*West Virginia Department of Environmental Protection*
*Division of Air Quality*

*Earl Ray Tomblin*
*Governor*

*Randy C. Huffman*
*Cabinet Secretary*

# Permit to Operate

*Pursuant to*

**Title V**

of the Clean Air Act

*Issued to:*

~~Capitol~~ Essroc Cement Corp
Martinsburg, Berkeley County, WV
R30-00300006-2012

*John A. Benedict*
*Director*

*Issued: January 19, 2012 • Effective: February 2, 2012*
*Expiration: January 19, 2017 • Renewal Application Due: July 19, 2016*

Permit Number: **R30-00300006-2012 (MM0~~1~~2)**
Permittee: **~~Capitol~~ Essroc Cement Corporation**
Mailing Address: **1826 South Queen Street, Martinsburg, WV 25401**

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

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

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

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

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

## 1.1. Emission Units

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[1] |
| **Modern Precalciner Kiln System and Related Equipment** | | | | | | | |
| **Quarry and Crushing EU1** | | | | | | | |
| EP0X.01 | Quarry drilling | N/A | 4,490,653 TPY | PE | | | None |
| EP0X.02 | Quarry blasting | N/A | 4,490,653 TPY | PE | | | None |
| EP0X.03.01 | Loader to truck (good rock) | N/A | 4,276,653 TPY | PE | | | None |
| EP0X.03.02 | Loader to truck (waste rock) | N/A | 213,841 TPY | PE | | | None |
| EP0X.03.03 | Truck to waste pile | N/A | 213,841 TPY | PE | | | None |
| EP0X.03.04 | Truck to crusher pile | N/A | 150,879 TPY | PE | | | None |
| EP0X.03.05 | Truck or loader to crusher dump | N/A | 150,879 TPY | PE | | | None |
| EP01.01 | Primary Crusher | 1943 and 1982 | 150,879 TPY | CD01.01 | | EP01.01 to EP01.02 | Baghouse |
| EP01.02 | Crusher to belt conveyor 1013 | 1982 | 150,879 TPY | CD01.01 | | EP01.02 to EP01.03 | Baghouse |
| CD01.01 | Primary Crusher D\C | 1972 | 6,298 dscfm | | | | N/A |
| EP01.03 | Belt Conveyor 1013 to 40 T Bin (40TB) | 1943 and 1982 | 150,879 TPY | PE | | 1013 to 40TB | None |
| EP01.04 | 40 Ton Bin (40TB) to feeder (F40TB) | 1943 and 1982 | 150,879 TPY | PE | | 40TB to F40TB | None |
| EP01.05.01 | Feeder (F40TB) to Belt Conveyor 1011 | 1943 and 1982 | 150,879 TPY | PE | | F40TB to 1011 | None |
| EP01.05.02 | Belt Conveyor 1011 to Belt Conveyor 1007 | 1943 and 1982 | 150,879 TPY | PE | | 1011 to 1007 | None |
| EP01.06.01 | Belt Conveyor 1007 to screen 1009 | 1955 and 1971 | 150,879 TPY | CD02.01 | | 1007 to 1009 | Baghouse |
| EP01.06.02 | Screen 1009 | 1955 and 1971 | 150,879 TPY | CD02.01 | | | Baghouse |
| EP01.06.03 | Screen 1009 to belt conveyor 1009-B | 1955 and 1971 | 75,439 TPY | CD02.01 | | 1009 to 1009-B | Baghouse |
| EP01.06.04 | Screen 1009 to feeder 1009-A | 1955 and 1971 | 75,439 TPY | CD02.01 | | 1009 to 1009-A | Baghouse |
| EP02.01.01 | Feeder 1009-A to hammermill 1006 | 1966 and 1982 | 75,439 TPY | CD02.01 | | 1009-A to 1006 | Baghouse |
| EP02.01.02 | Hammermill 1006 | 1966 and 1982 | 113,159 TPY | CD02.01 | | | Baghouse |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| EP02.01.03 | Hammermill 1006 to belt conveyor 1005 | 1966 and 1982 | 113,159 TPY | CD02.01 | | 1006 to 1005 | Baghouse |
| EP02.01.04 | Belt conveyor 1005 to belt conveyor 1004 | 1966 and 1982 | 113,159 TPY | WS | | 1005 to 1004 | None |
| EP02.01.05 | Belt conveyor 1004 to screen 1003 | 1966 and 1982 | 113,159 TPY | CD02.01 | | 1004 to 1003 | Baghouse |
| EP02.01.06 | Screen 1003 | 1966 and 1982 | 113,159 TPY | CD02.01 | | | Baghouse |
| EP02.01.07 | Screen 1003 to belt conveyor 1002 | 1966 and 1982 | 37,720 TPY | PE | | 1003 to 1002 | None |
| EP02.01.08 | Belt conveyor 1002 to hammermill 1006 | 1966 and 1982 | 37,720 TPY | CD02.01 | | 1002 to 1006 | Baghouse |
| EP02.01.09 | Screen 1003 to belt conveyor 1001 | 1966 and 1982 | 75,439 TPY | CD02.01 | | 1003 to 1001 | Baghouse |
| EP02.01.10 | Belt conveyor 1009-B to belt conveyor 1001 | 1966 and 1982 | 75,439 TPY | CD02.01 | | 1009-B to 1001 | Baghouse |
| CD02.01 | Secondary Crusher D\C | 1966 and 1982 | 45,997 dscfm | | | | N/A |
| EP02.02 | Belt conveyor 1001 to belt conveyor 1000 | 1965 and 1982 | 150,879 TPY | WS, PE | | 1001 to 1000 | None |
| EP02.03.01 | Belt Conveyor 1000 to belt conveyor 999 | 1965 and 1982 | 150,879 TPY | PE | | 1000 to 999 | None |
| EP02.03.02 | Belt Conveyor 999 to shuttle conveyor 998 | 1965 and 1982 | 150,879 TPY | PE | | 999 to 998 | None |
| EP03.02 | Shuttle conveyor 998 to raw bins (LP) | 1971 | 150,879 TPY | PE | | 998 to LP | None |
| EP37.02.01 | Truck(T) to large bin (LB) | 2009 | 4,125,933 TPY | WS | | T to LB | None |
| EP37.02.02 | Large Bin (LB) to conveyor (C1) | 2009 | 4,125,933 TPY | WS, PE | | LB to C1 | None |
| EP37.03.01 | Conveyor (C1) to Feeder (F1) | 2009 | 4,125,933 TPY | CD37.03 | | C1 to F1 | Baghouse |
| EP37.03.02 | Conveyor (C1) to Hammermill (H1) | 2009 | 4,125,933 TPY | CD37.03 | | C1 to H1 | Baghouse |
| EP37.03.03 | Hammermill (H1) to Feeder (F1) | 2009 | 4,125,933 TPY | CD37.03 | | H1 to F1 | Baghouse |
| EP37.03.04 | Feeder (F1) to Conveyor (C2) | 2009 | 4,125,933 TPY | CD37.03 | | F1 to C2 | Baghouse |
| CD37.03 | New Primary Crusher D\C | 2009 | 41,200 dscfm | | | | N/A |
| EP37.04.01 | Conveyor (C2) to Split (SPT1) | 2009 | 4,125,933 TPY | CD37.04 | | C2 to SPT1 | Baghouse |
| EP37.04.02 | Split (SPT1) to Conveyor (C3) | 2009 | 4,125,933 TPY | CD37.04 | | SPT1 to C3 | Baghouse |
| CD37.04 | Crushing System Transfer Tower | 2009 | 4,709 dscfm | | | | N/A |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| EP37.05 | Split (SPT1) to Surge Pile (SP1) | 2009 | 412,593 TPY | None | | SPT1 to SP1 | None |
| EP37.06.01 | Conveyor (C3) to Split (SPT2) | 2009 | 4,125,933 TPY | CD37.06 | | C3 to SPT2 | Baghouse |
| EP37.06.02 | Split (SPT2) to Top Conveyor (TC1) | 2009 | 3,395,680 TPY | CD37.06 | | SPT2 to TC1 | Baghouse |
| EP37.06.03 | Split (SPT2) to Bottom Conveyor (BC1) | 2009 | 4,125,933 TPY | CD37.06 | | SPT2 to BC1 | Baghouse |
| CD37.06 | Premix Conveying D\C | 2009 | 6,357 dscfm | | | | N/A |
| EP38.01.01 | Top Conveyor (TC1) to Swing Conveyor (SW1) | 2009 | 3,395,680 TPY | CD38.01 | | TC1 to SW1 | Baghouse |
| EP38.01.02 | Swing Conveyor (SW1) to Limestone Pile (LP) | 2009 | 3,395,680 TPY | CD38.01 | | SW1 to LP | Baghouse |
| CD38.01 | Premix Storage Feeding D\C | 2009 | 2,119 dscfm | | | | N/A |

| Raw Material Preparation EU2 | | | | | | | |
|---|---|---|---|---|---|---|---|
| EP04.01.01 | Raw Bins (RB) to Feeders East Tunnel (FET) | 1965 and 2009 | 150,879 TPY | FE | | RB to FET | None |
| EP04.01.02 | Feeders(FET) to Belt Conveyor East 917(917) | 1965 and 2009 | 150,879 TPY | FE | | FET to 917 | None |
| EP04.03.01 | Belt conveyor 917 to elevator east 915 | 1966 and 2009 | 150,879 TPY | CD04.03 | | 917 to 915 | Baghouse |
| EP04.03.02 | Elevator 915 to screens East 914/913 | 1966 and 2009 | 150,879 TPY | CD04.03 | | 915 to 914/913 | Baghouse |
| EP04.03.03 | Screens East 914/913 | 1966 and 2009 | 150,879 TPY | CD04.03 | | | Baghouse |
| EP04.03.04 | Screens East 914/913 to #1 stone system belt (SSB) | 1966 and 2009 | 150,879 TPY | CD04.03 | | 914/913 to SSB | Baghouse |
| EP04.04.01 | Shuttle conveyor 998 to new chute (NC) | 1966 and 2009 | 150,879 TPY | CD04.03 | | 998 to NC | Baghouse |
| EP04.04.02 | New chute (NC) to #1 stone system belt (SSB) | 2009 | 150,879 TPY | CD04.03 | | NC to SSB | Baghouse |
| CD04.03 | Limestone Conveying to #1 Stone Belt D\C | 1966 | 10,800 dscfm | | | CD04.03 to EP04.03 | N/A |
| EP04.04.03 | #1 Stone System Belt (SSB) to Limestone Pile (LP2) in craneway | 2009 | 150,879 TPY | PE | | SSB to LP2 | None |
| EP38.02.01 | Pile (LP) to Feeder 1 (FD1) | 2009 | 3,395,680 TPY | CD38.02 | | LP to FD1 | Baghouse |
| EP38.02.02 | Feeder 1 (FD1) to Bottom Conveyor (BC2) | 2009 | 3,395,680 TPY | CD38.02 | | FD1 to BC2 | Baghouse |
| EP38.02.03 | Pile (LP) to Feeder 2 (FD2) | 2009 | 3,395,680 TPY | CD38.02 | | LP to FD2 | Baghouse |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| EP38.02.04 | Feeder 2 (FD2) to Bottom Conveyor (BC2) | 2009 | 3,395,680 TPY | CD38.02 | | FD2 to BC2 | Baghouse |
| CD38.02 | Premix Storage Discharge D\C | 2009 | 2,119 dscfm | | | | N/A |
| EP39.01.01 | Conveyor (BC1) to Split (SPT3) | 2009 | 949,330 TPY | CD39.01 | | BC1 to SPT3 | Baghouse |
| EP39.01.02 | Split (SPT3) to Conveyor (C4) | 2009 | 949,330 TPY | CD39.01 | | SPT3 to C4 | Baghouse |
| EP39.03.02 | Conveyor (C4) to Shale Bin (SB) | 2009 | 730,254 TPY | CD39.01 | | C4 to SB | Baghouse |
| EP39.04.01 | Conveyor (C4) to Shale Bin 2 (SB2) | 2009 | 730,254 TPY | CD39.01 | | C4 to SB2 | Baghouse |
| EP39.07.01 | Split (SPT3) to Pyrite Silo (P S) | 2009 | 36,513 TPY | CD39.01 | | SPT3 to PS | Baghouse |
| EP39.08.01 | Split (SPT3) to sand silo (SS) | 2009 | 182,563 TPY | CD39.01 | | SPT3 to SS | Baghouse |
| CD39.01 | Additive Feeding System D\C | 2009 | 7,416 dscfm | | | | N/A |
| EP39.03.01 | Conveyor (BC2) to Limestone Mix Bin (LMB) | 2009 | 3,395,680 TPY | CD39.02 | | BC2 to LMB | Baghouse |
| CD39.02 | Limestone Bin D\C | 2009 | 2,119 dscfm | | | | N/A |
| EP39.03.03 | Shale Bin (SB) to Feeder (SBF) | 2009 | 730,254 TPY | CD39.03 | | SB to SBF | Baghouse |
| EP39.03.04 | Shale Bin Feeder (SBF) to Conveyor (C5) | 2009 | 730,254 TPY | CD39.03 | | SBF to C5 | Baghouse |
| EP39.02.01 | Conveyor (C6) Limestone Mix Bin (LMB) to Feeder (LMBF) | 2009 | 3,395,680 TPY | CD39.03 | | LMB to LMBF | Baghouse |
| EP39.02.02 | Limestone Mix Feeder (LMBF) to Conveyor (C5) | 2009 | 3,395,680 TPY | CD39.03 | | LMBF to C5 | Baghouse |
| EP39.07.02 | Pyrite Silo (PS) to Feeder (PSF) | 2009 | 36,513 TPY | CD39.03 | | PS to PSF | Baghouse |
| EP39.07.03 | Pyrite Silo Feeder (PSF) to Conveyor (C5) | 2009 | 36,513 TPY | CD39.03 | | PSF to C5 | Baghouse |
| EP39.08.02 | Sand Silo (SS) to Feeder (SSF) | 2009 | 182,563 TPY | CD39.03 | | SS to SSF | Baghouse |
| EP39.08.03 | Sand Silo Feeder (SSF) to Conveyor (C5) | 2009 | 182,563 TPY | CD39.03 | | SSF to C5 | Baghouse |
| CD39.03 | Raw Material Discharge D\C1 | 2009 | 4,238 dscfm | | | | N/A |
| EP39.04.02 | Shale Silo 2 (SB2) to Feeder (SB2F) | 2009 | 730,254 TPY | CD39.04 | | SB2 to SB2F | Baghouse |
| EP39.04.03 | High Silo Feeder (HSF) Shale Silo 2 Feeder (SB2F) to Conveyor (C5) | 2009 | 730,254 TPY | CD39.04 | | SB2F to C5 | Baghouse |
| CD39.04 | Raw Material Discharge D\C2 | 2009 | 3,178 dscfm | | | | N/A |
| EP39.05 | Additive Truck (T3) to Conveyor (C6) | 2009 | 219,076 TPY | CD39.05 | | T3 to C6 | Baghouse |
| EP39.04.04 | Conveyor (C6) to Conveyor (C7) | 2009 | 219,076 TPY | CD39.05 | | C6 to C7 | Baghouse |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| CD39.05 | Additives Delivery System D\C | 2009 | 29,429 dscfm | | | | N/A |
| EP40.03 | Split to Surge Pile (SP3) | 2009 | | None | | | |
| EP39.06.01 | Raw Mill Feed Conveyor (C5) | 2009 | 3,651,268 TPY | CD39.06 | | | Baghouse |
| CD39.06 | Raw Mill Feeding D\C | 2009 | 2,119 dscfm | | | | N/A |
| EP40.01.01 | RM Feed Conveyor (C5) to conveyor (C6) | 2009 | 3,651,268 TPY | CD40.01 | | C5 to C6 | Baghouse |
| EP40.01.02 | Conveyor (C6) to Split (SPT4) | 2009 | 3,651,268 TPY | CD40.01 | | C6 to SPT4 | Baghouse |
| EP40.01.03 | Split (SPT4) to Hopper (HP1) | 2009 | 3,651,268 TPY | CD40.01 | | SPT4 to HP1 | Baghouse |
| EP40.02.03 | Bucket Elevator (BE2) to Conveyor (C6) | 2009 | 3,651,268 TPY | CD40.01 | | BE2 to C6 | Baghouse |
| EP40.04.01 | Split (SPT4) to Raw Mill (RM1) | 2009 | 3,651,268 TPY | CD40.01 | | SPT4 to RM1 | Baghouse |
| CD40.01 | Raw Mill High Zone D\C | TBD | 9,005 dscfm | | | | N/A |
| EP40.02.01 | Conveyor (C7) to Split (SPT5) | 2009 | 3,651,268 TPY | CD40.02 | | C7 to SPT5 | Baghouse |
| EP40.02.02 | Split (SPT5) to Bucket Elevator (BE2) | 2009 | 3,651,268 TPY | CD40.02 | | SPT5 to BE2 | Baghouse |
| EP40.04.02 | Raw Mill (RM1) to conveyor (C8) | 2009 | 3,651,268 TPY | CD40.02 | | RM1 to C8 | Baghouse |
| EP40.02.04 | Conveyor (C8) to Bucket Elevator (BE2) | 2009 | 3,651,268 TPY | CD40.02 | | C8 to BE2 | Baghouse |
| CD40.02 | Raw Mill Low Zone D\C | 2009 | 7,416 dscfm | | | | N/A |
| EP40.05 | Raw Meal Conveying Equipment | 2009 | 3,651,268 TPY | CD40.05 | | EP40.05 to EP40.06 | Baghouse |
| CD40.05 | Raw Meal Air Slide D\C | 2009 | 4,803 dscfm | | | | N/A |
| EP40.06 | Homogenizing Silo Feeding Equipment | 2009 | 3,651,268 TPY | CD40.06 | | EP40.06 to EP40.07 | Baghouse |
| CD40.06 | Homogenizing Silo Feeding D\C | 2009 | 5,297 dscfm | | | | N/A |
| EP40.07 | Homogenizing Silo Discharging Equipment | 2009 | 3,651,268 TPY | CD40.07 | | EP40.07 to EP42.02 | Baghouse |
| CD40.07 | Homogenizing Silo Discharge ~~D/C~~ D\C | 2009 | 4,238 dscfm | | | | N/A |
| CD40.08 | Top of Homo Silo D\C | 2010 | 2220 dscfm | | | Raw Feed to Homo Silo | N/A |
| EP39.07.04 | Inert Raw Material Hauling to Quarry (Paved) | 2011 | 882 VMT/year | | | | DSWS |
| EP39.07.05 | Inert Raw Material Hauling to Quarry (Unpaved) | 2011 | 7,055 VMT/year | | | | DSWS |
| EP39.08 | Inert Raw Material Truck Dump to Pile | 2011 | 220,460 ston/yr | | | Truck to Pile | None |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| EP39.09 | Inert Raw Material Storage Pile (Within Mines) | 2011 | 0.5 acres | | | | PE |
| EP39.10 | Inert Raw Material Pile Reclaim | 2011 | 220,460 ston/yr | | | Pile to FEL | None |
| EP39.11 | Inert Raw Material Dump to Primary Crusher | 2011 | 220,460 ston/yr | | | FEL to Crusher | None |
| EP39.12.01 | Hauling to Additives Unloading Bin (Paved) | 2011 | 529 VMT/year | | | | DSWS |
| EP39.12.02 | Hauling to Additives Unloading Bin (Unpaved) | 2011 | 1,058 VMT/year | | | | DSWS |

