone, sand and shale;
(b) Iron-bearing materials, such as pyrites and millscale;
(c) Cat fines;
(d) Bottom ash and fly ash from coal-fired fuel burning equipment;
(e) Coal;
(f) Scrap tires;
(g) Petroleum coke;
(h) Used oil generated on site;

(i) Class A Dried BioSolids (DBS); and
(j) Other materials which are included in the Permittee's current operating permit or may have been approved by the Department in the past under separate action.

Any alternative kiln raw material, fuel, or additive not approved under authority of this permit or under any previous action may not be used unless it is demonstrated to the Department's satisfaction that the use of any substitute raw material, fuel or additive does not violate the Department's air toxics screening levels and does not increase air emissions beyond the allowable limits stated in the permit to construct, the PSD approval, or the NSR approval.

Rationale for Compliance Demonstration

The Permittee has demonstrated compliance with all premises-wide emission limits through stack emissions testing and/or continuous emissions monitoring. As long as the Permittee demonstrates compliance with all requirements for each emission unit, its premises-wide actual emissions will not exceed allowable emission limits. Quarterly emission reports and annual emissions certification reports confirm compliance with the limits.

14. Emergency Generator

Emission Unit

J08-532 Caterpillar 2520 horsepower (1750 kW) diesel generator, ARMA Reg. No. 013-0012-9-0186, installed in July 2001

This generator was constructed in July 2001, before the applicability date of the NSPS for generators (40 CFR 60, Subpart IIII). This generator is not subject to 40 CFR, Part 63, Subpart ZZZZ since emergency generators at major sources of HAPs are exempt from the requirements of 40 CFR, Part 63, Subpart ZZZZ according to 40 CFR 63.6590(b)(3)(iii). The following requirements have been included in Table IV-18 in the permit.

Applicable Standards and Regulations

(1) **COMAR 26.11.09.05E(2) -** The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity. This requirement does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system. This requirement also does not apply while maintenance, repair, or testing is being performed by qualified mechanics.

In addition, COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:
(a) Engines that are idled continuously when not in service: 30 minutes
(b) All other engines: 15 minutes

(2) **COMAR 26.11.09.05E(3) -** The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity. This requirement does not apply while maintenance, repair, or testing is being performed by qualified mechanics.

(3) The Permittee shall not burn any distillate fuel oil with a sulfur content by weight greater than 0.3%. **[Reference: COMAR 26.11.09.07A(1)(c)]**

(4) The Permittee shall perform combustion analysis and optimize combustion once each year, for each year if the emission unit operates more than 500 hours. **[Reference: COMAR 26.11.09.08G(1)(b)]**

(5) Once every three years, require each operator of the installation to attend operator training programs on combustion optimization that are sponsored by the Department, the EPA, or equipment vendors. For the purposes of COMAR 26.11.09.08, the equipment operator to be trained may be the person who maintains the equipment and makes the necessary adjustments for efficient operation. **[Reference: COMAR 26.11.09.08B (4) and (5)]**

Compliance Demonstration

(1) The Permittee is limited to burning only diesel fuel (No. 2 fuel oil) that meets all applicable federal and state requirements in the generator unless the Permittee obtains an approval from the Department to burn alternate fuels. The Permittee shall obtain a certification from the fuel supplier indicating that the oil complies with the limitation on the sulfur content of the fuel oil. **[Reference: COMAR 26.11.03.06C]**

(2) The Permittee performs combustion analyses and training as required by COMAR 26.11.09.08 for the emergency generator.