| Pyroprocessing EU3 | | | | | | | |
|---|---|---|---|---|---|---|---|
| EP42.02 | Kiln Feeding Bucket Elevator D\C | 2009 | 3,651,268 TPY | CD42.02 | | EP42.02 to EP42.03 | Baghouse |
| CD42.02 | Kiln Feeding Bucket Elevator D\C | 2009 | 5,297 dscfm | | | | N/A |
| EP42.03 | Kiln Feed Belt | 2009 | 3,651,268 TPY | CD42.03 | | EP42.03 to EP42.05 | Baghouse |
| CD42.03 | Kiln Feeding D\C1 | 2009 | 12,713 dscfm | | | | N/A |
| EP42.04 | Kiln System – Inline Raw Mill/PH/PC Kiln/Clinker Cooler | 2009 | In = 3,651,268 TPY of Kiln Feed Out = 2,212,890 TPY of Clinker | CD42.04 | | EP42.04 to EP43.02 | Baghouse |
| EP42.08 | Kiln Bypass Baghouse DC | 2009 | N/A | CD42.04 | | | Baghouse |
| EP41.03.01 | Coal Mill | 2009 | 292,110 TPY | CD42.04 | | | Baghouse |
| CD42.04 | Inline Raw Mill/PH/PC Kiln/Clinker Cooler & Bypass & Coal Mill D\C | 2009 | 713,986 dscfm | | | | N/A |
| EP42.05 | Kiln Feed Belt | 2009 | 3,651,268 TPY | CD42.05 | | EP42.05 to EP42.04 | Baghouse |
| CD42.05 | Kiln Feeding D\C2 | 2009 | 2,119 dscfm | | | | N/A |
| EP43.02 | New Cooler Discharge DC | 2009 | 2,212,890 TPY | CD43.02 | | EP43.02 to EP43.03 | Baghouse |
| CD43.02 | Cooler Discharge D\C | 2009 | 2,119 dscfm | | | | N/A |
| EP42.01 | Bypass Dust Transfer to Existing Cement Silos | 2009 | 176,368 TPY | CD42.01 | | | Baghouse |
| CD42.01 | Cement Fringe Bin D/C | 2009 | 7,662 dscfm | | | | N/A |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| EP42.06 | Lime Storage for Scrubber System | 2009 | 77,161 TPY | CD42.06 | | | Baghouse |
| CD42.06 | Lime Storage D\C | 2009 | 1,000 dscfm | | | | N/A |
| EP42.07 | Bypass Truck Spout Dedusting | 2009 | N/A | | | | |
| EP42.09 | Reburn Hopper System | 2011 | 1,102 stons/yr | None | | | N/A |
| **Clinker Handling and Storage EU4** | | | | | | | |
| EP43.05 | Clinker Conveyor to big clinker silo (ClC1) | 2009 | 2,212,890 TPY | CD43.03 CD43.21 | | EP43.02 to ClC1 | Baghouse |
| CD43.03 | Clinker Storage Feeding D\C | 2009 | 7,063 dscfm | | | | N/A |
| CD43.21 | Top of Normal Clinker Silo D/C | 2013 | 8,000 dscfm | | | | N/A |
| EP43.04 | Clinker Conveyor to Clinker Silo (C1C2) | 2009 | 2,212,890 TPY | CD43.04 CD43.19 | | EP43.02 to C1C2 | Baghouse |
| CD43.04 | Small Clinker Storage Feeding D\C | 2009 | 3,178 dscfm- | | | | N/A |
| CD43.19 | Top of LA Clinker Silo D/C | 2013 | 6,500 dscfm | | | | N/A |
| EP43.06.01 | Low alkali clinker silo (LACS) to upper conveyors UCS | 2009 | 2,212,890 TPY | CD43.06 | | LACS to UCS | Baghouse |
| EP43.06.02 | Upper conveyors (UCS) to lower conveyor (LC) | 2009 | 2,212,890 TPY | CD43.06 | | UCS to LC | Baghouse |
| EP43.06.03 | Low alkali clinker silo to lower conveyor (LC) | 2009 | 2,212,890 TPY | CD43.06 | | LACS to LC | Baghouse |
| CD43.06 | Small Clinker Storage Discharge D\C | 2009 | 2,119 dscfm | | | | N/A |
| EP43.07.01 | Big clinker silo (BCS) to upper conveyor 1 (UC1) | 2009 | 2,212,890 TPY | CD43.07 | | BCS to UC1 | Baghouse |
| EP43.07.02 | Big clinker silo (BCS) to upper conveyor 2 (UC2) | 2009 | 2,212,890 TPY | CD43.07 | | BCS to UC2 | Baghouse |
| EP43.07.03 | Big clinker silo (BCS) to lower conveyor (LC) | 2009 | 2,212,890 TPY | CD43.07 | | BCS to LC | Baghouse |
| EP43.07.04 | Big clinker silo (BCS) to short conveyor (SC) | 2009 | 2,212,890 TPY | CD43.07 | | BCS to SC | Baghouse |
| EP43.07.05 | Short conveyor (SC) to lower conveyor (LC) | 2009 | 2,212,890 TPY | CD43.07 | | SC to LC | Baghouse |
| CD43.07 | Clinker Storage Discharge D\C | 2009 | 2,119 dscfm | | | | N/A |
| EP43.08 | Upper conveyor 1 (UC1) to FM feed hoppers belt (FM FHB) | 2009 | 2,212,890 TPY | CD43.08 | | UC1 to FM FHB | Baghouse |
| CD43.08 | Finish Mill Conveying D\C1 | 2009 | 2,119 dscfm | | | | N/A |
| EP43.09 | Lower Conveyor (LC) to FM feed hoppers belt (FM FHB) | 2009 | 2,212,890 TPY | CD43.09 | | LC to FM FHB | Baghouse |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| CD43.09 | Finish Mill Conveying D\C2 | 2009 | 2,119 dscfm | | | | N/A |
| EP43.13 | Upper conveyor 2 (UC2) to FM feed hoppers belt (FM FHB) | 2009 | 2,212,890 TPY | CD43.13 | | UC2 to FM FHB | Baghouse |
| CD43.13 | Finish Mill Conveying D\C3 | 2009 | 2,119 dscfm | | | | N/A |
| EP43.18 | Big Clinker Silo | 2009 | 2,212,890 TPY | CD43.18 | | | Baghouse |
| CD43.18 | Big Clinker Silo D\C | 2009 | 2,654 dscfm | | | | |
| **Fuel Handling EU5** | | | | | | | |
| EP15.01.01 | Rail Unloading (RU) to Petcoke Hopper (PH) | 1966, 1972, and 2009 | 116,844 TPY | PE | | RU to PH | None |
| EP15.01.02 | Petcoke Hopper (PH) to feeders (PF) | 1966, 1972, and 2009 | 116,844 TPY | PE | | PH to PF | None |
| EP41.01.01 | Petcoke feeders (PF) to conveyor (PC1) | 2009 | 116,844 TPY | WS | | PF to PC1 | None |
| EP41.01.02 | Petcoke conveyor (PC1) to split to conveyor (PC2) | 2009 | 116,844 TPY | WS | | PC1 to PC2 | None |
| EP41.01.03 | Petcoke Conveyor (PC2) to CSH Fuel Bins (FB) or pile | 2009 | 116,844 TPY | PE | | PC2 to FB | None |
| EP41.01.04 | Coal truck unloading (TU) to storage hall (CSH) | 2009 | 175,266 TPY | PE | | TU to CSH | None |
| EP41.01.05 | Clam bucket (CB) to coal pile (CP) | 2009 | 175,266 TPY | PE | | CB to CP | None |
| EP41.01.06 | Pile (CP) to clam bucket (CB) | 2009 | 292,110 TPY | PE | | CP to CB | None |
| EP41.01.07 | Clam bucket (CB) to CSH fuel bins (FB) | 2009 | 292,110 TPY | PE | | CB to FB | None |
| EP41.02.01 | CSH Fuel Bins (FB) to feeders (FB FD) | 2009 | 292,110 TPY | PE | | FB to FB FD | None |
| EP41.02.02 | Feeders (FB FD) to Conveyor (CM C1) | 2009 | 292,110 TPY | WS | | FB FD to CM C1 | None |
| EP41.02.03 | Conveyor (CM C1) to split to conveyor (CM C2) | 2009 | 292,110 TPY | WS | | CM C1 to CM C2 | None |
| EP41.02.04 | Conveyor (CM C2) to Coal Mill (CM) | 2009 | 292,110 TPY | CD42.04 | | CM C2 to CM | Baghouse |
| **Cement Production EU6** | | | | | | | |
| EP43.14 | Conveyor (FM FHB) to clinker feeding hoppers (CFH1/2) (FM 1&2) | 2009 | 2,212,890 TPY | CD43.14 CD43.20 | | FM FHB to CFH1/2 | Baghouse |
| EP43.15 | Conveyor (FM FHB) to lower conveyor (LC2) (FM3) | 2009 | 2,212,890 TPY | CD43.14 CD43.20 | | FM FHB to LC2 | Baghouse |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| CD43.14 | Finish Mill 1 & 2 Hoppers D\C | 2009 | 5,297 dscfm | | | | N/A |
| CD43.20 | Normal Clinker Bin at Pan Conv. 73 D/C | 2013 | 9,500 dscfm | | | | N/A |
| EP43.16 | Lower conveyor (LC2) to clinker feeding hopper (CFH3) (FM3) | 2009 | 2,212,890 TPY | CD43.16 | | LC2 to CFH3 | Baghouse |
| CD43.16 | Finish Mill 3 Hopper D\C | 2009 | 5,297 dscfm | | | | N/A |
| CD43.17 | Normal Clinker Bin-Bin Vent D\C | 2010 | 2,793 dscfm | | | Clinker to Clinker Bin | N/A |
| EP26.06.03 | Gypsum/synthetic gypsum truck unloading (GTU) to storage hall (SH) | 2009 | 150,879 TPY | | | GTU to SH | None |
| EP26.06.04 | Clam bucket (CB1) to gypsum/synthetic gypsum pile (GP) | 2009 | 150,879 TPY | PE | | CB1 to GP | None |
| EP26.06.05 | Gypsum/synthetic gypsum pile (GP) to clam bucket (CB1) | 2009 | 150,879 TPY | PE | | GP to CB1 | None |
| EP26.06.06 | Clam bucket (CB1) to gypsum/synthetic gypsum bin (GB) (FM1/2/3) | 2009 | 150,879 TPY | PE | | CB1 to GB | None |
| EP26.07.01 | Limestone Pile (LP) to clam bucket (CB1) | 2009 | 150,879 TPY | PE | | LP to CB1 | None |
| EP26.07.02 | Clam bucket (CB1) to limestone bin (LB) (FM1/2/3) | 2009 | 150,879 TPY | PE | | CB1 to LB | None |
| EP27.01 | Conveyor (FM FHB) to clinker hopper (CFH1/2) | 2009 | 25,000 TPY | PE | | FM FHB to CFH1/2 | None |
| EP27.02 | Clinker hopper (CFH1/2) to crane (CB1) | 2009 | 25,000 TPY | PE | | CFH1/2 to CB1 | None |
| EP27.03 | Crane (CB1) to clinker pile (CP) | 2009 | 25,000 TPY | PE | | CB1 to CP | None |
| EP27.04 | Clinker pile (CP) to crane (CB1) | 2009 | 25,000 TPY | PE | | CP to CB1 | None |
| EP27.05 | Crane (CB1) to clinker bins (CFH1/2 & CFH3) (FM1/2/3) | 2009 | 25,000 TPY | PE | | CB1 to CFH1/2 & CFH3 | None |
| EP44.01 | L.A. clinker bin (LACB) to FM2 conveyor (FM2C) | 2009 | 2,212,890 TPY | CD44.01 | | LACB to FM2C | Baghouse |
| CD44.01 | Finish Mill 2 Feeding System D\C1 | 2009 | 3,178 dscfm | | | | N/A |
| EP44.02 | Clinker bin (CB) to FM1 conveyor (FM1C) | 2009 | 2,212,890 TPY | CD44.02 | | CB to FM1C | Baghouse |
| CD44.02 | Finish Mill 1 Feeding D\C1 | 2009 | 3,178 dscfm | | | | N/A |
| EP44.03 | Clinker Bin (CB) to FM2 conveyor (FM2C) | 2009 | 2,212,890 TPY | CD44.03 | | CB to FM2C | Baghouse |
| CD44.03 | Finish Mill 2 Feeding D\C2 | 2009 | 2,119 dscfm | | | | N/A |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[1] |
| EP44.04.01 | Limestone bin (LB) to FM2 conveyor (FM2C) | 2009 | 150,879 TPY | CD44.04 | | LB to FM2C | Baghouse |
| EP44.04.02 | Gypsum/synthetic gypsum bin (GB) to FM2 conveyor (FM2C) | 2009 | 150,879 TPY | CD44.04 | | GB to FM2C | Baghouse |
| CD44.04 | Finish Mill 2 Feeding D\C3 | 2009 | 3,178 dscfm | | | | N/A |
| EP44.05.01 | Limestone bin (LB) to FM1 conveyor (FM1C) | 2009 | 150,879 TPY | CD44.05 | | LB to FM1C | Baghouse |
| EP44.05.02 | Gypsum/synthetic gypsum bin (GB) to FM1 conveyor (FM1C) | 2009 | 150,879 TPY | CD44.05 | | GB to FM1C | Baghouse |
| CD44.05 | Finish Mill 1 Feeding D\C 2 | 2009 | 3,178 dscfm | | | | N/A |
| EP44.06 | FM1 conveyor (FM1C) to conveyor (FM1C2) | 2009 | 1,839,600 TPY | CD44.06 | | FM1C to FM1C2 | Baghouse |
| CD44.06 | Finish Mill 1 Conveying D\C | 2009 | 3,178 dscfm | | | | N/A |
| EP44.07.01 | Elevator (EL1) to FM1 conveyor (FM1C2) | 2009 | 1,839,600 TPY | CD44.07 CD44.18 | | EL1 to FM1C2 | Baghouse |
| EP44.07.02 | FM1 Conveyor (FM1C2) to bin (FM1B) | 2009 | 1,839,600 TPY | CD44.07 CD44.18 | | FM1C2 to FM1B | Baghouse |
| EP44.07.03 | Conveyor (FM1C2) to Finish Mill 1 (FM1) | 2009 | 1,839,600 TPY | CD44.07 CD44.18 | | FM1C2 to FM1 | Baghouse |
| CD44.07 | Finish Mill 1 High Zone D\C | 2009 | 7,416 dscfm | | | | N/A |
| CD44.18 | Finish Mill 1 Reject Elevator High Zone D/C | 2013 | 1,500 dscfm | | | | N/A |
| EP44.08.01 | Finish Mill 1 (FM1) to conveyor (FM1C3) | 2009 | 1,839,600 TPY | CD44.08 | | FM1 to FM1C3 | Baghouse |
| EP44.08.02 | Bin (FM1B) to FM1 conveyor (FM1C3) | 2009 | 1,839,600 TPY | CD44.08 | | FM1B to FM1C3 | Baghouse |
| EP44.08.03 | FM1 Conveyor (FM1C3) to bucket elevator (EL1) | 2009 | 1,839,600 TPY | CD44.08 | | FM1C3 to EL1 | Baghouse |
| CD44.08 | Finish Mill 1 Low Zone D\C | 2009 | 4,238 dscfm | | | | N/A |
| EP44.09 | Finish Mill 1 | 2009 | 1,839,600 TPY | CD44.09 | | | Baghouse |
| CD44.09 | Finish Mill 1 D\C | 2009 | 76,515 dscfm | | | | N/A |
| EP44.13 | Finish Mill 1 Conveying | 2009 | 1,839,600 TPY | CD44.13 | | | Baghouse |
| CD44.13 | Finish Mill 1 Discharge D\C | 2009 | 2,119 dscfm | | | | N/A |
| EP44.14 | FM2 Conveyor (FM2C) to conveyor (FM2C2) | 2009 | 1,839,600 TPY | CD44.14 | | FM2C to FM2C2 | Baghouse |
| CD44.14 | Finish Mill 2 Conveying D\C | 2009 | 3,178 dscfm | | | | N/A |
| EP44.10.01 | FM2 Elevator (EL2) to conveyor (FM2C2) | 2009 | 1,839,600 TPY | CD44.10 CD44.19 | | EL2 to FM2C2 | Baghouse |
| EP44.10.02 | FM2 Conveyor (FM2C2) to bin (FM2B) | 2009 | 1,839,600 TPY | CD44.10 CD44.19 | | FM2C2 to FM2B | Baghouse |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| EP44.10.03 | Conveyor (FM2C2) to Finish Mill 2 (FM2) | 2009 | 1,839,600 TPY | CD44.10 CD44.19 | | FM2C2 to FM2 | Baghouse |
| CD44.10 | Finish Mill 2 High Zone D\C | 2009 | 7,416 dscfm | | | | N/A |
| CD44.19 | Finish Mill 2 Reject Elevator High Zone D/C | 2013 | 1,500 dscfm | | | | N/A |
| EP44.11.01 | Finish Mill 2 (FM2) to conveyor (FM2C3) | 2009 | 1,839,600 TPY | CD44.11 | | FM2 to FM2C3 | Baghouse |
| EP44.11.02 | Bin (FM2B) to FM2 conveyor (FM2C3) | 2009 | 1,839,600 TPY | CD44.11 | | FM2B to FM2C3 | Baghouse |
| EP44.11.03 | FM2 Conveyor (FM2C3) to bucket elevator (EL2) | 2009 | 1,839,600 TPY | CD44.11 | | FM2C3 to EL2 | Baghouse |
| CD44.11 | Finish Mill 2 Low Zone D\C | 2009 | 4,238 dscfm | | | | N/A |
| EP44.12 | Finish Mill 2 | 2009 | 1,839,600 TPY | CD44.12 | | | Baghouse |
| CD44.12 | Finish Mill 2 D\C | 2009 | 76,515 dscfm | | | | N/A |
| EP44.15 | Finish Mill 2 conveying | 2009 | 1,839,600 TPY | CD44.15 | | | Baghouse |
| CD44.15 | Finish Mill 2 Discharge D\C | 2009 | 2,119 dscfm | | | | N/A |
| CD44.17 | Finish Mills Reject Bin D\C | 2011 | 294 dscfm | | | Rejects to Reject Bin | N/A |
| EP44.16 | Finish Mill 1/2 Air Heater | 2009 | 19.84 MMBtu/hr | CD44.09 CD44.12 | | | Baghouse |
| EP19.01Pb | No. 3 Finish Mill Separator (Existing FM10) | 1965, 1986, 2009 | 695,243 TPY | CD19.02 | | | Baghouse |
| CD19.02 | Finish Mill 3 Baghouse D\C | 1986, 2009 | 1,801 dscfm | | | | N/A |
| EP19.01U | FM3 Feed bins (FM3B) to feeders (FM3F) | 1965, 1986, 2009 | 695,243 TPY | CD19.01 | | FM3B to FM3F | Baghouse |
| EP19.01Pa.01 | FM3 Feeders (FM3F) to belt conveyor 650 | 1965, 1986, 2009 | 695,243 TPY | CD19.01 | | FM3F to 650 | Baghouse |
| EP19.01Pa.02 | Belt conveyor 650 to FM3 | 1965, 1986, 2009 | 695,243 TPY | CD19.01 | | 650 to FM3 | Baghouse |
| EP19.02 | Finish Mill 3 | 1965, 1986, 2009 | 695,243 TPY | CD19.01 | | | Baghouse |
| CD19.01 | Finish Mill 3 Norblo D\C | 1986, 2009 | 20,000 dscfm | | | | N/A |
| **Shipping EU7** | | | | | | | |
| EP45.01 | Finish Mill 1 airslides (FM1A) | 2009 | 1,839,600 TPY | CD45.01 | | FM1 to FM1A | Baghouse |
| CD45.01 | Finish Mill 1 Airslides D\C | 2009 | ~~4,238~~ 4,620 dscfm | | | | N/A |
| EP45.02 | Finish Mill 2 airslides (FM2A) | 2009 | 1,839,600 TPY | CD45.02 | | FM2 to FM2A | Baghouse |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| CD45.02 | Finish Mill 2 airslides D\C | 2009 | ~~4,238~~ 4,620 dscfm | | | | N/A |
| EP45.03 | Finish Mill 1 to cement silos (CS) | 2009 | 1,839,600 TPY | CD45.03 | | FM1A to CS | Baghouse |
| CD45.03 | Cement Silos Feeding D\C1 | 2009 | 3,178 dscfm | | | | N/A |
| EP45.04 | Finish Mill 2 to cement silos (CS) | 2009 | 1,839,600 TPY | CD45.04 | | FM2A to CS | Baghouse |
| CD45.04 | Cement Silos Feeding D\C2 | 2009 | 3,178 dscfm | | | | N/A |
| EP45.05 | Cement Silo A1 & A2 | 2009 | 1,810,546 TPY | CD45.05 | | | Baghouse |
| CD45.05 | Cement Silo A1 & A2 D\C | 2009 | 5,062 dscfm | | | | N/A |
| EP45.06 | Cement Silo B1 & B2 | 2009 | 1,810,546 TPY | CD45.06 | | | Baghouse |
| CD45.06 | Cement Silo B1 & B2 D\C | 2009 | 5,062 dscfm | | | | N/A |
| EP45.07 | Cement Silo C1 & C2 | 2009 | 1,810,546 TPY | CD45.07 | | | Baghouse |
| CD45.07 | Cement Silo C1 & C2 D\C | 2009 | 5,297 dscfm | | | | N/A |
| EP45.08 | Bulk lane loudout 1 | 2009 | 1,810,546 TPY | CD45.08 | | CS to Trucks | Baghouse |
| CD45.08 | Truck Loudout 1 D\C | 2009 | 3,178 dscfm | | | | N/A |
| EP45.09 | Bulk lane loadout 2 | 2009 | 1,810,546 TPY | CD45.09 | | CS to Trucks | Baghouse |
| CD45.09 | Truck Loadout 2 D\C | 2009 | 2,825 dscfm | | | | N/A |
| EP45.10 | Bulk lane loadout 3 | 2009 | 1,810,546 TPY | CD45.10 | | CS to Trucks | Baghouse |
| CD45.10 | Truck Loadout 3 D\C | 2009 | 2,825 dscfm | | | | N/A |
| EP45.11 | Bulk lane loadout 4 | 2009 | 1,810,546 TPY | CD45.11 | | CS to Trucks | Baghouse |
| CD45.11 | Truck Loadout 4 D\C | 2009 | 3,178 dscfm | | | | N/A |
| EP45.14 | Cement Analyzer | 2009 | 1,810,546 TPY | CD45.14 | | | Baghouse |
| CD45.14 | Cement Analyzer D\C | 2009 | 1,471 dscfm | | | | N/A |
| EP45.15 | Transfer Airslide at the Multi Cell | 2010 | 1,810,546 TPY | CD45.15 | | | Baghouse |
| CD45.15 | Transfer Airslide D\C at the Multi Cell | 2010 | 2,420 dscfm | | | Cement Transfer to Multi Cell | N/A |
| EP21.05 | Middle Bank Silos 1 DC | 2009 | 2,514,648 TPY | CD21.05 | | | Baghouse |
| CD21.05 | Middle Bank Silos 1 D\C | 2009 | 4,560 dscfm | | | | N/A |
| EP21.06 | Middle Bank Silos 2 DC | 2009 | 2,514,648 TPY | CD21.06 | | | Baghouse |
| CD21.06 | Middle Bank Silos 2 D\C | 2009 | 4,560 dscfm | | | | N/A |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[1] |
| EP21.07 | Middle Bank Silos 3 DC | 2009 | 2,514,648 TPY | CD21.07 | | | Baghouse |
| CD21.07 | Middle Bank Silos 3 D\C | 2009 | 4,560 dscfm | | | | N/A |
| EP21.08 | Middle Bank Silos 4 DC | 2009 | 2,514,648 TPY | CD21.08 | | | Baghouse |
| CD21.08 | Middle Bank Silos 4 D\C | 2009 | 4,560 dscfm | | | | N/A |
| EP21.09 | Middle Bank Silos 5 DC | 2009 | 2,514,648 TPY | CD21.09 | | | Baghouse |
| CD21.09 | Middle Bank Silos 5 D\C | 2009 | 4,560 dscfm | | | | N/A |
| EP21.10 | Middle Bank Bin Vent 1 - Silos Inlet | 2009 | 2,514,648 TPY | CD21.10 | | | Baghouse |
| CD21.10 | Middle Bank Vent 1 D\C | 2009 | 1,615 dscfm | | | | N/A |
| EP21.11 | Middle Bank Bin Vent 2 - Silos Inlet | 2009 | 2,514,648 TPY | CD21.11 | | | Baghouse |
| CD21.11 | Middle Bank Vent 2 D\C | 2009 | 1,615 dscfm | | | | N/A |
| EP21.12 | Middle Bank Bin Vent 3 - Silos Discharge | 2009 | 2,514,648 TPY | CD21.12 | | | Baghouse |
| CD21.12 | Middle Bank Vent 3 D\C | 2009 | ~~2,000~~ 350 dscfm | | | | N/A |
| EP21.13 | Middle Bank Bin Vent 4 - Silos Discharge | 2009 | 2,514,648 TPY | CD21.13 | | | Baghouse |
| CD21.13 | Middle Bank Vent 4 D\C | 2009 | ~~2,000~~ 350 dscfm | | | | N/A |
| EP22.04 | West Bank Silos | 2009 | 2,514,648 TPY | CD22.04 | | | Baghouse |
| CD22.04 | West Bank Silos D\C | 2009 | 8,769 dscfm | | | | N/A |
| EP22.05 | West Bank Silo #71 | 2009 | 2,514,648 TPY | CD22.05 | | | Baghouse |
| CD22.05 | West Bank Silos #71 D\C | 2009 | 1,000 dscfm | | | | N/A |
| EP22.06 | West Bank Silo #72 | 2009 | 2,514,648 TPY | CD22.06 | | | Baghouse |
| CD22.06 | West Bank Silos #72 D\C | 2009 | 1,000 dscfm | | | | N/A |
| EP22.07 | West Bank Silo #82 | 2009 | 2,514,648 TPY | CD22.07 | | | Baghouse |
| CD22.07 | West Bank Silos #82 D\C | 2009 | 1,000 dscfm | | | | N/A |
| EP22.08 | West Bank Silo #83 | 2009 | 2,514,648 TPY | CD22.08 | | | Baghouse |
| CD22.08 | West Bank Silos #83 D\C | 2009 | 1,000 dscfm | | | | N/A |
| EP23.01 | Packer #1 N.E. | 1956, 1971, and 1997 | 251,465 TPY | CD23.01 | | | Baghouse |
| CD23.01 | N.E. Packer D\C | | 7,043 dscfm | | | | N/A |
| EP45.12 | Bulk rail loadout 1 | 2009 | 2,514,648 TPY | CD45.12 | | | Baghouse |
| CD45.12 | Rail Loadout 1 D\C | 2009 | 2,750 dscfm | | | | N/A |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| EP45.13 | Bulk rail loadout 2 | 2009 | 2,514,648 TPY | CD45.13 | | | Baghouse |
| CD45.13 | Rail Loadout 2 D\C | 2009 | 2,750 dscfm | | | | N/A |
| EP46.01 | Truck Loadout Silo 1 | 2010 | 1,810,546 TPY | CD46.01 | | | Baghouse |
| CD46.01 | Truck Loadout Silo 1 D\C | 2010 | 3,323 dscfm | | | | N/A |
| EP46.02 | Truck Loadout Silo 2 | 2010 | 1,810,546 TPY | CD46.02 | | | Baghouse |
| CD46.02 | Truck Loadout Silo 2 D\C | 2010 | 7,283 dscfm | | | | N/A |
| EP46.03 | Truck Loadout Silo 3 | 2010 | 1,810,546 TPY | CD46.03 | | | Baghouse |
| CD46.03 | Truck Loadout Silo 3 D\C | 2010 | 2,503 dscfm | | | | N/A |
| EP46.04 | Truck Loadout Silo 4 | 2010 | 1,810,546 TPY | CD46.04 | | | Baghouse |
| CD46.04 | Truck Loadout Silo 4 D\C | 2010 | 2,503 dscfm | | | | N/A |
| EP46.05 | Truck Loadout Silo 5 | 2010 | 1,810,546 TPY | CD46.05 | | | Baghouse |
| CD46.05 | Truck Loadout Silo 5 D\C | 2010 | 2,354 dscfm | | | | N/A |
| EP46.06 | Bulk loadout 5 - Truck Loadout Silos | 2010 | 1,810,546 TPY | CD46.06 | | | Baghouse |
| CD46.06 | Truck Loadout 5 D\C | 2010 | 1,791 dscfm | | | | N/A |
| EP46.07 | Bulk loadout 6 - Truck Loadout Silos | 2010 | 1,810,546 TPY | CD46.07 | | | Baghouse |
| CD46.07 | Truck Loadout 6 D\C | 2010 | 1,791 dscfm | | | | N/A |
| EP20.04 | East Bank Silos 1 | 2009 | 695,243 TPY | CD20.04 | | | Baghouse |
| CD20.04 | East Bank Silos 1 D\C | 2009 | 3,800 dscfm | | | | N/A |
| EP20.05 | East Bank Silos 2 | 2009 | 695,243 TPY | CD20.05 | | | Baghouse |
| CD20.05 | East Bank Silos 2D\C | 2009 | 3,800 dscfm | | | | N/A |
| EP20.06 | East Bank Silos 3 | 2009 | 695,243 TPY | CD20.06 | | | Baghouse |
| CD20.06 | East Bank Silos 3D\C | 2009 | 3,800 dscfm | | | | N/A |
| EP48.01 | Packhouse | 2009 | 251,465 TPY | CD48.01 | | | Baghouse |
| CD48.01 | Packhouse D\C | 2009 | 13,449 dscfm | | | | N/A |
| EP45.16 | Rail Transloader (50-hp diesel engine-driven) | 2013 | 219,960 TPY | CD45.16 | | | Baghouse |
| CD45.16 | Rail Transloader D\C | 2013 | 8,200 dscfm | | | | N/A |

| Other Miscellaneous Sources EU8 | | | | | | | |
|---|---|---|---|---|---|---|---|
| EP31.01 | Flyash Tank #1 | 2009 | 50,293 TPY | CD31.01 | | | Baghouse |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device[(1)] |
| CD31.01 | Flyash Tank No.1 D\C | 2009 | 2,401 dscfm | | | | N/A |
| EP31.02 | Bypass Dust Tank | 2009 | 50,293 TPY | CD31.02 | | | Baghouse |
| CD31.02 | Bypass Dust Tank D\C | 2009 | 2,401 dscfm | | | | N/A |
| EP31.03 | Bypass Dust silo/loadout | 2009 | 50,293 TPY | CD31.03 | | | Baghouse |
| CD31.03 | Bypass Dust Loadout D\C | 2009 | 2,943 dscfm | | | | N/A |
| EP22.09 | Dry Flyash Weigh Bin/Alleviator | 2009 | 264,552 TPY | CD22.09 | | | Baghouse |
| CD22.09 | Dry Flyash Bin D\C | 2009 | 2,750 dscfm | | | | N/A |
| EP0B.01 | Administrative Boiler 1 | 2009 | 1.66 MMBtu/hr | None | | | None |
| EP0B.02 | Administrative Boiler 2 | 2009 | 1.66 MMBtu/hr | None | | | None |
| EP0G.01 | Emergency Generator | 2009 | 1000kw | None | | | None |
| EP0X.04 | Crusher feed pile | 1972 | 1 acre | None | | | None |
| EP0X.05 | Quarry Waste pile | 1972 | 3.1 acres | None | | | None |
| EP0X.06 | New Crusher feed pile | 2009 | 2 acres | None | | | None |
| EP03.01 | Storage Bays – 5 piles | 1966 and 1971 | 1.06 acres | PE | | | None |
| EP26.05 | Gypsum/synthetic gypsum storage pile (Craneway) | 2009 | 0.25 acre | PE | | | None |
| EP26.08 | Limestone Storage pile (Craneway) | 2009 | 0.25 acre | PE | | | None |
| EP15.04.03 | Coal storage pile (Craneway) | 2009 | 0.25 acre | PE | | | None |
| EP15.04.04 | Petcoke Storage Pile (Craneway) | 2009 | 0.25 acre | PE | | | None |
| EP14.08 | Clinker stockpile (Craneway) | 2009 | 0.1 acre | PE | | | None |
| EP25.01 | Quarry Haul Roads (new crusher) | 2009 | 4,125,933 TPY | DSWS | None | None | None |
| EP25.02 | Quarry Haul Roads (old crusher) | 2009 | 150,879 TPY | DSWS | None | None | None |
| EP25.03 | Quarry Haul Roads (waste) | 2009 | 213,841 TPY | DSWS | None | None | None |
| EP25.04.02 | Cement Shipments | 2009 | 2,062,011 TPY | DSWS | None | None | None |
| EP25.05.01 | Additive Trucks (unpaved) | 2009 | 219,076 TPY | DSWS | None | None | None |
| EP25.05.02 | Additive Trucks (paved) | 2009 | 219,076 TPY | DSWS | None | None | None |
| EP25.06.01 | Fuel deliveries (unpaved) | 2009 | 175,266 TPY | DSWS | None | None | None |
| EP25.06.02 | Fuel Deliveries (paved) | 2009 | 175,266 TPY | DSWS | None | None | None |
| EP25.07 | Waste Dust Trucks (unpaved) | 2009 | 90,801 TPY | DSWS | None | None | None |
| EP25.08 | Misc. Plant vehicles (unpaved) | 2009 | | DSWS | None | None | None |
| EP25.09.01 | Dry Flyash trucks (For Cement) (unpaved) | 2009 | 50,293 TPY | DSWS | None | None | None |

| Emission Unit ID | Emission Unit Description | Year Installed or Modified | Design or Nominal Capacity | Control Device | Associated Emissions Points | | |
|---|---|---|---|---|---|---|---|
| | | | | | ID No | Transfer Description | Fugitive Dust Control System/ Control Device(1) |
| EP25.09.02 | Dry Flyash trucks (For Cement) (paved) | 2009 | 50,293 TPY | DSWS | None | None | None |
| EP25.09.03 | Dry Flyash trucks (For Calciner) (unpaved) | 2009 | 264,552 TPY | DSWS | None | None | None |
| EP25.09.04 | Dry Flyash trucks (For Calciner) (paved) | 2009 | 264,552 TPY | DSWS | None | None | None |
| EP25.10.01 | Waste Dust Customer Trucks (unpaved) | 2009 | 35,274 TPY | DSWS | None | None | None |
| EP25.10.02 | Waste Dust Customer Trucks (paved) | 2009 | 35,274 TPY | DSWS | None | None | None |
| EP25.12 | Gypsum/Synthetic Gypsum Haul Roads (paved) | 2009 | 150,879 TPY | DSWS | None | None | None |
| EP25.14 | Gypsum/Synthetic Gypsum Haul Road (unpaved) | 2009 | 150,879 TPY | DSWS | None | None | None |
| EP42.06.01 | Lime deliveries (unpaved) | 2009 | 77,161 TPY | DSWS | None | None | None |
| EP42.06.02 | Lime deliveries (paved) | 2009 | 77,161 TPY | DSWS | None | None | None |
| EP50.01 | Quarry Diesel Tank | 2009 | 15,000 gal | | | | None |
| EP50.02 | Light Oil Tank | 2009 | 64,500 gal | | | | None |
| EP50.03 | Grinding Aid Tank | 2009 | 10,600 gal | | | | None |
| EP50.04 | Air Entrainment Tank | 2009 | 5,300 gal | | | | None |

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

(2) Temperature value limits established by stack testing.

### 1.2. Active R13, R14, and R19 Permits

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

| Permit Number | Date of Issuance |
|---|---|
| R14-026~~H~~I | ~~December 13, 2012~~ March 14, 2013 |

## 2.0. General Conditions

### 2.1. Definitions

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

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

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

### 2.2. Acronyms

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

## 2.3. Permit Expiration and Renewal

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

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

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

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

## 2.4. Permit Actions

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

## 2.5. Reopening for Cause

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

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

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

c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

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

**[45CSR§30-6.6.a.]**

## 2.6. Administrative Permit Amendments

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

## 2.7. Minor Permit Modifications

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

## 2.8. Significant Permit Modification

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

## 2.9. Emissions Trading

2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.
**[45CSR§30-5.1.h.]**

## 2.10. Off-Permit Changes

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

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

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

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

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

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

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

**[45CSR§30-5.9.]**

## 2.11. Operational Flexibility

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

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

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

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

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

**[45CSR§30-5.8.c.]**

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

## 2.12. Reasonably Anticipated Operating Scenarios

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

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

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

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

**[45CSR§30-5.1.i.]**

## 2.13. Duty to Comply

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

## 2.14. Inspection and Entry

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

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

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

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

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

**[45CSR§30-5.3.b.]**

## 2.15. Schedule of Compliance

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

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

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

**[45CSR§30-5.3.d.]**

## 2.16. Need to Halt or Reduce Activity not a Defense

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

## 2.17. Emergency

2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.
**[45CSR§30-5.7.a.]**

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

2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

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

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

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

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

**[45CSR§30-5.7.c.]**

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

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

## 2.18. Federally-Enforceable Requirements

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

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

## 2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.
**[45CSR§30-5.1.f.5.]**

## 2.20. Duty to Supplement and Correct Information

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

## 2.21. Permit Shield

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

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

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

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

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

**[45CSR§30-5.6.c.]**

## 2.22. Credible Evidence

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

## 2.23. Severability

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

## 2.24. Property Rights

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

## 2.25. Acid Deposition Control

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

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

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

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

**[45CSR§30-5.1.d.]**

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

# 3.0. Facility-Wide Requirements

## 3.1. Limitations and Standards

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

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

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

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

3.1.5. Reserved.

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

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

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

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

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

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

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

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

3.1.10. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any process source operation which is greater than twenty (20) percent opacity, except as noted in subsections 45CSR§7- 3.2 (See Section 3.1.11), 3.3, 3.4, 3.5, 3.6, and 3.7. (See Section 3.1.12).
**[45CSR§7-3.1., 45CSR14, R14-026, B.3., EU1, EU2, CD45.16 (Rail Transloader) in EU7, EU8]**

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

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

3.1.13. Reserved.

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

3.1.15. No person shall cause, suffer, allow, or permit any manufacturing process generating fugitive particulate matter to operate that is not equipped with a system to minimize the emissions of fugitive particulate matter. To minimize means that a particulate capture or suppression system shall be installed to ensure the lowest fugitive particulate emissions reasonably achievable.
**[45CSR§7-5.1., 45CSR14, R14-026, B.3.]**

3.1.16. The owner or operator of a plant shall maintain dust control of the plant premises, and plant owned, leased or controlled access roads, by paving, application of asphalt, chemical dust suppressants or other suitable dust control measures. Good operating practices shall be implemented and when necessary dust suppressants shall be applied in relation to stockpiling and general material handling to prevent dust generation and atmospheric entrainment.
**[45CSR§7-5.2., 45CSR14, R14-026, B.3.]**

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

3.1.18. Maintenance operations (as defined in 45CSR7) shall be exempt from the provisions of 45CSR§7-4 provided that at all times the owner or operator shall conduct maintenance operations in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Director, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the source.
**[45CSR§7-10.3.]**

3.1.19. If your source is an existing or new raw or finish mill, your emission limit is ten percent (10%) opacity.
**[45CSR34, 40 C.F.R. §63.1343(b)(1) Table 1, Row 16, Finish Mill #10, 45CSR14, R14-026, B.10., 40 C.F.R. §60.62(c), 45CSR16, EU2 and EU6]**

3.1.20. The owner or operator of each new or existing raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; and bulk loading or unloading system, at a facility which is a major source subject to the provisions of 40 C.F.R. Part 63 Subpart LLL shall not cause to be discharged any gases from these affected sources which exhibit opacity in excess of ten percent.
**[45CSR34, 40 C.F.R. §63.1345, 45CSR14, R14-026, B.10., 40 C.F.R. §60.62(c), 45CSR16, EU2, EU4, EU6, EU7, and EP42.09]**

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

3.1.22. In accordance with 40 C.F.R. §63.1351(c), the compliance date for existing sources for all requirements which became effective November 8, 2010 will be September 9, 2013. The permittee shall comply with all applicable amended requirements for existing sources under 40 C.F.R. 63, Subpart LLL - "National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry" no later than September 9, 2013 or a new compliance date set by U.S. EPA. The permittee shall submit a Notification of Compliance Status (NOCS) and a complete application for a significant modification of this Title V permit to incorporate the specific requirements of 40 C.F.R. 63, Subpart LLL in the operating permit on or prior to the 60th day following the completion of the relevant compliance demonstration activity specified in 40 C.F.R. 63 Subpart LLL.