(3) The Permittee shall maintain the following records at the premises at least five (5) years, and shall make available to the Department upon request:
   (a) Records of the calculated capacity factors. **[Reference: COMAR 26.11.03.06C]**
   (b) Records of hours of operation. **[Reference: COMAR 26.11.02.19C]**
   (c) Records of combustion analysis performed if the hours of operation exceed 500. **[Reference: COMAR 26.11.09.08G(1)(c)]**
   (d) Record of training program attendance for each operator. **[Reference: COMAR 26.11.09.08G(1)(e)]**
   (e) Annual records of the quantity and type of fuel combusted in the generator.
   (f) Fuel supplier certifications.
   (g) Incidents of visible emissions in accordance with permit condition 4, Section III, Plant Wide Conditions, “Report of Excess Emissions and Deviations.” **[Reference: COMAR 26.11.03.06C]**

Rationale for Compliance Demonstration

COMAR 26.11.09.08 outlines the methods for compliance with the training and combustion analysis requirements. Compliance with the requirements of COMAR 26.11.09.08 ensures that operators of the generator are properly trained and the generator is properly maintained to not cause emissions in excess of the applicable visible emissions standards. Fuel supplier certification is sufficient to ensure that the fuel used in the emergency generator meets the applicable sulfur content limit. The Permittee shall keep records of all analyses and fuel supplier certifications to confirm compliance.

15. **Facility Wide – MACT Sources Only**

Applicable Standards and Regulations
The Permittee shall comply with the sections of the General Provisions (Table IV-15 to Subpart LLL of Part 63) and facility wide general requirements.

TITLE IV – ACID RAIN

LCC is not subject to the Acid Rain Program requirements.

TITLE VI – OZONE DEPLETING SUBSTANCES

LCC is not subject to Title VI requirements.

SECTION 112(r) – ACCIDENTAL RELEASE

LCC is not subject to the requirements of Section 112(r).

PERMIT SHIELD

LCC requested that a permit shield be expressly included in the Permittee's Part 70 permit. Permit shields are granted on an emission unit by emission unit basis. If an emission unit is covered by a permit shield, a permit shield statement will follow the emission unit table in Section IV - Plant Specific Conditions of the permit. In this case, a permit shield was granted for each emission unit covered by the permit.

INSIGNIFICANT ACTIVITIES

This section provides a list of insignificant emissions units that were reported in the Title V permit application. The applicable Clean Air Act requirements, if any, are listed below the insignificant activity.

(1) No. 3 Stationary internal combustion engines with an output less than 500 brake horsepower (373 kilowatts) and which are not used to generate electricity for sale or for peak or load shaving;

The engines are subject to the following requirements:

(A) COMAR 26.11.09.05E(2), Emissions During Idle Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at idle, greater than 10 percent opacity.

(B) COMAR 26.11.09.05E(3), Emissions During Operating Mode: The Permittee may not cause or permit the discharge of emissions from any engine, operating at other than idle conditions, greater than 40 percent opacity.

(C) Exceptions:

(i) COMAR 26.11.09.05E(2) does not apply for a period of 2 consecutive minutes after a period of idling of 15 consecutive minutes for the purpose of clearing the exhaust system.

(ii) COMAR 26.11.09.05E(2) does not apply to emissions resulting directly from cold engine start-up and warm-up for the following maximum periods:

(a) Engines that are idled continuously when not in service: 30 minutes
(b) all other engines: 15 minutes.

(iii) COMAR 26.11.09.05E(2) & (3) do not apply while maintenance, repair or testing is being performed by qualified mechanics.

(2) ✓ Space heaters utilizing direct heat transfer and used solely for comfort heat;

(3) ✓ Water cooling towers and water cooling ponds unless used for evaporative cooling of water from barometric jets or barometric condensers, or used in conjunction with an installation requiring a permit to operate;

(4) No. 3 Unheated VOC dispensing containers or unheated VOC rinsing containers of 60 gallons (227 liters) capacity or less;

The containers are subject to COMAR 26.11.19.09D, which requires that the Permittee control emissions of volatile organic compounds (VOC) from cold degreasing operations by meeting the following requirements:

(a) COMAR 26.11.19.09D(2)(b), which establishes that the Permittee shall not use any VOC degreasing material that exceeds a vapor pressure of 1 mm Hg at 20 ° C;

(b) COMAR 26.11.19.09D(3)(a—d), which requires that the Permittee implement good operating practices designed to minimize spills and evaporation of VOC degreasing material. These practices, which shall be established in writing and displayed such that they are clearly visible to operators, shall include covers (including water covers), lids, or other methods of minimizing evaporative losses, and reducing the time and frequency during which parts are cleaned;

(c) COMAR 26.11.19.09D(4), which prohibits the use of any halogenated VOC for cold degreasing.