Operating Mode: Normal Operation

| Pollutant | Existing Source Kilns |
|---|---|
| Mercury | 55 pounds per million tons of clinker, averaged over 30 days |
| Total Hydrocarbons | 24 parts per million by volume (ppmv), averaged over 30 days, measured as propane. |
| Particulate Matter<br>(as a surrogate for toxic metals other than mercury) | 0.04 pounds per ton of clinker, averaged over 30 days |
| Hydrochloric acid (major sources only) | 3 ppmv, averaged over 30 days |

Operating Mode: Startup and Shutdown

| Pollutant | Existing Source Kilns |
|---|---|
| Mercury | 10 ug/dscm |
| Total Hydrocarbons | 24 ppmvd (measured as propane) |
| Particulate Matter | 0.004 gr/dscf |
| Hydrochloric acid | 3 ppmvd (If the kiln does not have a HCl CEM, the emissions limit is zero.) |

**[45CSR34; 40 C.F.R. §§ 63.6(c), 63.1351(c), 63.1353(b)(5), 63.1343(b)(1), Table 1, Rows 1, 2, 3, and 4, and 63.9(h)(2)(i) *and* (ii)]**

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

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

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

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

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

**[45CSR34; 40 C.F.R. §63.1348(a)(3)]**

## 3.2. Monitoring Requirements

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

(1) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits of 40 C.F.R. §§ 63.1343 through 63.1348;

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

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

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

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

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

(i) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to 40 C.F.R part 60 of Chapter I of Title 40. The test must be conducted while the affected source is in operation.

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

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

(iv) If visible emissions are observed during any Method 22 test, the owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of Chapter I of Title 40. The Method 9 test must begin within one hour of any observation of visible emissions.

(v) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall

mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

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

(vii) If visible emissions from a building are monitored, the requirements of Section 3.2.1 (4) (i) [40 C.F.R. § 63.1350 (a) (4) (i)] apply to the monitoring of the building, and you must also test visible emissions from each side, roof and vent of the building for at least 1-minute. The test must be conducted under normal operating conditions.

*This condition 3.2.1(4) shall remain in effect until the compliance date specified in condition 3.1.22*.

**[45CSR34, 40 C.F.R. §63.1350 (a), 45CSR14, R14-026, B.10., EU2, EU3, EU4, EU5,EU6, EU7, EU8]**

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

**Continuous Compliance for Opacity**
If you are subject to the limitations on opacity under 40 C.F.R. §63.1345 (condition 3.1.20.), you must demonstrate continuous compliance with the opacity emissions standards by using the monitoring methods and procedures in 40 C.F.R. §63.1350(f).

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

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

**[45CSR§30-12.7., 45CSR34, 40 C.F.R. §§ 63.1348(b)(3), 63.1348(b)(3)(ii) and 63.1350(f)(4)(i), 40 C.F.R. §60.64(b)(4), 45CSR16, 45CSR14, R14-026, B.10., EP42.04]**

3.2.3. Reserved.

3.2.4. The owner or operator of a raw mill or finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator particulate matter control devices (PMCD) of these affected sources in accordance with the procedures of Method 22 of appendix A-7 to part 60 of chapter I of Title 40. The duration of the Method 22 test shall be 6 minutes.

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

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

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

**[45CSR34, 40 C.F.R. § 63.1350(f)(2)(i), (ii), and (iii), §63.1350(f)(3), 40 C.F.R. §60.64(b)(4), 45CSR16, Finish Mill #10, 45CSR14, R14-026, B.10., EU2 and EU6]**

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

(1) You must install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill, coal mill, and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill, coal mill, and/or alkali bypass PM control devices.

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

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

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

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

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

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

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

*Note: The requirement for an emission monitoring plan is not effective until the compliance date specified in Condition 3.1.22.*

**[45CSR34, 40 C.F.R. §63.1350(g), 45CSR14, R14-026, B.10., EP42.04]**

3.2.6. Reserved.

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

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

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

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

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

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

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

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

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

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

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

**[45CSR34, 40 C.F.R. §§ 63.1350(f)(1)(i) through (vii) and (f)(2)(i) through (iii), 40 C.F.R. §60.64(b)(4), 45CSR16, 45CSR14, R14-026, B.10., EU2, EU3, EU4, EU6, EU7]**

3.2.8. The owner or operator of an affected source subject to a particulate matter standard under 40 C.F.R. § 63.1343 shall install, calibrate, maintain, and operate a particulate matter continuous emission monitoring system (PM CEMS) to measure the particulate matter discharged to the atmosphere. All requirements relating to installation, calibration, maintenance, operation or performance of the PM CEMS and implementation of the PM CEMS requirement are deferred pending further rulemaking.
**[45CSR34, 40 C.F.R. § 63.1350(k), 45CSR14, R14-026, B.10., EP42.04]** *Note: This condition 3.2.8. shall remain in effect until the compliance date specified in condition 3.1.22.*

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

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

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

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

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

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

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

(4) The Administrator will notify you of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any

supplementary information, whichever is later. The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide:

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

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

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

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

**[45CSR34, 40 C.F.R. §63.1350(o), 40 C.F.R. §60.64(b)(4), 45CSR16, EU3, EU4, EU6, EU7]**

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

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

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

**[45CSR34, 40 C.F.R. §63.1350(f)(4), 40 C.F.R. §60.64(b)(4), 45CSR16, 45CSR14, R14-026, B.10., EU2 and EU6]**

3.2.11. *Startup, shutdown, and malfunction plan.*

(i) The owner or operator of an affected source must develop and implement a written startup, shutdown, and malfunction plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard. This plan must be developed by the owner or operator by the source's compliance date for that relevant standard. The purpose of the startup, shutdown, and malfunction plan is to --

(A) Ensure that, at all times, the owner or operator operates and maintains each affected source, including associated air pollution control and monitoring equipment, in a manner which satisfies the general duty to minimize emissions established by 40 C.F.R. § 63.3 (e) (1) (i);

(B) Ensure that owners or operators are prepared to correct malfunctions as soon as practicable after their occurrence in order to minimize excess emissions of hazardous air pollutants; and

(C) Reduce the reporting burden associated with periods of startup, shutdown, and malfunction (including corrective action taken to restore malfunctioning process and air pollution control equipment to its normal or usual manner of operation).

(ii) During periods of startup, shutdown, and malfunction, the owner or operator of an affected source must operate and maintain such source (including associated air pollution control and monitoring equipment) in accordance with the procedures specified in the startup, shutdown, and malfunction plan developed under Section 3.2.11 (i) [40 C.F.R. § 63.3 (e) (3) (i)].

(iii) When actions taken by the owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan for that event. In addition, the owner or operator must keep records of these events as specified in 40 C.F.R. § 63.10 (b), including records of the occurrence and duration of each startup, shutdown, or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in 40 C.F.R. § 63.10 (d) (5).

(iv) If an action taken by the owner or operator during a startup, shutdown, or malfunction (including an action taken to correct a malfunction) is not consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, and the source exceeds any applicable emission limitation in the relevant emission standard, then the owner or operator must record the actions taken for that event and must report such actions within 2 working days after commencing actions inconsistent with the plan, followed by a letter within 7 working days after the end of the event, in accordance with 40 C.F.R. § 63.10 (d) (5) (unless the owner or operator makes alternative reporting arrangements, in advance, with the Administrator).

(v) The owner or operator must maintain at the affected source a current startup, shutdown, and malfunction plan and must make the plan available upon request for inspection and copying by the Administrator. In addition, if the startup, shutdown, and malfunction plan is subsequently revised as provided in Section 3.2.11 (viii) [40 C.F.R. § 63.3 (e) (3) (viii)], the owner or operator must maintain at the affected source each previous (i.e., superseded) version of the startup, shutdown, and malfunction plan, and must make each such previous version available for inspection and copying by the Administrator for a period of 5 years after revision of the plan. If at any time after adoption of a startup, shutdown, and malfunction plan the affected source ceases operation or is otherwise no longer subject to the provisions of this part, the owner or operator must retain a copy of the most recent plan for 5 years from the date the source ceases operation or is no longer subject to this part and must make the plan available upon request for inspection and copying by the Administrator. The Administrator may at any time request in writing that the owner or operator submit a copy of any startup, shutdown, and malfunction plan (or a portion thereof) which is maintained at the affected source or in the possession of the owner or operator. Upon receipt of such a request, the owner or operator must promptly submit a copy of the requested plan (or a portion thereof) to the Administrator. The Administrator must request that the owner or operator submit a particular startup, shutdown, or malfunction plan (or a portion thereof) whenever a member of the public submits a specific and reasonable request to examine or to receive a copy of

that plan or portion of a plan. The owner or operator may elect to submit the required copy of any startup, shutdown, and malfunction plan to the Administrator in an electronic format. If the owner or operator claims that any portion of such a startup, shutdown, and malfunction plan is confidential business information entitled to protection from disclosure under section 114(c) of the Clean Air Act or 40 CFR 2.301, the material which is claimed as confidential must be clearly designated in the submission.

(vi) To satisfy the requirements of this section to develop a startup, shutdown, and malfunction plan, the owner or operator may use the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of this section and are made available for inspection or submitted when requested by the Administrator.

(vii) Based on the results of a determination made under 40 C.F.R. § 63.3 6 (e) (1) (i), the Administrator may require that an owner or operator of an affected source make changes to the startup, shutdown, and malfunction plan for that source. The Administrator must require appropriate revisions to a startup, shutdown, and malfunction plan, if the Administrator finds that the plan:

(A) Does not address a startup, shutdown, or malfunction event that has occurred;

(B) Fails to provide for the operation of the source (including associated air pollution control and monitoring equipment) during a startup, shutdown, or malfunction event in a manner consistent with the general duty to minimize emissions established by 40 C.F.R. § 63.3 (e) (1) (i);

(C) Does not provide adequate procedures for correcting malfunctioning process and/or air pollution control and monitoring equipment as quickly as practicable; or

(D) Includes an event that does not meet the definition of startup, shutdown, or malfunction listed in 40 C.F.R. § 63.2.

(viii) The owner or operator may periodically revise the startup, shutdown, and malfunction plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. Unless the permitting authority provides otherwise, the owner or operator may make such revisions to the startup, shutdown, and malfunction plan without prior approval by the Administrator or the permitting authority. However, each such revision to a startup, shutdown, and malfunction plan must be reported in the semiannual report required by 40 C.F.R. § 63.10 (d) (5). If the startup, shutdown, and malfunction plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the startup, shutdown, and malfunction plan at the time the owner or operator developed the plan, the owner or operator must revise the startup, shutdown, and malfunction plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment. In the event that the owner or operator makes any revision to the startup, shutdown, and malfunction plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the owner or operator has provided a written notice describing the revision to the permitting authority.

(ix) The Title V permit for an affected source must require that the owner or operator adopt a startup,

shutdown, and malfunction plan which conforms to the provisions of this part, and that the owner or operator operate and maintain the source in accordance with the procedures specified in the current startup, shutdown, and malfunction plan. However, any revisions made to the startup, shutdown, and malfunction plan in accordance with the procedures established by this part shall not be deemed to constitute permit revisions under part 70 or part 71 of this chapter. Moreover, none of the procedures specified by the startup, shutdown, and malfunction plan for an affected source shall be deemed to fall within the permit shield provision in section 504 (f) of the Clean Air Act.

**[45CSR34, 40 C.F.R. §63.6(e)(3), EU2 through EU7]**

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

a. Visible emission observations shall be conducted weekly for fugitive particulate emission activities identified in Section 1.0 by a certified Method 9 observer during periods of normal operation for a sufficient time interval to determine if any of the emission units listed above or emission points have visible emissions and if so, the opacity of the emissions. If any of the emission units listed above or emission points have visible emissions exceeding the regulatory limit of twenty percent (20%) opacity, then a 45CSR7A evaluation shall be conducted immediately after the violation of the regulatory limit unless the permittee can demonstrate a valid reason that the time frame should be extended. A 45CSR7A evaluation shall not be required if the condition resulting in the excess visible emissions is corrected within 24 hours and the units are operated at normal operating conditions.

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

**[45CSR§30-5.1.c.]**

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

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

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

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

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

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

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

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

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

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

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

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

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

*Note: The requirement for an emission monitoring plan is not effective until the compliance date specified in Condition 3.1.22.*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

## 3.3. Testing Requirements

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

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

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

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

d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status,

also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

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

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

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

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

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

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

(2) Sampling location description(s);

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

(4) Test results;

(5) Quality assurance procedures and results;

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

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

(8) Documentation of calculations;

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

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

**[45CSR34, 40 C.F.R. §63.1349(a), 45CSR14, R14-026, B.10., EU3, EU4, EU6, EU7]**

3.3.3. (1) The owner or operator of a kiln subject to limitations on particulate matter emissions shall demonstrate compliance by conducting a performance test as specified in Section 3.3.3 (1) (i) through (1) (iv) [40 C.F.R. §§ 63.1349 (b) (1) (i) through (b) (1) (iv)]. The owner or operator of an in-line kiln/raw mill subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting separate performance tests as specified in Section 3.3.3 (1)(i) through (1)(iv) [40 C.F.R. §§ 63.1349 (b) (1) (i) through (b) (1) (iv)] while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. The owner or operator of a clinker cooler subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test as specified in Section 3.3.3 (1) (i) through (1) (iii) [40 C.F.R. §§ 63.1349 (b) (1) (i) through (b) (1) (iii)]. The opacity exhibited during the period of the Method 5 of Appendix A to 40 C.F.R. part 60 of Chapter I of Title 40 performance tests required by Section 3.3.3 (1) (i) [40 C.F.R. § 63.1349 (b) (1) (i)] shall be determined as required in 40 C.F.R. § 63.1349 (b) (1) (v) and (b) (vi).

(i) Method 5 of appendix A to 40 C.F.R. part 60 of Chapter I of Title 40 shall be used to determine PM emissions. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with 40 C.F.R. § 63.7 (e). Each run shall be conducted for at least 1 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. A determination of the PM collected in the impingers ("back half") of the Method 5 particulate sampling train is not required to demonstrate initial compliance with the PM standards of 40 C.F.R. Part 63, Subpart LLL. However, this shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes.

(ii) Suitable methods shall be used to determine the kiln or in-line kiln/raw mill feed rate, except for fuels, for each run.

(iii) The emission rate, E, of PM shall be computed for each run using equation 1:

$$E = (C_s\ Q_{sd}) / P \qquad \text{Equation 1}$$

Where:

E = emission rate of particulate matter, kg/Mg of kiln feed.

$c_s$ = concentration of PM, kg/dscm.

$Q_{sd}$ = volumetric flow rate of effluent gas, dscm/hr.

P = total kiln feed (dry basis), Mg/hr.

(iv) When there is an alkali bypass associated with a kiln or in-line kiln/raw mill, the main exhaust and alkali bypass of the kiln or in-line kiln/raw mill shall be tested simultaneously and the combined emission rate of particulate matter from the kiln or in-line kiln/raw mill and alkali bypass shall be computed for each run using equation 2,

$$Ec = (C_{sk}\ Q_{sdk} + C_{sd}\ Q_{sdb}) / P \qquad \text{Equation 2}$$

Where:

$E_c$ = the combined emission rate of particulate matter from the kiln or in-line kiln/raw mill and bypass stack, kg/Mg of kiln feed.

$c_{sk}$ = concentration of particulate matter in the kiln or in-line kiln/raw mill effluent, kg/dscm.

$Q_{sdk}$ = volumetric flow rate of kiln or in-line kiln/raw mill effluent, dscm/hr.

$c_{sb}$ = concentration of particulate matter in the alkali bypass gas, kg/dscm.

$Q_{sdb}$ = volumetric flow rate of alkali bypass gas, dscm/hr.

P = total kiln feed (dry basis), Mg/hr.

(v) Except as provided in 40 C.F.R. § 63.1349 (b) (1) (vi) the opacity exhibited during the period of the Method 5 performance tests required by Section 3.3.3 (1) (i) [40 C.F.R. § 63.1349 (b) (1) (i)] shall be determined through the use of a continuous opacity monitor (COM). The maximum six-minute average opacity during the three Method 5 test runs shall be determined during each Method 5 test run, and used to demonstrate initial compliance with the applicable opacity limits of Section 4.1.5 (b) [40 C.F.R. § 63.1343 (e)], 40 C.F.R. §63.1343(e), Table 2, Row 1, or Section 4.1.30. [40 C.F.R. §63.1343(e)].

*Note: This condition 3.3.3.(1) shall remain in effect until the compliance date specified in condition 3.1.22.*

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

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

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

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

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

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

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

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

**[45CSR34, 40 C.F.R. §§ 63.1349 (b) (1) (i) – (v), (2), and (3) (i) – (iv), 45CSR14, R14-026, B.10., EU3, EU4, EU6, EU7]**

3.3.4. Except as provided in Section 3.3.6 [40 C.F.R. §63.1348(c)], performance tests required under Section 3.3.3 (1) through (2) [40 C.F.R. §§ 63.1349 (b) (1) and (b) (2)] shall be repeated every five years, except that the owner or operator of a kiln, in-line kiln/raw mill or clinker cooler is not required to repeat the initial performance test of opacity for the kiln, in-line kiln/raw mill or clinker cooler.

*Note: This condition 3.3.4. shall remain in effect for particulate matter only until the compliance date specified in condition 3.1.22.*

**[45CSR34, 40 C.F.R. §63.1349(c), EU3, EU4, EU6, EU7]**

3.3.5. *Performance test frequency.* Except as provided in 40 C.F.R. §63.1348(b), performance tests are required for affected sources that are subject to a dioxin, total organic HAP, or HCl, emissions limit and must be repeated every 30 months except for pollutants where that specific pollutant is monitored using CEMS.
**[45CSR34, 40 C.F.R. §63.1349(c), EU3, EU4, EU6, EU7]**

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

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

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

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

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

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

**[45CSR34, 40 C.F.R. § 63.1348(c)]**

## 3.4. Recordkeeping Requirements

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

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

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of the analyses; and

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

**[45CSR§30-5.1.c.2.A.]**

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.
**[45CSR§30-5.1.c.2.B.]**

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

3.4.4. The owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 C.F.R. § 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.
**[45CSR34, 40 C.F.R. § 63.1355 (a)]**

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

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

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

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

**[45CSR34, 40 C.F.R. § 63.1355 (b)]**

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

## 3.5. Reporting Requirements

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

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

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

**If to the DAQ:**

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

Phone: 304/926-0475
FAX: 304/926-0478

**If to the US EPA:**

Associate Director
Office of Enforcement and Permits Review (3AP12)
U. S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

3.5.4. **Certified emissions statement.** The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. The certified emissions statement and pay fees to be submitted on July 31 of each year unless directed by DAQ.
**[45CSR§30-8.]**

3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The annual certification to the USEPA shall be submitted in electronic format only. It shall be submitted by e-mail to the following address: R3_APD_Permits@epa.gov. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification.
**[45CSR§30-5.3.e.]**

3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4.
**[45CSR§30-5.1.c.3.A.]**

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

3.5.8. **Deviations.**

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

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

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

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

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

**[45CSR§30-5.1.c.3.C.]**

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

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

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

(1) Initial notifications as required by 40 C.F.R. §§ 63.9 (b) through (d). For the purposes of 40 C.F.R. Part 63 Subpart LLL, a Title V or 40 CFR part 70 permit application may be used in lieu of the

initial notification required under 40 C.F.R. § 63.9 (b), provided the same information is contained in the permit application as required by 40 C.F.R. § 63.9 (b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of Chapter I of Title 40 and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification.

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

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

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

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

**[45CSR34, 40 C.F.R. § 63.1353 (b)]**

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

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

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

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

(4) As required by 40 C.F.R § 63.10 (d) (5), if actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 C.F.R § 63.6 (e) (3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and

(5) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

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

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

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

(9) The owner or operator shall submit a summary report semiannually, which contains the information specified in 40 C.F.R § 63.10 (e) (3) (vi). In addition, the summary report shall include:

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

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

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

(v) All failures to comply with any provision of the operation and maintenance plan developed in accordance with Section 3.2.1 [40 C.F.R §§63.1347(a) and (b)].

(vi) Monthly rolling average mercury, THC, PM, and HCl (if applicable) emissions levels in the units of the applicable emissions limit for each kiln, and clinker cooler.

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

**[45CSR34, 40 C.F.R. § 63.1354 (b)]**

3.5.12. The semiannual report required by paragraph (b)(9) of 40 C.F.R. §63.1354 (condition 3.5.11.(9)) must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 C.F.R. §63.1348(d) (condition 3.1.23.), including actions taken to correct a malfunction.
**[45CSR34, 40 C.F.R. § 63.1354(c)]**

## 3.6. Compliance Plan

3.6.1. None

## 3.7. Permit Shield

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

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

| | |
|---|---|
| **40 C.F.R. Part 60 Subpart F** (August 31, 1971) | Standards of Performance for Portland Cement Plants do not apply to Capitol since Capitol commenced construction or modification prior to August 17, 1971. Capitol is also exempt because it is regulated by 40 C.F.R. Part 63 Subpart LLL. |
| **40 C.F.R. Part 60 Subpart LL** (August 24, 1982) | Standards of Performance for Metallic Mineral Processing do not apply because lime or limestone is not metallic mineral. |
| **40 C.F.R. Part 60 Subpart UUU** (April 23, 1986) | Standards of Performance for Calciners and Dryers in Mineral Industries do not apply because lime or limestone is not listed as a mineral processed or produced in a mineral processing plant. |
| **40 C.F.R. Part 72** (01/11/93) | Acid Rain Program General Provisions does not apply to Capitol Cement Corporation because it is not considered a Title IV (Acid Rain) Source. |
| **45CSR1** | ***NOx Budget Trading Program as a Means of Control and Reduction of Nitrogen Oxides from Non-electric Generating Units.*** This rule was repealed effective May 1, 2009. Therefore, it no longer applies to any emission units located at the facility. |

| | |
|---|---|
| **40 C.F.R. Part 64 – *Compliance Assurance Monitoring (CAM)*.** | The first rule applicability criterion at 40 C.F.R. §64.2(a)(1) states that "*The unit is subject to an emission limitation or standard for the applicable regulated air pollutant (or a surrogate thereof), other than an emission limitation or standard that is exempt under paragraph (b)(1) of this section;*" 40 C.F.R. §64.2(b)(1)(i) grants an exemption from CAM, on a pollutant-specific basis, to emission units that are subject to "*Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act.*" According to Attachment H of the renewal application, all emission units at the plant are subject to one of the following federal regulations: NSPS Subpart OOO, NSPS Subpart Y, NSPS Subpart F, and NESHAP MACT Subpart LLL. Since these regulations were proposed after November 15, 1990, all of the emission units qualify for the exemption at 40 C.F.R. §64.2(b)(1)(i) and are therefore not subject to requirements of 40 C.F.R. Part 64 for their respective emissions of particulate matter and HAPs.<br><br>The permittee's $SO_2$ scrubber is an air pollution control device. The $SO_2$ scrubber is part of the kiln system which is regulated by 40 C.F.R. 63 Subpart LLL, and therefore, according to the permittee's renewal application, is exempt from 40 C.F.R. Part 64. However, this is not a correct conclusion because it overlooks the fact that CAM applies to a *Pollutant-specific emissions unit*, which means an emissions unit is considered separately with respect to each regulated air pollutant (cf. §64.1). Thus, specific pollutants regulated by MACT Subpart LLL are exempt from CAM, but not necessarily other pollutants emitted from the same source that may meet the applicability criteria under §§64.2(a)(1) through (3).<br><br>Emissions of $SO_2$ from the kiln system meet all three applicability criteria at §§64.2(a)(1) through (3). However, the kiln system exhausts to the Main Stack which is equipped with a Continuous Emission Monitor (CEM) for monitoring $SO_2$, $NO_x$, and CO (and THC per the minor modification). Operation of the CEM for these pollutants is required by underlying permit R14-26D, condition B.11., which is already specified in the current Title V permit as condition 5.2.4. (condition 4.2.4. in the renewal since Section 4.0 will be eliminated). Therefore, the exemption criterion at 40 C.F.R. §64.2(b)(1)(vi) is met for $SO_2$, $NO_x$, and CO, and the kiln system is exempt from CAM on a pollutant-specific basis for these pollutants.<br><br>While the permittee's PH/PC kiln has potential VOC emissions over 100 tons per year, and it has a VOC limit (permit # R14-026D, condition A.15.), it does not use a control device to meet the limitation. According to technical correspondence (8/30/2010 email from permittee), it was outlined in Section 4 (Control Technology Analyses) of the September 2009 application for NSR Permit, that the best available control technology for VOC was determined to be good combustion practices. Further, according to the definition of *Control device* at 40 C.F.R. §64.1, "For purposes of this part, a control device does not include … the use of combustion or other process design features or characteristics". Without a control device the applicability criterion at 40 C.F.R. §64.2(a)(2) is not met and CAM does not apply on a pollutant-specific basis to VOC emitted from the PH/PC kiln. |

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

### 4.1. Limitations and Standards

**PLANT AREAS**

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

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

**Facility Wide Requirements**

4.1.1. Clinker production from the facility shall not exceed 2,212,890 short tons per year. Compliance with the annual production limit shall be determined using a 12 month rolling total. A 12 month rolling total shall mean the sum of the clinker production at any given time for the previous twelve (12) consecutive calendar months.
**[45CSR14, R14-026, A.1., Preheater-Precalciner Kiln (EP42.04)]**

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

| Pollutant | Allowable Emissions (TPY) |
|---|---|
| $PM_{2.5}$ | ~~223.24~~ 227.40 |
| $PM_{10}$ | ~~586.82~~ 598.59 |
| TSP | ~~921.64~~ 935.49 |
| $SO_2$ | 4,507.90 |
| $NO_x$ (as $NO_2$) | 4,009.59 |
| CO | 4,436.95 |
| VOC | 156.32 |
| Fluorides | 1.02 |
| Lead | 0.08 |

**[45CSR14, R14-026, A.2.]**

4.1.3. During periods of startup, shutdown and malfunctions, the source shall follow the procedures found in the site specific Startup, Shutdown, and Malfunction plan as required by 40 C.F.R. Part 63 Subpart LLL.
**[45CSR34, 40 C.F.R. §63.6 (e), 45CSR14, R14-026, A.3., See Section 3.2.12.]**

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

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

**[45CSR14, R14-026, A.4.]**

4.1.5. *Emissions limits in effect prior to September 9, 2010 for Existing, reconstructed, or new brownfield sources.*

No owner or operator of an existing, reconstructed or new brownfield kiln or an existing, reconstructed or new brownfield in-line kiln/raw mill at a facility that is a major source subject to the provisions of 40 C.F.R. Part 63 Subpart LLL shall cause to be discharged into the atmosphere from these affected sources, any gases which:

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

(b) Contain D/F in excess of:

(i) 0.20 ng per dscm ($8.7\times10^{-11}$ gr per dscf) (TEQ) corrected to seven percent oxygen; or

(ii) 0.40 ng per dscm ($1.7\times10^{-10}$ gr per dscf) (TEQ) corrected to seven percent oxygen, when the average of the performance test run average temperatures at the inlet to the particulate matter control device is 204 °C (400 °F) or less.

**[45CSR34, 40 C.F.R. §63.1343(e), Table 2, Row 1; 45CSR14, R14-026A, B.10.] (EU3, EU4, EU6, EU7)**

4.1.5.1. *Applicable emission limits under the September 9, 2010 amendments that must be complied with per condition 3.1.22.* Emission limits for D/F in both normal operating mode and startup and shutdown mode is 0.2 ng/dscm (TEQ) and the oxygen correction factor is 7 percent; or if the average temperature at the inlet to the first particulate matter control device (fabric filter or electrostatic precipitator) during the D/F performance test is 400°F or less this limit is changed to 0.4 ng/dscm (TEQ).

**[45CSR34, 40 C.F.R. §63.1343(b), Table 1, Rows 5 and 7; 45CSR14, R14-026A, B.10.] (EU3, EU4, EU6, EU7)**

4.1.6. The owner or operator of a kiln subject to a D/F emission limitation under 40 C.F.R. § 63.1343 must operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in Section 4.1.7. The owner or operator of an in-line kiln/raw mill subject to a D/F emission limitation under Section 4.1.5. [40 C.F.R. §§ 63.1343(b) or (e)] must operate the in-line kiln/raw mill, such that:

(1) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in Section 4.1.7. and established during the performance test when the raw mill was operating is not exceeded, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent.

(2) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in Section 4.1.7. and established during the performance test when the raw mill was not operating, is not exceeded, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent.

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

**[45CSR34, 40 C.F.R. §63.1346 (a), 45CSR14, R14-026, B.10.]**

4.1.7. The temperature limit for affected sources meeting the limits of Section 4.1.6. or Section 4.1.6.(1) through (3) is determined in accordance with Section 3.3.3 (3) (iv) [40 C.F.R. § 63.1349 (b) (3) (iv)].
**[45CSR34, 40 C.F.R. §63.1346(b), 45CSR14, R14-026, B.10.]**

4.1.8. The permitted facility shall be constructed and operated in accordance with information filed in Permit Application R14-026 and any amendments thereto. The Secretary may suspend or revoke a permit if the plans and specifications upon which the approval was based are not adhered to.
**[45CSR14, R14-026, C.3.]**

## Group 1 - Quarry and Crushing Requirements - - - EU1

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

| Identification Number | Description | Outlet Loading (gr/dscf) | Existing Or New |
|---|---|---|---|
| CD01.01 | Primary Crusher Dust Collector | 0.02 | Existing |
| CD02.01 | Secondary Crusher Dust Collector | 0.02 | Existing |
| CD37.03 | New Primary Crusher D\C | 0.01 | New |
| CD37.04 | Crushing System Transfer Tower D\C | 0.01 | New |
| CD37.06 | Premix Conveying D\C | 0.01 | New |
| CD38.01 | Premix Storage Feeding D\C | 0.01 | New |

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

| Emission Point Identification Number | Emission Point Description | TSP (TPY) | $PM_{10}$ (TPY) |
|---|---|---|---|
| EP0X.01 | Quarry Drilling | 0.28 | 0.13 |
| EP0X.02 | Quarry Blasting | 0.28 | 0.13 |
| EP0X.03.01 | Loader to truck (good rock) | 8.07 | 3.82 |
| EP0X.03.02 | Loader to truck (waste rock) | 0.40 | 0.19 |
| EP0X.03.03 | Truck to waste pile | 0.40 | 0.19 |

| Emission Point Identification Number | Emission Point Description | TSP (TPY) | $PM_{10}$ (TPY) |
|---|---|---|---|
| EP0X.03.04 | Truck to crusher pile | 0.28 | 0.13 |
| EP0X.03.05 | Truck or loader to crusher dump | 0.28 | 0.13 |
| EP01.03 | Belt Conveyor 1013 to 40 T Bin | 0.19 | 0.09 |
| EP01.04 | 40 T Bin to Feeder | 0.19 | 0.09 |
| EP01.05.01 | Feeder to Belt Conveyor 1011 | 0.19 | 0.09 |
| EP01.05.02 | Belt Conveyor 1011 to Belt Conveyor 1007 | 0.28 | 0.13 |
| EP.02.01.04 | Belt conveyor 1005 to belt conveyor 1004 | 0.21 | 0.10 |
| EP.02.01.07 | Screen 1003 to belt conveyor 1002 | 0.05 | 0.02 |
| EP02.02 | Belt conveyor 1001 to belt conveyor 1000 | 0.19 | 0.09 |
| EP02.03.01 | Belt Conveyor 1000 to Belt Conveyor 999 | 0.28 | 0.13 |
| EP02.03.02 | Belt Conveyor 999 to Shuttle Conveyor 998 | 0.28 | 0.13 |
| EP03.02 | Shuttle conveyor 998 to raw bins | 0.19 | 0.09 |
| EP37.02.01 | Truck to large bin | 7.79 | 3.68 |
| EP37.02.02 | Large bin to conveyor | 2.60 | 1.23 |
| EP37.05 | Split to surge pile | 1.04 | 0.49 |

Additionally, emissions from the combined above sources (both point and fugitive) shall not exceed 53.51 tons per year of TSP nor 36.63 tons per year of PM10 based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by the more stringent requirements of Section 4.1.9.

**[45CSR14, R14-026, A.5.]**

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

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

(2) Exhibit greater than 7 percent opacity.

**[45CSR16, 40 C.F.R. §60.672 (a); 45CSR14, R14-026, B.8. (EU1, EU2, EU8)]**

4.1.11. No owner or operator subject to the provisions of 40 C.F.R. Part 60 Subpart OOO shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 10 percent opacity.
**[45CSR16, 40 C.F.R. § 60.672 (b), 45CSR14, R14-026, B.8. (EU1, EU2, EU8)]**

4.1.12. No owner or operator shall cause to be discharged into the atmosphere from any crusher, at which a capture system is not used, fugitive emissions which exhibit greater than 15 percent opacity.
**[45CSR16, 40 C.F.R. § 60.672(b), 45CSR14, R14-026, B.1. (EU1, EU2, EU8)]**

## Group 2 - Raw Material Preparation Requirements - - - EU2

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

| CD Identification Number | CD Description | Outlet Loading (gr/dscf) | Existing Or New |
|---|---|---|---|
| CD04.03 | Limestone Conveying to #1 Stone Belt D\C | 0.02 | Modified |
| CD38.02 | Premix Storage Discharge D\C | 0.01 | New |
| CD39.05 | Additive Delivery System D\C | 0.01 | New |
| CD39.01 | Additive Feeding System D\C | 0.01 | New |
| CD39.02 | Limestone Bin D\C | 0.01 | New |
| CD39.03 | Raw Material Discharge D\C1 | 0.01 | New |
| CD39.04 | Raw Material Discharge D\C2 | 0.01 | New |
| CD39.06 | Raw Mill Feeding D\C | 0.01 | New |
| CD40.01 | New Raw Mill High Zone D\C | 0.01 | New |
| CD40.02 | New Raw Mill Low Zone D\C | 0.01 | New |
| CD40.05 | New Raw Meal Air Slide D\C | 0.01 | New |
| CD40.06 | New Homo Silo Feeding D\C | 0.01 | New |
| CD40.07 | New Homo Silo Discharge D\C | 0.01 | New |
| CD40.08 | Top of Homo Silo D\C | 0.01 | New |

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

| Emission Point Identification Number | Emission Point Description | TSP (TPY) | $PM_{10}$ (TPY) |
|---|---|---|---|
| EP04.01.01 | Raw bins to feeders East Tunnel | 0.09 | 0.04 |
| EP04.01.02 | Feeders to belt conveyor East 917 | 0.09 | 0.04 |
| EP04.04.03 | #1 Stone System Belt to Limestone Pile in Craneway | 0.11 | 0.05 |
| EP40.03 | Split to surge pile | 0.00 | 0.00 |
| EP39.07.04 | Inert Raw Material Hauling to Quarry (Paved) | 0.09 | 0.02 |
| EP39.07.05 | Inert Raw Material Hauling to Quarry (Unpaved) | 13.70 | 4.04 |
| EP39.08 | Inert Raw Material Truck Dump to Pile | 0.10 | 0.05 |
| EP39.09 | Inert Raw Material Storage Pile (Within Mines) | 0.17 | 0.08 |
| EP39.10 | Inert Raw Material Pile Reclaim | 0.10 | 0.05 |
| EP39.11 | Inert Raw Material Dump to Primary Crusher | 0.10 | 0.05 |
| EP39.12.01 | Hauling to Additives Unloading Bin (Paved) | 0.05 | 0.01 |
| EP39.12.02 | Hauling to Additives Unloading Bin (Unpaved) | 2.06 | 0.61 |

Additionally, emissions from the combined above sources (both point and fugitive) shall not exceed 51.91 tons per year of TSP nor 35.00 tons per year of PM10 based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by the more stringent requirements of Section 4.1.13.

**[45CSR14, R14-026, A.7.; 45CSR§7-4.1.]**

## Group 3 - Pyroprocessing Requirements - - - EU3

4.1.14. Reserved.

4.1.15. The new preheater-precalciner kiln may combust any combination of the following fuels: coal, coal fines, coke, and on site generated petroleum contaminated soils (as outlined in Section 4.1.18.). If the permittee wishes to use alternative fuels including but not limited to tires, wood, paper cardboard, non-PVC plastics, automobile fluff, carpets, non-hazardous liquids/solids, and refuse derived fuels the permittee shall notify the Director in writing of the fuel to be used within thirty (30) days of the use of the fuel. Use of the alternative fuel shall only commence upon the granting of the written consent of the Director.
**[45CSR14, R14-026, A.8., Preheater-Precalciner Kiln (EP42.04)]**

4.1.16. The permittee may combust spent carbon, tires and/or roofing shingles in the new preheater-precalciner kiln provided that the permittee shall first conduct or have conducted EPA approved stack tests to determine compliance with the VOC and PM emission limits as set forth in Section 4.1.22. while combusting the fuel in question. Until compliance with the VOC and PM emission limits are verified and written approval is granted by the Director, the permittee may initially only combust the amount of fuel needed to perform the stack test. A stack test protocol and the anticipated test date shall be submitted to this office at least 7 days prior to the date of the stack test. Results of the stack test shall be reported to this office within 30 days of performance of stack test. The changes in fuel, however, will not be subject to NSR/PSD review since the fuel can be accommodated in the new preheater-precalciner kiln and the Permittee has accounted for the criteria pollutant emissions' potential changes in this PSD (R14-026 Application).
**[45CSR14, R14-026, A.9., Preheater-Precalciner Kiln (EP42.04)]**

4.1.17. The new preheater-precalciner kiln may combust fuel oil during startup. Additionally the kiln may combust fuel oil during periods of primary fuel system maintenance or breakdown so long as no emission limits contained in this permit or any applicable rule are exceeded.
**[45CSR14, R14-026, A.10., Preheater-Precalciner Kiln (EP42.04)]**

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

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

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

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

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

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

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

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

**[45CSR14, R14-026, A.11., Preheater-Precalciner Kiln (EP42.04)]**

4.1.19. Clinker production from the new preheater-precalciner kiln shall not exceed 2,212,890 short tons per year.
**[45CSR14, R14-026, A.13., Preheater-Precalciner Kiln (EP42.04)]**

4.1.20. The permittee shall install, operate and maintain a scrubber to reduce $SO_2$ emissions from the new preheater-precalciner kiln as necessary to meet the emission limits set in condition 4.1.22. of this permit.
**[45CSR14, R14-026, A.12., Preheater-Precalciner Kiln (EP42.04)]**

4.1.21. Operation of the existing Kilns 7 and 8 system shall permanently cease after the preheater-precalciner kiln system achieves full production or within 180 days after the preheater-precalciner kiln system first becomes operational whichever comes first. Operation of the existing Kiln 9 system shall permanently cease after the preheater-precalciner kiln system achieves full production or within 180 days after the preheater-precalciner kiln system first becomes operational or before the BART compliance deadline (approximately 2013) whichever comes first.
**[45CSR14, R14-026, A.14., Kilns #7, #8 and #9 (EP10.01, EP11.01 and EP12.01)]**

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

| Source | Pollutant | Allowable | Compliance Method | Averaging Time |
|---|---|---|---|---|
| PH/PC Kiln System | NOx | 3983.2 TPY | CEM | TPY, 12 month rolling total |
| PH/PC Kiln System | NOx | 1745.0 LB/hr | CEM | 30-day average (LB/hr) |
| PH/PC Kiln System | CO | 3960.0 LB/hr | CEM | 24-hr average (LB/hr) |
| PH/PC Kiln System | CO | 4425.8 TPY | CEM | TPY, 12 month rolling total |
| PH/PC Kiln System | VOC | 38.7 LB/hr | Stack Test | 3-hr average (LB/hr) |
| PH/PC Kiln System | VOC | 154.9 TPY | Stack Test/production data | TPY, 12 month rolling total |
| PH/PC Kiln System | VOC | 0.14 LB/ton clinker | Stack Test /production data | 12 month rolling average |
| PH/PC Kiln System | SO2 | 3,230.8 TPY | CEM | TPY, 12 month rolling total |

| Source | Pollutant | Allowable | Compliance Method | Averaging Time |
|---|---|---|---|---|
| PH/PC Kiln System | SO2 | 2111.3 LB/hr | CEM | 3-hr average (LB/hr) |
| PH/PC Kiln System | TSP | 268.1 TPY | Stack Test / production data | TPY, 12 month rolling total |
| PH/PC Kiln System | $PM_{10}$ | 225.2 TPY | Stack Test / production data | TPY, 12 month rolling total |
| PH/PC Kiln System | TSP | 69.8 LB/hr | Stack Test | Average (3) 1-hr tests |
| PH/PC Kiln System | $PM_{10}$ | 58.6 LB/hr | Stack Test | Average (3) 1-hr tests |
| PH/PC Kiln System | Opacity | 10% | COM | 6-minute block average |
| PH/PC Kiln System | Pb | 0.08 TPY | Production data | TPY, 12 month rolling total |
| PH/PC Kiln System | Fluorides | 1.0 TPY | Production data | TPY, 12 month rolling total |

**[45CSR14, R14-026, A.15., Preheater-Precalciner Kiln (EP42.04)]**

4.1.23. Reserved.

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

| CD Identification Number | CD Description | Outlet Loading (gr/dscf) | Existing Or New |
|---|---|---|---|
| CD42.04 | Inline Raw Mill PH-PC Kiln/Clinker Cooler & Bypass & Coal Mill D\Cs | 0.01 | New |
| CD42.02 | Kiln Feeding Bucket Elevator D\C | 0.01 | New |
| CD42.03 | Kiln Feeding D\C1 | 0.01 | New |
| CD42.05 | Kiln Feeding D\C2 | 0.01 | New |
| CD43.02 | Cooler Discharge D\C | 0.01 | New |
| CD42.01 | Cement Fringe Bin D\C | 0.01 | New |
| CD42.06 | Lime Storage D\C | 0.01 | New |
| CD42.07 | Bypass Truck Spout Dedusting | 0.01 | New |

Emissions from the Group 3 fugitive sources shall not exceed the following:

| Emission Point Identification Number | Emission Point Description | TSP (tpy) | $PM_{10}$ (tpy) |
|---|---|---|---|
| EP42.09 | Reburn Hopper System | 0.32 | 0.15 |

Additionally, emissions from the combined above sources shall not exceed 280.09 tons per year of TSP nor 235.27 tons per year of $PM_{10}$ based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by the more stringent requirements of Section 4.1.24.