The Permittee shall maintain on site for at least five (5) years, and shall make available to the Department upon request, the following records of operating data:

(a) Monthly records of the total VOC degreasing materials used; and

(b) Written descriptions of good operating practices designed to minimize spills and evaporation of VOC degreasing materials.

(5) Containers, reservoirs, or tanks used exclusively for:

(a) ✓ Storage of butane, propane, or liquefied petroleum, or natural gas;

(b) No. 2 Storage of lubricating oils;

(c) No. 4 Storage of Numbers 1, 2, 4, 5, and 6 fuel oil and aviation jet engine fuel;

(6) ✓ First aid and emergency medical care provided at the facility, including related activities such as sterilization and medicine preparation used in support of a manufacturing or production process;

(7) ✓ Potable water treatment equipment, not including air stripping equipment;

(8) ✓ Emissions resulting from the use of explosives for blasting at quarrying operations and from the required disposal of boxes used to ship the explosive;

(9) ✓ Comfort air conditioning subject to requirements of Title VI of the Clean Air Act; and

(10) ✓ Laboratory fume hoods and vents.

STATE ONLY ENFORCEABLE REQUIREMENTS

This section of the permit contain state-only enforceable requirements. The requirements in this section will not be enforced by the U.S. Environmental Protection Agency. The requirements in this section are not subject to COMAR 26.11.03.10 - Public Petitions for Review to EPA Regarding Part 70 Permits.

Applicable Regulations

(1) COMAR 26.04.10, which provides requirements for management of coal combustion byproducts.

(2) COMAR 26.11.01.11B, which provides general requirements for CEMs.

(3) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

(4) COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.

(5) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.

(6) COMAR 26.11.36.03A, which provides requirements for emissions of oxides of nitrogen (NOx) from emergency generators.

Compliance Demonstration

The Permittee shall submit to the Department by April 1 of each year a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. Such analysis shall include either:
(a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
(b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

Rationale of Compliance Demonstration
Compliance Demonstrations specified for each emission unit, particularly for the Kiln, should be sufficient to demonstrate compliance with regards to the issues of nuisance and toxic air pollutants. In addition, the Permittee is required to submit to the Department each year a written certification of the results of an analysis of emissions of toxic air pollutants.

Emergency Generator
Applicable Requirements - Operating Conditions:
(1) The Permittee may not operate the emergency generator registered under ARMA Registration No. 013-0012-9-0186 except for emergencies, testing, and maintenance purposes. **[Reference: COMAR 26.11.36.03A(1)]**

(2) The Permittee may not operate the emergency generator registered under ARMA Registration No. 013-0012-9-0186 for testing and maintenance purposes between 12:01 a.m. and 2 p.m. on any day on which the Department forecasts that the air quality will be code orange, code red, or code purple. **[Reference: COMAR 26.11.36.03A(5)]**

Compliance Demonstration
The Permittee shall record the date and time of operating hours used for emergency, testing and maintenance purposes and shall make them available to the Department upon request.

COMPLIANCE SCHEDULE
LCC is operating under the CONSENT DECREE OF AUGUST 24, 2009. The Consent Decree addressed violations of the particulate matter emission limits established for the kiln and the clinker cooler based upon stack tests performed on April 18 and 19, 2007. The Consent Decree became effective on August 24, 2009. The Consent Decree requires LCC to revise the Operation, Maintenance & Monitoring (OMM) Plan with regards to the cement kiln and clinker cooler baghouses and to stack test the cement kiln and clinker cooler for particulate matter once every calendar year with at least 180 days between each test. LCC is operating in compliance with the Decree.