**[45CSR14, R14-026, A.16.; 45CSR§7-4.1.]**

4.1.25. The preheater section of the new PH/PC kiln will be equipped with low-$NO_x$ burners. The precalciner section of the new PH/PC kiln will be designed with low-$NO_x$ and CO technology. The PH/PC kiln shall be equipped with an SNCR $NO_x$ control system in order to comply with a future $NO_x$ limit to be determined by USEPA.
**[45CSR14, R14-026, A.17.]**

4.1.26. No person shall cause, suffer, allow or permit emission of particulate matter into the open air from any fugitive dust control system which is twenty percent (20%) opacity or greater.
**[45CSR§5-3.4., 45CSR14, R14-026, B.2., Coal Handling Operations, EU5]**

4.1.27. No person shall cause, suffer, allow or permit a coal preparation plant or handling operation to operate that is not equipped with a fugitive dust control system. This system shall be operated and maintained in such a manner as to minimize the emission of particulate matter into the open air.
**[45CSR§5-6.1., 45CSR14, R14-026, B.2., Coal Handling Operations, EU5]**

4.1.28. The owner or operator of a coal preparation plant or handling operation shall maintain dust control of the premises and owned, leased or controlled access roads by paving, or other suitable measures. Good operating practices shall be observed in relation to stockpiling, car loading, breaking, screening and general maintenance to minimize dust generation and atmospheric entrainment.
**[45CSR§5-6.2., 45CSR14, R14-026, B.2., Coal Handling Operations, EU5]**

4.1.29. No owner or operator subject to the provisions of 45CSR10 shall build, erect, install, modify or use any article, machine, equipment or process, the use of which purposely conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere.
**[45CSR§10-11.1., 45CSR14, R14-026, B.5.]**

4.1.30. No owner or operator of a new or existing clinker cooler at a facility which is a major source subject to the provisions of 40 C.F.R. Part 63 Subpart LLL shall cause to be discharged into the atmosphere from the clinker coolers any gases which:

(a) Contain particulate matter in excess of 0.050 kg per Mg (0.10 LB per ton) of feed (dry basis) to the kiln.

(b) Exhibit opacity greater than ten percent.

**[45CSR34, 40 C.F.R. §63.1343(e), 45CSR14, R14-026, B.10., EP10.02 and EP43.01]**

4.1.30.1. *Applicable emission limits under the September 9, 2010 amendments that must be complied with per condition 3.1.22*. If you source is an existing clinker cooler, and if it is located at a major source, and:

| The operating mode is: | Your emission limits are: | And the units of the emission limits are: |
|---|---|---|
| Normal operation | 0.04 | lb/ton clinker |
| Startup and shutdown | 0.004 | gr/dscf |

**[45CSR34; 40 C.F.R. §63.1343(b)(1), Table 1, Rows 9 and 10; 45CSR14, R14-026, B.10., EP10.02 and EP43.01]**

4.1.31. Due to unavoidable malfunction of equipment or inadvertent fuel shortages, emissions exceeding those provided for in 45CSR10 may be permitted by the Director for periods not to exceed ten (10) days upon specific application to the Director. Such application shall be made within twenty-four (24) hours of the equipment malfunction or fuel shortage. In cases of major equipment failure or extended shortages of conforming fuels, additional time periods may be granted by the Director provided a corrective program has been submitted by the owner or operator and approved by the Director.
**[45CSR§10-9.1, 45CSR14, R14-026, B.5., and Preheater-Precalciner Kiln (EP42.04)]**

4.1.32. Standard requirements.

Effective May 1, 2009, an owner or operator of any Portland cement kiln subject to 45CSR§40-100 must not operate the kiln during May 1 through September 30 unless the kiln has installed and operates during May 1 to September 30 with low-$NO_X$ burners, mid-kiln firing or alternative control techniques, subject to approval by the Secretary, that achieve at least the same emissions decreases as low-$NO_X$ burners or mid-kiln firing.

**[45CSR§40-100.3., Preheater-Precalciner Kiln (EP42.04)]**

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

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

**[45CSR§7-4.2., 45CSR14, R14-026, B.3., Preheater-Precalciner Kiln (EP42.04)]**

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

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

**[45CSR§§10-4.1. and 4.1.e., EP42.04]**

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

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

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

Where,

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

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

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

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

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

4.1.37. Reserved.

4.1.38. Reserved.

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

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

| CD Identification Number | CD Description | Outlet Loading (gr/dscf) | Existing Or New |
|---|---|---|---|
| CD43.03 | Clinker Storage Feeding D\C | 0.01 | New |
| CD43.04 | Small Clinker Storage Feeding D\C | 0.01 | New |
| CD43.06 | Small Clinker Storage Discharge D\C | 0.01 | New |
| CD43.07 | Clinker Storage Discharge D\C | 0.01 | New |
| CD43.08 | Finish Mill Conveying D\C1 | 0.01 | New |
| CD43.09 | Finish Mill Conveying D\C2 | 0.01 | New |
| CD43.13 | Finish Mill Conveying D\C3 | 0.01 | New |
| CD43.18 | Big Clinker Silo D\C | 0.01 | New |
| CD43.19 | Top of LA Clinker Silo | 0.01 | New |
| CD43.20 | Normal Clinker Bin at Pan Conv. 73 | 0.01 | New |
| CD43.21 | Top of Normal Clinker Silo | 0.01 | New |

There shall be no Group 4 fugitive sources.

Additionally, emissions from the above point sources shall not exceed ~~5.24~~ 14.25 tons per year of TSP nor ~~4.45~~ 12.10 tons per year of $PM_{10}$ based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by more the stringent requirements of Section 4.1.39.

**[45CSR14, R14-026, A.18.]**

## Group 5 - Fuel Handling Requirements - - - EU5

4.1.40. There shall be no Group 5 point sources.

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

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

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

**[45CSR14, R14-026, A.20.; 45CSR§7-4.1.]**

4.1.41. At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate, any affected facility including associated air pollution equipment in a manner consistent with good air pollution control practice for minimizing emissions.
**[45CSR16, 40 C.F.R. § 60.11 (d), 45CSR14, R14-026, B.8.]**

4.1.42. On and after the date on which the performance test required to be conducted by 40 C.F.R. § 60.8 is completed, an owner or operator subject to the provisions of 40 C.F.R. Part 60 Subpart Y shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, reconstructed, or modified on or before April 28, 2008, gases which exhibit 20 percent opacity or greater.
**[45CSR16, 40 C.F.R. §60.254(a), 45CSR14, R14-026, B.8., Fuel Handling System EU5 (except EP41.02.04) and EP15.04.03 and EP15.04.04]**

## Group 6 - Cement Production Requirements - - - EU6

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

| CD Identification Number | CD Description | Outlet Loading (gr/dscf) | Existing Or New |
|---|---|---|---|
| CD43.14 | Finish Mill 1 & 2 Hoppers D\C | 0.01 | New |
| CD43.16 | Finish Mill 3 Hopper D\C | 0.01 | New |
| CD43.17 | Normal Clinker Bin-Bin Vent D\C | 0.01 | New |
| CD44.01 | Finish Mill 2 Feeding D\C1 | 0.01 | New |
| CD44.02 | Finish Mill 1 Feeding D\C1 | 0.01 | New |
| CD44.03 | Finish Mill 2 Feeding D\C2 | 0.01 | New |
| CD44.04 | Finish Mill 2 Feeding D\C3 | 0.01 | New |

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

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

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

Additionally, emissions from the combined above sources (both point and fugitive) shall not exceed ~~153.70~~ 154.82 tons per year of TSP nor ~~126.35~~ 127.31 tons per year of $PM_{10}$ based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by more the stringent requirements of Section 4.1.43. **[45CSR14, R14-026, A.22.; 45CSR§7-4.1.]**

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

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

**[45CSR14, R14-026, A.24.]**

4.1.45. Reserved.

4.1.46. Finish Mill 1 and 2 air heater shall only combust fuel oil, propane or natural gas. Additionally, the Finish Mills 1 and 2 air heater shall not exceed 19.84 MMBTU/hr MDHI.
**[45CSR14, R14-026, A.25.]**

## Group - 7 Shipping Requirements - - - EU7

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

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

| CD Identification Number | CD Description | Outlet Loading (gr/dscf) | Existing Or New |
|---|---|---|---|
| CD20.06 | East Bank Silos 3 DC | 0.01 | Modified |
| CD21.05 | Middle Bank Silos 1D\C | 0.01 | Modified |
| CD21.06 | Middle Bank Silos 2D\C | 0.01 | Modified |
| CD21.07 | Middle Bank Silos 3D\C | 0.01 | Modified |
| CD21.08 | Middle Bank Silos 4D\C | 0.01 | Modified |
| CD21.09 | Middle Bank Silos 5D\C | 0.01 | Modified |
| CD21.10 | Middle Bank Vent 1 D\C | 0.01 | New |
| CD21.11 | Middle Bank Vent 2 D\C | 0.01 | New |
| CD21.12 | Middle Bank Vent 3 D\C | 0.01 | New |
| CD21.13 | Middle Bank Vent 4 D\C | 0.01 | New |
| CD22.04 | West Bank Silos D\C | 0.02 | Existing |
| CD22.05 | West Bank Silos #71 D\C | 0.01 | New |
| CD22.06 | West Bank Silos #72 D\C | 0.01 | New |
| CD22.07 | West Bank Silos #82 D\C | 0.01 | New |
| CD22.08 | West Bank Silos #83 D\C | 0.01 | New |
| CD23.01 | N.E. Packer D\C | 0.02 | Existing |
| CD45.12 | Rail Loadout 1 D\C | 0.01 | New |
| CD45.13 | Rail Loadout 2 D\C | 0.01 | New |
| CD48.01 | Packhouse D\C | 0.01 | Modified |
| CD45.16 | Rail Transloader D\C | 0.02 | New |

There shall be no Group 7 fugitive sources.

Additionally, emissions from the above Point sources shall not exceed ~~63.28~~ 67.00 tons per year of TSP nor ~~53.83~~ 56.99 tons per year of $PM_{10}$ based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by the more stringent requirements of Section 4.1.47.
**[45CSR14, R14-026, A.26.; 45CSR§7-4.1.]**

4.1.48. Diesel fuel usage by the rail transloader engine shall not exceed 14,560 gallons per year.
**[45CSR14, R14-026, A.28.]**

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

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

**[45CSR14, R14-026, A.29.]**

4.1.50. Owners and operators of 2007 model year and later non-emergency stationary compression ignition (CI) internal combustion engine (ICE) with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in 40 C.F.R. §60.4201(a) for their 2007 model year and later stationary CI ICE, as applicable.
**[40 C.F.R. §§ 60.4204(b) and 60.4201(a); 45CSR16; 40 C.F.R. §63.6590(c)(1); 45CSR14, R14-026, B.1.] (Rail Transloader Engine)**

4.1.51. Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in 40 C.F.R. §60.4204(b) (permit condition 4.1.50.) over the entire life of the engine.
**[40 C.F.R. § 60.4206; 45CSR16; 40 C.F.R. §63.6590(c)(1); 45CSR14, R14-026, B.1.] (Rail Transloader Engine)**

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

(1) Sulfur content.

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

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

(i) A minimum cetane index of 40; or

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

**[40 C.F.R. § 60.4207(b); 45CSR16; 40 C.F.R. §63.6590(c)(1); 45CSR14, R14-026, B.1.] (Rail Transloader Engine)**

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

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

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

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

**[40 C.F.R. §§ 60.4211(a)(1)-(3); 45CSR16; 40 C.F.R. §63.6590(c)(1); 45CSR14, R14-026, B.1.] (Rail Transloader Engine)**

4.1.54. If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in 40 C.F.R. § 60.4204(b) (permit condition 4.1.50.), you must comply by purchasing an engine certified to the emission standards in 40 C.F.R. § 60.4204(b), for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of 40 C.F.R. §60.4211 (condition 4.1.55.).
**[40 C.F.R. § 60.4211(c); 45CSR16; 40 C.F.R. §63.6590(c)(1); 45CSR14, R14-026, B.1.] (Rail Transloader Engine)**

4.1.55. If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that

is not permitted by the manufacturer, you must demonstrate compliance as follows:

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

**[40 C.F.R. §§ 60.4211(g) and 60.4211(g)(1); 45CSR16; 40 C.F.R. §63.6590(c)(1); 45CSR14, R14-026, B.1.] (Rail Transloader Engine)**

## Group - 8 Miscellaneous Sources Requirements - - - EU8

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

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

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

| Emission Point Identification Number | Emission Point Description | TSP (TPY) | $PM_{10}$ (TPY) |
|---|---|---|---|
| EP0B.01 | Administrative Boiler 1 | 0.05 | 0.05 |
| EP0B.02 | Administrative Boiler 2 | 0.05 | 0.05 |
| EP0G.01 | Emergency Generator | 0.23 | 0.19 |
| EP0X.04 | Crusher feed pile | 0.50 | 0.25 |
| EP0X.05 | Quarry waste pile | 0.07 | 1.04 |
| EP0X.06 | New Crusher Feed Pile | 1.00 | 0.50 |
| EP03.01 | Storage Bays - 5 Piles | 0.35 | 0.18 |
| EP26.05 | Gypsum/synthetic gypsum storage pile (Craneway) | 0.05 | 0.03 |
| EP26.08 | Limestone Storage Pile ( Craneway) | 0.05 | 0.03 |
| EP15.04.03 | Coal storage Pile (Craneway) | 0.03 | 0.01 |
| EP15.04.04 | Petcoke Storage Pile (Craneway) | 0.03 | 0.01 |
| EP14.08 | Clinker Stockpile (Craneway) | 0.02 | 0.01 |

| Emission Point Identification Number | Emission Point Description | TSP (TPY) | $PM_{10}$ (TPY) |
|---|---|---|---|
| EP25.01 | Quarry haul roads (New Crusher) | 203.90 | 60.18 |
| EP25.02 | Quarry haul roads (Old Crusher) | 7.99 | 2.36 |
| EP25.03 | Quarry haul roads (waste) | 15.10 | 4.46 |
| EP25.05.01 | Additive trucks (unpaved) | 0.00 | 0.00 |
| EP25.05.02 | Additive trucks (paved) | 0.42 | 0.08 |
| EP25.14 | Gypsum/Synthetic Gypsum Haul Road (Unpaved) | 14.86 | 4.39 |
| EP25.12 | Gypsum/Synthetic Gypsum Haul Road (paved) | 0.25 | 0.05 |
| EP25.04.02 | Cement Shipments (paved) | 7.47 | 1.46 |
| EP25.06.01 | Fuel deliveries (unpaved) | 0.00 | 0.00 |
| EP25.06.02 | Fuel deliveries (paved) | 0.67 | 0.13 |
| EP25.09.01 | Dry Flyash trucks (for Cement, unpaved) | 0.98 | 0.29 |
| EP25.09.02 | Dry Flyash trucks (for Cement, paved) | 0.61 | 0.12 |
| EP25.09.03 | Dry Flyash trucks (for Calciner, unpaved) | 14.39 | 4.25 |
| EP25.09.04 | Dry Flyash trucks (for Calciner, paved) | 0.48 | 0.09 |
| EP25.10.01 | Waste dust customer trucks (unpaved) | 3.43 | 1.01 |
| EP25.10.02 | Waste dust customer trucks (paved) | 0.21 | 0.04 |
| EP25.08 | Misc. plant vehicles (unpaved) | 6.90 | 2.04 |
| EP25.07 | Waste Dust Trucks (unpaved) | 30.63 | 9.04 |
| EP42.06.01 | Lime Deliveries (unpaved) | 0.00 | 0.00 |
| EP42.06.02 | Lime Deliveries (paved) | 0.35 | 0.07 |

Additionally, emissions from the combined above sources (both point and fugitive) shall not exceed 313.52 tons per year of TSP nor 95.11 tons per year of $PM_{10}$ based on a 12 month rolling total. Compliance with 45CSR§7-4.1 will be shown by more the stringent requirements of Section 4.1.48.

**[45CSR14, R14-026, A.30.; 45CSR§7-4.1.]**

## 4.2. Monitoring Requirements

### Facility Wide Requirements

4.2.1. See Section 3.2.

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

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

4.2.3. No additional requirements.

## Pyroprocessing - - - EU3

4.2.4. A continuous emission monitoring system (CEMS) shall be installed, operated, and maintained to measure the emissions of $SO_2$, $NO_x$, THC and CO from the preheater-precalciner kiln system exhaust stack. The CEMS shall be installed within 180 days of startup of the pyroprocessing line, and operated in compliance with the USEPA Part 60, Appendix B, Performance Specification 2 ($NO_x$ and $SO_2$) and Performance Specification 4, 4a or 4b (CO) as appropriate.
**[45CSR14, R14-026, B.11.]**

4.2.5. A continuous opacity monitoring system (COMS) shall be installed, operated, and maintained to measure the opacity from the preheater-precalciner kiln system exhaust stack. The COMS shall be installed within 180 days of startup of the pyroprocessing line, and operated as outlined in Section 4.2.12. [40 C.F.R. §63.1350(f)].
**[45CSR14, R14-026, B.12.; 40 C.F.R. §60.64(b)(4); 45CSR16]**

4.2.6. Monitoring requirements.

a. Any owner or operator of an kiln subject to 45CSR§40-100 must complete an initial performance test and subsequent annual testing consistent with the requirements of 40 CFR Part 60, appendix A, method 7, 7A, 7C, 7D or 7E;

**[45CSR§40-100.6.a., Preheater-Precalciner Kiln, (EP42.04)]**

4.2.7. The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) shall demonstrate compliance with 45CSR§§10-3, 4 and 5 (Sections 4.1.34. and 4.1.35.) by testing and /or monitoring in accordance with one or more of the following: 40 C.F.R. Part 60, Appendix A, Method 6, Method 15, continuous emissions monitoring systems (CEMS) or fuel sampling and analysis as set forth in an approved monitoring plan for each emission unit.
**[45CSR§10-8.2.c, 45CSR14, R14-026, B.5., Preheater-Precalciner Kiln, (EP42.04)]**

## Clinker Handling and Storage - - - EU4

4.2.8. No additional requirements.

## Fuel Handling - - - EU5

4.2.9. See Section 3.2.

4.2.10. Compliance with opacity standards shall be determined by conducting observations in accordance with Reference Method 9 in appendix A of 40 C.F.R. 60. For purposes of determining initial compliance, the minimum total time of observations shall be 3 hours (30 6-minute averages) for the performance test or other set of observations (meaning those fugitive-type emission sources subject only to an opacity standard).
**[45CSR16, 40 C.F.R. § 60.11 (b), 45CSR14, R14-026, B.8.]**

**Cement Production - - - EU6**

4.2.11. See Section 3.2.

4.2.12. The requirements under Section 3.2.4 [40 C.F.R. § 63.1350(f)(2)(i) through (iii)] to conduct daily Method 22 testing do not apply to any specific raw mill or finish mill equipped with a continuous opacity monitoring system (COMS) or bag leak detection system (BLDS). If the owner or operator chooses to install a (COMS) in lieu of conducting the daily visual emissions testing required under Section 3.2.4 [40 C.F.R. §63.1350(f)(2)(i) through (iii)], then the (COMS) must be installed at the outlet of the PM control device of the raw mill or finish mill, and the (COMS) must be installed, maintained, calibrated, and operated as required by the general provisions in 40 C.F.R. Part 63 Subpart A and according to PS–1 of appendix B to 40 C.F.R. Part 60. If you choose to install a BLDS in lieu of conducting the daily visual emissions testing required under Section 3.2.4 [40 C.F.R. § 63.1350(f)(2)(i) through (iii)], the requirements in 40 C.F.R. § 63.1350 (m)(1) through (4), (m)(10) and (m)(11) apply.
**[45CSR34, 40 C.F.R. §§ 63.1350(f)(4)(i) and (ii), 40 C.F.R. §60.64(b)(4); 45CSR16, 45CSR14, R14-026, B.10.]**

**Shipping - - - EU7**

4.2.13. See Section 3.2.

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

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

**[45CSR14, R14-026, B.18.; 45CSR§30-5.1.c.]**

**Other Miscellaneous Sources - - - EU8**

4.2.15. See Section 3.2.

## 4.3. Testing Requirements

**Facility Wide Requirements**

4.3.1. See Section 3.3.

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

4.3.2. The permittee shall perform monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Sections 4.1.9. and 4.1.13. If any emissions are observed in accordance with the Method 22 testing the permittee shall, within 24 hours, perform a Method 9 test in accordance with 40 CFR Part 60, Appendix A. If six (6) consecutive monthly inspections reveal no visible emissions, then the observer shall take the readings semi-annually. If there are no emissions observed in the semi-annual inspection, then the readings shall be annual. If, at any time a visible emission is observed, the inspections shall revert back to

monthly, until (6) consecutive monthly readings have no visible emissions observed. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.
**[45CSR14, R14-026, A.6.]**

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

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

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

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

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

**[45CSR16, 40 C.F.R. §§ 60.675 (c) (1), and (3), 45CSR14, R14-026, B.8. (EU1, EU2, EU8)]**

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

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

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

**[45CSR16, 40 C.F.R. §60.675 (b); 45CSR14, R14-026, B.1. (EU1, EU2, EU8)]**

## Pyroprocessing - - - EU3

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

4.3.6. At such reasonable times as the Director may designate, the owner or operator of any fuel burning unit(s), manufacturing process source(s) or combustion source(s) may be required to conduct or have conducted

tests to determine the compliance of such source(s) with the emission limitations of 45CSR§§10-3, 4 or 5 (Sections 4.1.34. and 4.1.35.). Such tests shall be conducted in accordance with the appropriate test method set forth in 40 C.F.R. Part 60, Appendix A, Method 6, Method 15 or other equivalent EPA testing method approved by the Director. The Director, or his or her duly authorized representative, may at his or her option witness or conduct such tests. Should the Director exercise his or her option to conduct such tests, the operator will provide all necessary sampling connections and sampling ports to be located in such manner as the Director may require, power for test equipment, and the required safety equipment such as scaffolding, railings, and ladders to comply with generally accepted good safety practices.
**[45CSR§10-8.1.a., 45CSR14, R14-026, B.5., Preheater-Precalciner Kiln (EP42.04), Finish Mills (EP44.09, EP44.12 and EP19.02]**

4.3.7. In order to determine compliance with the D/F limits set forth in 40 C.F.R. 63 Subpart LLL, the permittee shall perform an EPA approved stack test~~s~~ on the new precalciner-preheater kiln. The compliance test for the new preheater-precalciner kiln must be performed within 180 days of startup of the kiln.
**[45CSR14, R14-026, B.14., Preheater-Precalciner Kiln, (EP42.04)]**

4.3.8. Reserved.

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

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

**[45CSR14, R14-026, B.13., Preheater-Precalciner (EP42.04)]**

4.3.10. Reserved.

4.3.11. Within 180 days of startup of the new PH/PC kiln Capitol will perform tests using EPA Method 202 or an alternative test method approved by the Director to determine the emission rate of Condensable Particulate Matter (CPM) emitted by the new PH/PC kiln.
**[45CSR14, R14-026, B.17., Preheater-Precalciner Kiln, (EP42.04)]**

## Clinker Handling and Storage - - - EU4

4.3.12. The permittee shall perform monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Section 4.1.39. If a positive emission is observed during the monthly USEPA Method 22 inspections, a corrective action as listed in the site-specific Startup, Shutdown, and Malfunction plan must be initiated within one hour. Additionally, within one hour a certified USEPA Method 9 observer must conduct a USEPA Method 9 "Opacity Measurement" (6-minutes) on the affected source. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.
**[45CSR14, R14-026, A.19.]**

## Fuel Handling - - - EU5

4.3.13. The permittee shall perform monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Section 4.1.40. If a positive emission is observed during the monthly USEPA Method 22 inspections, a corrective action as listed in the site-specific Startup, Shutdown, and Malfunction plan must be initiated within one hour. Additionally, within one hour a certified USEPA Method 9 observer must conduct a USEPA Method 9 "Opacity Measurement" (6-minutes) on the affected source. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.
**[45CSR14, R14-026, A.21.]**

4.3.14. Within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility, the owner or operator of such facility shall conduct performance test(s) to determine compliance with emission limitations set forth in §60.254(a) and furnish a written report of the results of such performance test(s).
**[45CSR16, 40 C.F.R. §60.8 (a), 40 C.F.R. §60.255(a), 45CSR14, R14-026, B.8.]**

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

(1) Method 9 of appendix A–4 of 40 C.F.R. part 60 and the procedures in §60.11 must be used to determine opacity, with the exceptions specified in paragraphs (1)(i) and (ii) of this permit condition.
   (i) The duration of the Method 9 of appendix A–4 of this part performance test shall be 1 hour (ten 6-minute averages).
   (ii) If, during the initial 30 minutes of the observation of a Method 9 of appendix A–4 of 40 C.F.R. part 60 performance test, all of the 6-minute average opacity readings are less than or equal to half the applicable opacity limit, then the observation period may be reduced from 1 hour to 30 minutes.

(2) To determine opacity for fugitive coal dust emissions sources, the additional requirements specified in paragraphs (2)(i) through (iii) of this permit condition must be used.
   (i) The minimum distance between the observer and the emission source shall be 5.0 meters (16 feet), and the sun shall be oriented in the 140-degree sector of the back.
   (ii) The observer shall select a position that minimizes interference from other fugitive coal dust emissions sources and make observations such that the line of vision is approximately perpendicular to the plume and wind direction.
   (iii) The observer shall make opacity observations at the point of greatest opacity in that portion of the plume where condensed water vapor is not present. Water vapor is not considered a visible emission.

(3) A visible emissions observer may conduct visible emission observations for up to three fugitive, stack, or vent emission points within a 15-second interval if the following conditions specified in paragraphs (3)(i) through (iii) of this permit condition are met.
   (i) No more than three emissions points may be read concurrently.
   (ii) All three emissions points must be within a 70 degree viewing sector or angle in front of the observer such that the proper sun position can be maintained for all three points.
   (iii) If an opacity reading for any one of the three emissions points is within 5 percent opacity from the applicable standard (excluding readings of zero opacity), then the observer must stop taking readings for the other two points and continue reading just that single point.

**[45CSR16, 40 C.F.R. §§60.257(a)(1) through (3), 45CSR14, R14-026, B.8. Fuel Handling System EU5 (except EP41.02.04) and EP15.04.03 and EP15.04.04]**

**Cement Production - - - EU6**

4.3.16. The permittee shall perform monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Section 4.1.43. If a positive emission is observed during the monthly USEPA Method 22 inspections, a corrective action as listed in the site-specific Startup, Shutdown, and Malfunction plan must be initiated within one hour. Additionally, within one hour a certified USEPA Method 9 observer must conduct a USEPA Method 9 "Opacity Measurement" (6-minutes) on the affected source. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.
**[45CSR14, R14-026, A.23.]**

**Shipping - - - EU7**

4.3.17. The permittee shall perform monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Section 4.1.47. If a positive emission is observed during the monthly USEPA Method 22 inspections, a corrective action as listed in the site-specific Startup, Shutdown, and Malfunction plan must be initiated within one hour. Additionally, within one hour a certified USEPA Method 9 observer must conduct a USEPA Method 9 "Opacity Measurement" (6-minutes) on the affected source. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.
**[45CSR14, R14-026, A.27.]**

**Other Miscellaneous Sources - - - EU8**

4.3.18. The permittee shall perform monthly USEPA Method 22 Visible Emissions tests on each emission point listed in Section 4.1.56. If a positive emission is observed during the monthly USEPA Method 22 inspections, a corrective action as listed in the site-specific Startup, Shutdown, and Malfunction plan must be initiated within one hour. Additionally, within one hour a certified USEPA Method 9 observer must conduct a USEPA Method 9 "Opacity Measurement" (6-minutes) on the affected source. Records of the Method 22 testing and any necessary Method 9 testing shall be retained on site by the permittee for at least five (5) years. Upon request the records shall be certified and made available to the Director or his/her duly authorized representative.
**[45CSR14, R14-026, A.31.]**

## 4.4. Recordkeeping Requirements

**Facility Wide Requirements**

4.4.1. See Section 3.4.

4.4.2. For the purpose of determining compliance with production limits set forth in Sections 4.1.1., and 4.1.19., the permittee shall maintain daily and monthly records of the amount of clinker produced in the new preheater-precalciner kiln. Such records shall be retained on-site by the permittee for at least five (5) years and shall be certified and made available to the Director or his duly authorized representative upon request.
**[45CSR14, R14-026, B.15.]**

4.4.3. The permittee shall maintain monthly hours of operation for the major processing operations at the facility. Such records shall be retained on-site by the permittee for at least five (5) years and shall be certified and made available to the Director or his duly authorized representative upon request.
**[45CSR14, R14-026, B.16.]**

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

4.4.4. See Section 3.4.

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

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

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

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

**[45CSR16, 40 C.F.R. § 60.7 (a) (1), (2), (3), 45CSR14, R14-026, B.8.]**

## Pyroprocessing - - - EU3

4.4.6. See Section 3.4.

4.4.7. Recordkeeping requirements. -- Any owner or operator of a kiln subject to 45CSR§40-100 must produce and maintain records, which include, but are not limited to:

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

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

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

d. The results of any performance testing;

e. Daily cement kiln production records; and

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

**[45CSR§40-100.7., Preheater-Precalciner Kiln, (EP42.04)]**

4.4.8. The owner or operator of fuel burning unit(s), manufacturing process source(s) or combustion source(s) subject to 45CSR§§10-3, 4 or 5 (Sections 4.1.34. and 4.1.35.) shall maintain on-site a record of all required monitoring data as established in a monitoring plan pursuant to 45CSR§10-8.2.c. Such records shall be made available to the Director or his duly authorized representative upon request. Such records shall be retained on-site for a minimum of five years.
**[45CSR§10-8.3.a, 45CSR14, R14-026, B.5., Preheater-Precalciner Kiln, (EP42.04)]**

4.4.9. The owner or operator of a fuel burning unit(s) or a combustion source(s) shall maintain records of the operating schedule and the quantity and quality of fuel consumed in each unit in a manner specified by the Director. Such records are to be maintained on-site and made available to the Director or his duly authorized representative upon request.
**[45CSR§10-8.3.c, 45CSR14, R14-026, B.5., Preheater-Precalciner Kiln, (EP42.04)]**

**Clinker Handling and Storage - - - EU4**

4.4.10. See Section 3.4.

**Fuel Handling - - - EU5**

4.4.11. See Section 3.4.

**Cement Production - - - EU6**

4.4.12. See Section 3.4.

**Shipping - - - EU7**

4.4.13. See Section 3.4.

**Other Miscellaneous Sources - - - EU8**

4.4.14. See Section 3.4.

## 4.5. Reporting Requirements

**Facility Wide Requirements**

4.5.1. See Section 3.5.

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

4.5.2. See Section 3.5.

4.5.3. The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in Sections 4.1.10. and 4.1.12. [40 C.F.R. §60.672], including reports of opacity observations made using Method 9 to demonstrate compliance with Sections 4.1.11. and 4.1.12. [40 C.F.R. §60.672 (b)], and 40 C.F.R. §60.672 (f).
**[45CSR16, 40 C.F.R. §60.676 (f), 45CSR14, R14-026, B.8. (EU1, EU2, EU8)]**

**Pyroprocessing - - - EU3**

4.5.4. See Section 3.5.

4.5.5. Reporting requirements. -- Any owner or operator subject to the requirements of 45CSR§40-100.3. (condition 4.1.32.) must comply with the following reporting requirements:

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

**[45CSR§40-100.5.b., Preheater-Precalciner Kiln, (EP42.04)]**

4.5.6. The owner or operator shall submit a periodic exception report to the Director, in a manner specified by the Director. Such an exception report shall provide details of all excursions outside the range of measured emissions or monitored parameters established in an approved monitoring plan and shall include, but not be limited to, the time of the excursion, the magnitude of the excursion, the duration of the excursion, the cause of the excursion and the corrective action taken.
**[45CSR§10-8.3.b, Preheater-Precalciner Kiln, (EP42.04)]**

**Clinker Handling and Storage - - - EU4**

4.5.7. See Section 3.5.

**Fuel Handling - - - EU5**

4.5.8. See Section 3.5.

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

**Cement Production - - - EU6**

4.5.10. See Section 3.5.

**Shipping - - - EU7**

4.5.11. See Section 3.5.

**Other Miscellaneous Sources - - - EU8**

4.5.12. See Section 3.4.

## 4.6. Compliance Plan

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

# APPENDIX A

45CSR10 Monitoring Plan for Capitol Cement Corporation

Martinsburg Plant

March 2010

- **PH/PC Kiln**

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# 1.0 Facility Information

| | |
|---|---|
| Company Name: | Capital Cement Corporation |
| Facility Name: | Martinsburg Plant |
| Location: | 1826 South Queen Street<br>Martinsburg, West Virginia 25402 |
| Mailing Address: | 1826 South Queen Street<br>Martinsburg, West Virginia 25402 |
| Phone Number: | 304-260-1827 |
| Contact Person: | Bradley Blase, Plant Environmental Manager |

# 2.0 Cement Kiln Process Description

The following sections describe the processes and equipment used to manufacture Portland cement. The manufacturing process can be divided into four main sections: 1) kiln feed preparation, 2) clinker production, 3) finish cement grinding, and 4) packaging and shipping. A general process overview of the Portland cement manufacturing process is presented in Figure 1.

## 2.1 Kiln Feed Preparation

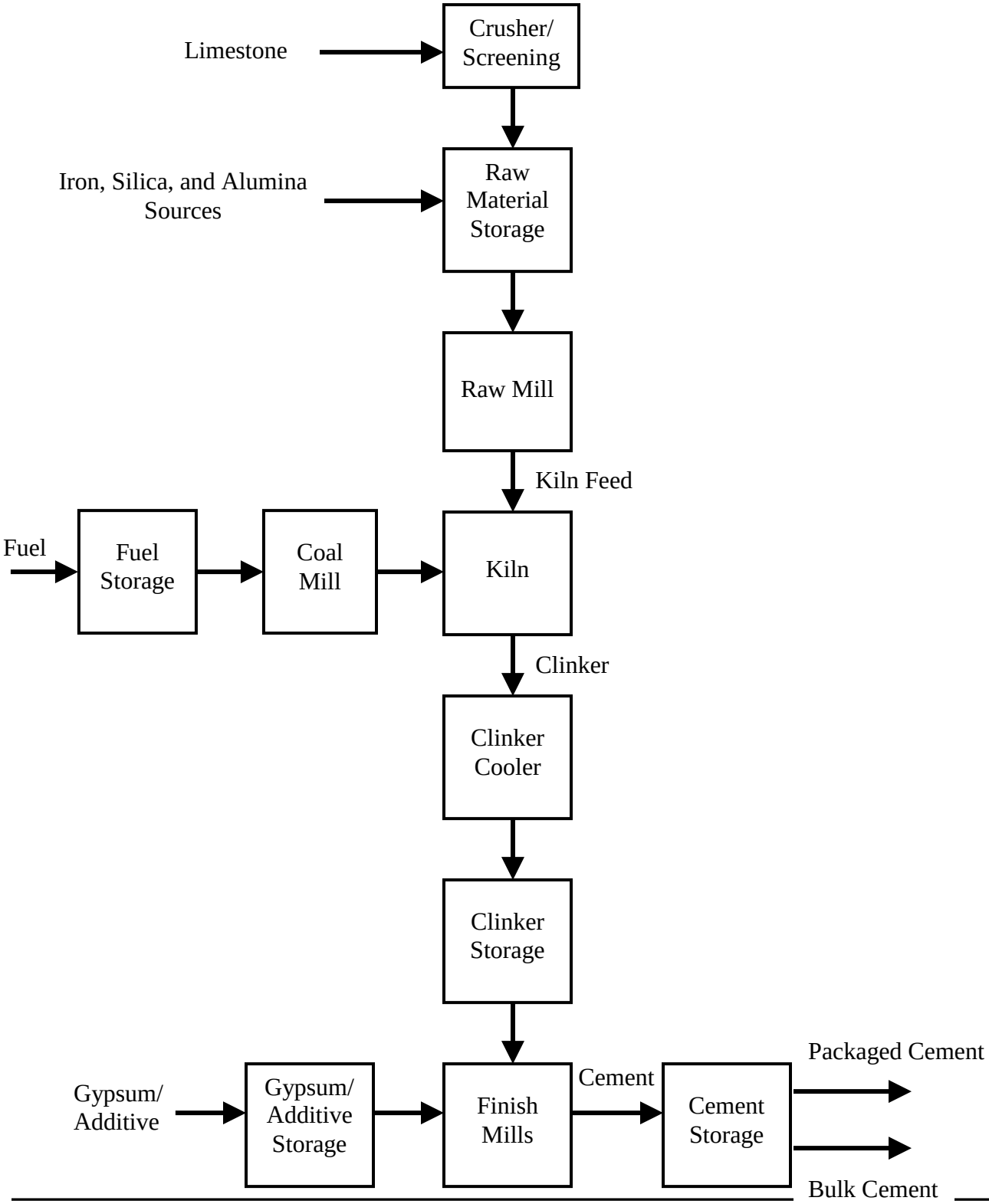
The basic ingredients of cement include oxides of calcium, silicon, aluminum, and iron. Because of the large requirement of calcium oxide (CaO), Portland cement plants are generally located near a source of calcareous material (limestone in the case of Capitol Cement Corporation - Martinsburg Plant). The limestone for the manufacturing process is mined from quarries (including a quarry located at the site). Raw limestone is transported from the quarry to a crusher, which reduces the rock size. In addition, the plant may utilize material additives that can supply the basic ingredients of calcium, silicon, aluminum, and iron. These raw material additives are inter-ground with limestone within the raw mill to a desired fineness. In a modern kiln system, the raw mill is typically an in-line raw mill, which utilizes a significant portion of kiln system gases to dry raw materials. An air heater may be utilized at times when sufficient heat from the kiln is not present. The ground raw material is collected and fed to a blending system to provide the kiln with a homogenous kiln feed.

## 2.2 Clinker Production

The clinker production process involves high temperature processing in the rotary kiln. Necessary chemical reactions take place in the kiln to produce an intermediate product referred to as clinker. The kiln is a countercurrent heating device, meaning that material fed into the cool upper end is drawn slowly by gravity to the hot discharge end prior to its placement into the clinker cooler. The burner at the discharge end of the kiln produces a current of hot gases that heats the clinker, the calcined material, and the raw materials in succession, as the hot gases pass upward toward the feed end. Additionally, the kiln is designed with burners at the back end of the kiln and the calciner and/or riser duct for additional heat used for calcination.

The clinker formation process in the PH/PC kiln system may be divided into four or five stages that are correlated with the temperature of the raw materials. In the preheater, uncombined water evaporates from the raw materials as the material temperature increases to the boiling point of water. Material temperature increases to the point at which calcination begins.

**FIGURE 1 General Process Overview of the Portland cement Manufacturing Process**



As calcination occurs, carbon dioxide ($CO_2$) is liberated from the carbonate component. Sintering (or clinkering) of the oxides occurs in the burning zone of the kiln. The sintering reactions chemically combine calcined material with silica, alumina, and iron to form tricalcium silicate ($Ca_3SiO_5$), dicalcium silicate ($Ca_2SiO_4$), tricalcium aluminate ($Ca_3Al_2O_6$), and tetracalcium alumino-ferrite ($Ca_4AlFeO_7$). Following the sintering reactions, clinker is quickly cooled by contact with ambient air injected into the clinker cooler. Some of the heat transferred to the clinker cooler air is recuperated back into the process.

The PH/PC kiln system is equipped with an Alkali Removal System (ARS). This ARS system allows kilns to manufacture low alkali clinker and reduces the potential for physical blockages to occur within the preheater tower. Low alkali clinker is required for certain applications and is specifically mandated in various construction and transportation associated projects. The ARS operates by diverting a small portion of the kiln exhaust gas which is laden with high alkali material out of the pyroprocessing system. These diverted kiln exhaust gases are quickly cooled or quenched with air and/or water. This allows for condensation of the volatile alkali constituents contained in the diverted kiln exhaust gas to form particulate matter. The particulate matter is then removed by a dedicated fabric filter dust collector. The collected dust containing high alkali material can then be used in the manufacture of masonry cement product. The gas stream that exits the fabric filter dust collector is then returned to the main kiln stack for discharge to the atmosphere.

## 2.3 Finish Cement Grinding

Clinker is transferred to the finishing mills and combined with gypsum and other additive pozzolanic materials from storage. Pozzolanic materials include, but are not limited to, limestone, flyash, bottom ash, silica flumes, and any other material that meets the chemical and physical characteristics of a pozzolanic material. The clinker and pozzolanic materials are ground to a fine, homogenous powder within the finish mills. In addition, an air heater can be utilized by the finish mills, which is the case for the Martinsburg Plant, which provides additional heat required to dry materials processed in the finish mills.

## 2.4 Packaging and Shipping

Finished cement, the final product of the Portland cement manufacturing process, can be shipped in bulk or in packages (e.g., bags). Final processing of finished cement may also vary to achieve final desired characteristics of the product such as color, type, and blaine.

## 2.5 Fugitive Sources

A number of processes associated with Portland cement manufacturing create fugitive emissions. Typical fugitive emissions associated with Portland cement manufacturing include material unloading (i.e., truck or rail unloading), transfer of materials (i.e., front end loader to pile, belt to belt transfers, belt to bin transfers, etc.), vehicle generated fugitive dust on unpaved and paved plant haul roads, and outdoor material storage piles (i.e., transfer of material to pile, wind erosion of material contained in the pile, transfer of material out of pile). As discussed in Section 3, a Portland cement manufacturing plant is required to account for these fugitive particulate emissions when calculating future allowable emissions, past actual emissions, and contemporaneous emissions as part of the particulate air emission inventories when determining NSR applicability.

# 3.0 Monitoring Requirements

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

The owner or operator of a *kiln* shall monitor opacity at each point where emissions are vented from these affected sources in accordance with 40 C.F.R. §§ 63.1350 (c) (1) through (c) (3).

1. Except as provided in Section 3.2.2 (2) [40 C.F.R. § 63.1350 (c) (3)], the owner or operator shall install, calibrate, maintain, and continuously operate a continuous opacity monitor (COM) located at the main stack after the outlet of the PM control device to continuously monitor the opacity. The COM shall be installed, maintained, calibrated, and operated as required by 40 C.F.R. Part 63 Subpart A, general provisions of 40 C.F.R. Part 63, and according to PS-1 of appendix B to Part 60 of Chapter I of Title 40.

2. To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard.

3. The owner or operator of a *clinker cooler* shall monitor opacity at each point where emissions are vented from the clinker cooler to the main stack in accordance with Section 3.2.3 (1) through (3) [40 C.F.R. §§ 63.1350 (d) (1) through (d) (3)].

    (1) Except as provided in Section 3.2.3 (2) [40 C.F.R. § 63.1350 (d) (2)], the owner or operator shall install, calibrate, maintain, and continuously operate a COM located at the main stack after the outlet of *the clinker cooler* PM control device to continuously monitor the opacity. The COM shall be installed, maintained, calibrated, and operated as required by 40 C.F.R. Part 63 Subpart A, general provisions of 40 C.F.R. 63, and according to PS-1 of appendix B to part 60 of Chapter I of Title 40.

    (2) The owner or operator of *a clinker cooler* subject to the provisions of 40 C.F.R. Part 63 Subpart LLL using a fabric filter with multiple stacks or an electrostatic precipitator with multiple stacks may, in lieu of installing the continuous opacity monitoring system required by Section 3.2.3 (1) [40 C.F.R. § 63.1350 (d) (1)], monitor opacity in accordance with Section 3.2.3 (2) (i) through (ii) [40 C.F.R. § 63.1350 (d) (2) (i) through (ii)]. If the control device exhausts through a monovent, or if the use of a COM in accordance with the installation specifications of PS–1 of appendix B to part 60 of this chapter is not feasible, the owner or operator must monitor opacity in accordance with Section 3.2.3 (2) (i) through (ii) [40 C.F.R. § 63.1350 (d) (2) (i) through (ii)].

(i) Perform daily visual opacity observations of each stack in accordance with the procedures of Method 9 of Appendix A to part 60 of this chapter. The Method 9 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 9 test shall be at least 30 minutes each day.

(ii) Use the Method 9 procedures to monitor and record the average opacity for each six-minute period during the test.

(3) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard. The 10 percent opacity limit is applicable since the main stack consists of exhaust gas from the *PH/PC kiln, inline raw mill, clinker cooler, alkali bypass, and coal mill.*

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

(1) Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with Section 3.2.1 (1) and (2) [40 C.F.R. §§ 63.1350 (a) (1) and (a) (2)]; and

(2) 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 each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the follow-up Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 test in accordance with Method 9 of appendix A to part 60 of this chapter. The duration of the Method 9 test shall be 30 minutes.

5. The owner or operator of an *affected source* subject to a limitation on D/F emissions shall monitor D/F emissions in accordance with Section 3.2.6. (1) through (6) [40 C.F.R. §§ 63.1350 (f) (1) through (f) (6)].

(1) The owner or operator shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln,

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

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

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

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

(3) The three-hour rolling average temperature shall be calculated as the average of 180 successive one-minute average temperatures.

(4) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.

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

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

6. The owner or operator of a *kiln* subject to a D/F emission limit under 40 C.F.R. Part 63 Subpart LLL shall conduct an inspection of the components of the combustion system of the PH/PC kiln at least once per year.

7. The owner or operator of an *affected source* subject to a limitation on opacity under Section 3.1.20 [40 C.F.R § 63.1345] shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with Section 3.2.1 [C.F.R. § 63.1350 (a)].
8. The owner or operator of an *affected source* subject to a particulate matter standard under 40 C.F.R. § 63.1343 shall install, calibrate, maintain, and operate a particulate matter continuous emission monitoring system (PM CEMS) to measure the particulate matter discharged to the atmosphere. All requirements relating to installation, calibration, maintenance, operation or performance of the PM CEMS and implementation of the PM CEMS requirement are deferred pending further rulemaking.

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

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

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

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

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

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

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

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

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

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

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

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

10. The requirements under Section 3.2.4 [40 C.F.R. § 63.1350 (e)] to conduct daily Method 22 testing shall not apply to any specific *raw mill* or *finish mill* equipped with a continuous opacity monitor COM or bag leak detection system (BLDS). If the owner or operator chooses to install a COM in lieu of conducting the daily visual emissions testing required under 3.2.4 [40 C.F.R. § 63.1350 (e)], then the COM must be installed at the outlet of the PM control device of the raw mill or finish mill, and the COM must be installed, maintained, calibrated, and operated as required by the general provisions in subpart A of this part and according to PS–1 of appendix B to part 60 of this chapter. To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard. If the owner or operator chooses to install a BLDS in lieu of conducting the daily visual emissions testing required under paragraph (e) of this section, the requirements in 3.2.10 (1) through (9) [40 C.F.R. § 63.1350 (m)(1) through (9)] apply to each BLDS:

(1) The BLDS must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less. “Certify” shall mean that the instrument manufacturer has tested the instrument on gas streams having a range of particle size distributions and confirmed by means of valid filterable PM tests that the minimum detectable concentration limit is at or below 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(2) The sensor on the BLDS must provide output of relative PM emissions.

(3) The BLDS must have an alarm that will activate automatically when it detects a significant increase in relative PM emissions greater than a preset level.

(4) The presence of an alarm condition should be clearly apparent to facility operating personnel.

(5) For a positive-pressure fabric filter, each compartment or cell must have a bag leak detector. For a negative-pressure or induced-air fabric filter, the bag leak detector must be installed downstream of the fabric filter. If multiple bag leak detectors are required (for either type of fabric filter), detectors may share the system instrumentation and alarm.

(6) All BLDS must be installed, operated, adjusted, and maintained so that they are based on the manufacturer's written specifications and recommendations. The EPA recommends that where appropriate, the standard operating procedures manual for each bag leak detection system include concepts from EPA's "Fabric Filter Bag Leak Detection Guidance" (EPA–454/R–98–015, September 1997).

(7) The baseline output of the system must be established as follows:
   (i) Adjust the range and the averaging period of the device; and
   (ii) Establish the alarm set points and the alarm delay time.

(8) After initial adjustment, the range, averaging period, alarm set points, or alarm delay time may not be adjusted except as specified in the operations and maintenance plan required by paragraph (a) of this section. In no event may the range be increased by more than 100 percent or decreased by more than 50 percent over a 1 calendar year period unless a responsible official as defined in §63.2 certifies in writing to the Administrator that the fabric filter has been inspected and found to be in good operating condition.

(9) The owner or operator must maintain and operate the fabric filter such that the bag leak detector alarm is not activated and alarm condition does not exist for more than 5 percent of the total operating time in a 6-month block period. Each time the alarm activates, alarm time will be counted as the actual amount of time taken by the owner or operator to initiate corrective actions. If inspection of the fabric filter demonstrates that no corrective actions are necessary, no alarm time will be counted. The owner or operator must continuously record the output from the BLDS during periods of normal operation. Normal operation does not include periods when the BLDS is being maintained or during startup, shutdown or malfunction.

# 4.0 Testing Requirements

1. The owner or operator of an *affected source* subject to 40 C.F.R. Part 63 Subpart LLL shall demonstrate initial compliance with the emission limits of 40 C.F.R. § 63.1343 and 40 C.F.R. § 63.1345, and Section 3.1.19 and 3.1.20 [40 C.F.R. §§ 63.1343(b)(1) through 63.1345] using the test methods and procedures in Section 3.3.3 [40 C.F.R. § 63.1349 (b)] and 40 C.F.R. § 63.7. Performance test results shall be documented in complete test reports that contain the information required by Section 3.3.2 (1) through (10) [40 C.F.R. §§ 63.1349 (a) (1) through (a) (10)] as well as all other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.

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

   (2) Sampling location description(s);

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

   (4) Test results;

   (5) Quality assurance procedures and results;

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

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

   (8) Documentation of calculations;

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

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

2. Performance tests to demonstrate initial compliance with 40 C.F.R. Part 63 Subpart LLL shall be conducted as specified in Section 3.3.3 [40 C.F.R. §§ 63.1349 (b)(1) through (b)(3)].

   (1) The owner or operator of a *kiln* subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test as specified in Section 3.3.3 (1)(i) through (1)(iv) [40 C.F.R. §§ 63.1349 (b) (1) (i) through (b) (1) (iv)]. The owner or operator of an in-line kiln/raw mill subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting separate performance tests as specified in

Section 3.3.3 (1)(i) through (1)(iv) [40 C.F.R.§§63.1349 (b) (1) (i) through (b) (1) (iv)] while the *raw mill* of the in-line kiln/raw mill is under normal operating condition and while the *raw mill* of the in-line kiln/raw mill is not operating. The owner or operator of a clinker cooler subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test as specified in Section 3.3.3 (1) (i) through (1) (iii) [40 C.F.R. §§ 63.1349 (b) (1) (i) through (b) (1) (iii)]. The opacity exhibited during the period of the Method 5 of Appendix A to 40 C.F.R. part 60 of Chapter I of Title 40 performance tests required by Section 3.3.3 (1) (i) [40 C.F.R. § 63.1349 (b) (1) (i)] shall be determined as required in [40 C.F.R. §§ 63.1349 (b) (1) (v) through (b) (vi)].

(i) Method 5 of appendix A to 40 C.F.R. part 60 of Chapter I of Title 40 shall be used to determine PM emissions. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with 40 C.F.R. § 63.7 (e). Each run shall be conducted for at least 1 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. A determination of the PM collected in the impingers ("back half") of the Method 5 particulate sampling train is not required to demonstrate initial compliance with the PM standards of 40 C.F.R. Part 63, Subpart LLL. However, this shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes.

(ii) Suitable methods shall be used to determine the kiln feed rate, except for fuels, for each run.

(iv) The emission rate, E, of PM shall be computed for each run using equation 1:

$$E = (C_s\ Q_{sd}) / P \qquad \text{Equation 1}$$

Where:

E = emission rate of particulate matter, kg/Mg of kiln feed.

$c_s$ = concentration of PM, kg/dscm.

$Q_{sd}$ = volumetric flow rate of effluent gas, dscm/hr.

P = total kiln feed (dry basis), Mg/hr.

(v) When there is an alkali bypass associated with a kiln, the main exhaust

and alkali bypass of the kiln shall be tested simultaneously and the combined emission rate of particulate matter from the kiln and alkali bypass shall be computed for each run using equation 2,

$$Ec = (C_{sk} Q_{sdk} + C_{sd} Q_{sdb}) / P \qquad \text{Equation 2}$$

Where:

Ec = the combined emission rate of particulate matter from the kiln and bypass stack, kg/Mg of kiln feed.

csk = concentration of particulate matter in the kiln effluent, kg/dscm.

Qsdk = volumetric flow rate of kiln effluent, dscm/hr.

csb = concentration of particulate matter in the alkali bypass gas, kg/dscm.

Qsdb = volumetric flow rate of alkali bypass gas, dscm/hr.

P = total kiln feed (dry basis), Mg/hr.

(vi) Except as provided in 40 C.F.R. § 63.1349 (b) (1) (vi) the opacity exhibited during the period of the Method 5 performance tests required by Section 3.3.3 (1) (i) [40 C.F.R. § 63.1349 (b) (1) (i)] shall be determined through the use of a continuous opacity monitor (COM). The maximum six-minute average opacity during the three Method 5 test runs shall be determined during each Method 5 test run, and used to demonstrate initial compliance with the applicable opacity limits of Section 4.1.5.(b) [40 C.F.R. § 63.1343 (e)], 40 C.F.R. § 63.1343 (e), Table 2, Row 1, or Section 4.1.30. [40 C.F.R. §63.1343(e)].

*Note: This section 4.2.(1) shall remain in effect until the compliance date specified in permit condition 3.1.22.*

(2) The owner or operator of any *affected source* subject to limitations on opacity under 40 C.F.R. Part 63 Subpart LLL that is not subject to by Section 3.3.3 (1) [40 C.F.R. § 63.1349 (b) (1)] shall demonstrate initial compliance with the affected source opacity limit by conducting a test in accordance with Method 9 of Appendix A to Part 60 of Chapter I of Title 40. The performance test shall be conducted under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with 40 C.F.R. § 63.7 (e). The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in initial compliance

with the standard. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of Section 3.3.3 (2) (i) through (2) (ii) [40 C.F.R. §§ 63.1349 (b) (2) (i) through (ii)] apply:

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

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

(3) The owner or operator of an *affected source* subject to limitations on D/F emissions under 40 C.F.R. Part 63 Subpart LLL shall demonstrate initial compliance with the D/F emission limit by conducting a performance test using Method 23 of appendix A to Part 60 of Chapter I of Title 40. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating. The owner or operator of a kiln equipped with an alkali bypass shall conduct simultaneous performance tests of the kiln exhaust and the alkali bypass. However, the owner or operator of an in-line kiln/raw mill may conduct a performance test of the alkali bypass exhaust when the raw mill of the in-line kiln/raw mill is operating or not operating.

(i) Each performance test shall consist of three separate runs; each run shall be conducted under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with 40 C.F.R. § 63.7 (e). The duration of each run shall be at least 3 hours, and the sample volume for each run shall be at least 2.5 dscm (90 dscf). The concentration shall be determined for each run, and the arithmetic average of the concentrations measured for the three runs shall be calculated and used to determine compliance.

(ii) The temperature at the inlet to the kiln 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 of appendix A to part 60, and the continuous temperature record(s) must be included in the performance test report.

(iii) One-minute average temperatures must be calculated for each minute of each run of the test.

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

3. Except as provided in Section 3.3.6 [40 C.F.R. § 63.1348(c)], performance tests required under Section 3.3.3 (1) through (2) [40 C.F.R. §§ 63.1349 (b) (1) and (b) (2)] shall be repeated every five years, except that the owner or operator of a *kiln or clinker cooler* is not required to repeat the initial performance test of opacity for the *kiln, in-line kiln/raw mill or clinker cooler*.

4. Performance tests required under Section 3.3.3 (3) [40 C.F.R. § 63.1349 (b) (3)] shall be repeated every 30 months.

5. (1) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable D/F standard under 40 C.F.R. Part 63 Subpart LLL, the source must conduct a performance test and establish new temperature limit(s) as specified in Section 3.3.3 (3) [40 C.F.R. § 63.1349 (b) (3)].

(2) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable PM standard under 40 C.F.R. § 63.1343, the source must conduct a performance test as specified in Section 3.3.3 (1) [40 C.F.R. § 63.1349 (b) (1)].

(3) In preparation for and while conducting a performance test required in Section 3.3.6 (1) [40 C.F.R. § 63.1348 (c) (1)], a source may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in Sections 3.3.6 (3) (i) through (3) (iv) [40 C.F.R. §§ 63.1348 (c) (2) (i) through (iv)] are met. The source shall submit temperature and other monitoring data that are recorded during the pretest operations.

(i) The source must provide the Administrator written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under 40 C.F.R. Part 63 Subpart LLL, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under Sections 3.3.6 (3) (i) [40 C.F.R. § 63.1348 (c)(2)(i)] shall include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under Section 3.3.6. (1) [40 C.F.R. § 63.1348 (c) (1)], including when the planned operational change period would begin.

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

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

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

# 5.0 Recordkeeping Requirements

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

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

    h. The date(s) analyses were performed;

    i. The company or entity that performed the analyses;

    j. The analytical techniques or methods used;

    k. The results of the analyses; and

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

2. Retention of records. The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

3. Odors. For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received. Such record shall contain an assessment of the validity of the complaints as well as any corrective actions taken.

4. The owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 C.F.R. § 63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.

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

    (1) All documentation supporting initial notifications and notifications of compliance

status under 40 C.F.R. § 63.9;

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

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

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

# 6.0 Reporting Requirements

1. Responsible official. Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

3. All notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, mailed first class or by private carrier with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

| **If to the DAQ:** | **If to the US EPA:** |
|---|---|
| Director<br>WVDEP<br>Division of Air Quality<br>601 57th Street<br>Charleston, WV 25304-2943<br><br>Phone: 304/926-0475<br>FAX: 304/926-0478 | Associate Director<br>Office of Enforcement and Permits Review (3AP12)<br>U. S. Environmental Protection Agency<br>Region III<br>1650 Arch Street<br>Philadelphia, PA 19103-2029 |

4. Certified emissions statement. The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. The certified emissions statement and pay fees are to be submitted on July 31 of each year unless directed by DAQ.

5. Compliance certification. The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the

period ending December 31. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification.

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

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

8. Deviations.

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

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

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

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

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

d. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary.

9. New applicable requirements. If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

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

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

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

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

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

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

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

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

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

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

    (4) As required by 40 C.F.R § 63.10 (d) (5), if actions taken by an owner or operator during a startup, shutdown, or malfunction of an affected source (including

actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 C.F.R § 63.6 (e) (3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and

(5) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

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

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

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

(9) The owner or operator shall submit a summary report semiannually which contains the information specified in 40 C.F.R § 63.10 (e) (3) (vi). In addition, the summary report shall include:

(i) All exceedences of maximum control device inlet gas temperature limits specified in Section 4.1.6., and 4.1.7. [40 C.F.R §§63.1344(a) and (b)];

(ii) All failures to calibrate thermocouples and other temperature sensors as

required under Section 3.2.5 (6) [40 C.F.R § 63.1350 (f) (6)]; and

(iii) The results of any combustion system component inspections conducted within the reporting period as required under Section 3.2.6 [40 C.F.R § 63.1350 (i)].

(iv) All failures to comply with any provision of the operation and maintenance plan developed in accordance with Section 3.2.1 [40 C.F.R § 63.1350 (a)].

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