Part 70 Operating Permit Amendment

Permit Amendment No.: **3241-153-0003-V-04-2** **Effective Date:**

Facility Name: **CEMEX Southeast, LLC**

Facility Address: 2720 Highway 341 South
Clinchfield, Georgia 31013 (Houston County)

Mailing Address: P. O Box 120
Clinchfield, Georgia 31013

Parent/Holding Company: CEMEX, Inc.

Facility AIRS Number: 04-13-153-00003

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Georgia Rules for Air Quality Control, Chapter 391-3-1, adopted pursuant to and in effect under the Act, the Permittee described above is issued a construction/operating permit for:

(1) Construction and operation of a dry process Portland cement manufacturing line (Kiln No. 6) consisting of a preheater/calciner rotary cement kiln, an in-line raw mill, a clinker cooler, a coal/coke mill, a finish mill and associated material handling and pollution control equipment; (2) Addition of eight belt conveyors to the existing on-site quarry.

This Permit Amendment is conditioned upon compliance with all provisions of The Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq, the Rules, Chapter 391-3-1, adopted and in effect under that Act, or any other condition of this Permit Amendment and Permit No. 3241-153-0003-V-04-0. Unless modified or revoked, this Permit Amendment expires upon issuance of the next Part 70 Permit for this source.

This Permit Amendment may be subject to revocation, suspension, modification or amendment by the Director for cause including evidence of noncompliance with any of the above; or for any misrepresentation made in Application No. 17550 dated July 16, 2007; any other applications upon which this Permit Amendment or Permit No. 3241-153-0003-V-04-0 are based; supporting data entered therein or attached thereto; or any subsequent submittal or supporting data; or for any alterations affecting the emissions from this source.

This Permit Amendment is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **55** pages.

Director
Environmental Protection Division

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PART 1.0 FACILITY DESCRIPTION

1.3 Process Description of Modification

This modification involves the construction and operation of a dry process Portland cement manufacturing line (Kiln No. 6) capable of producing 1,405,104 short tons per year of cement clinker. The Kiln No. 6 consists mainly of raw material handling and storage, kiln feed preparation with an in-line raw mill, a dry process rotary kiln coupled with preheater and calciner, a clinker cooler, a coal/pet coke mill, a finish mill, and cement storage, packaging and shipping operations. Eight belt conveyors will be added to the existing on-site quarry as part of the modification. In addition to the new equipment, some existing silos will be retrofitted with baghouses and utilized either exclusively or partially in the operation of the Kiln No. 6.

The production process of the Kiln No. 6 begins with mixing the raw materials such as limestone, clay, fly ash and other additives according to specification. The mixture then is ground and dried in the raw mill. The powdery material produced by the raw mill, referred to as dry/kiln feed, is conveyed into the preheater, calciner, and kiln itself in turn for pyroprocessing into cement clinker nodules. The clinker nodules are cooled in the clinker cooler and then mixed and ground with limestone, gypsum and/or other additives as necessary in the finish mill to formulate Portland cement. The Kiln No. 6 has a capacity of 270 short tons per hour of dry feed input to the preheater/precalciner, and 160 short tons per hour of clinker output from the kiln. The finish mill can produce up to 220 short tons per hour of Portland cement. Cement produced is stored or packaged as necessary, and distributed via both truck and rail.

Raw materials for the Kiln No. 6 include limestone, clay, iron ore/mill scale (or other iron sources) and bauxite/fly ash (or other alumina sources), gypsum, either quarried on-site (limestone and clay) or brought in by both truck and freight train.

Fuel authorized for the Kiln No. 6 include natural gas, coal, petroleum coke, fuel oils, landfill gas, and other non-hazardous liquid and solid fuels such as “on-specification” used oil fuels, plastic, filter fluff and wood wastes. A coal/pet coke mill grinds up to 219,000 short tons of coal and petroleum coke annually for firing the kiln. Emissions of regulated air pollutants from combustion of each fuel are evaluated via performance tests before the fuel use authorization.

The Kiln No. 6 uses Selective Non-Catalytic Reduction (SNCR) in combination with staged and controlled combustion (SCC) and low NO_x burners to minimize NO_x emissions from the pyroprocessing processes. Fabric filters/baghouses are employed to capture PM emitted from various process units associated with the Kiln No. 6 wherever feasible. Wet suppression/water spray and other precautions are utilized as necessary to reduce fugitive PM emissions from the material handling operations. A hydrated lime injection system is used as necessary to comply with SO_2 emission limits for the kiln. The Kiln No. 6 is also designed and will be operated in a mode to minimize emissions of CO and VOC via controlled combustion, and SO_2 via raw material management and hydrated lime injection.

PART 3.0 REQUIREMENTS FOR EMISSION UNITS

Note: Except where an applicable requirement specifically states otherwise, the averaging times of any of the Emissions Limitations or Standards included in this permit are tied to or based on the run time(s) specified for the applicable reference test method(s) or procedures required for demonstrating compliance.

3.1.1 Additional Emission Units

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
6010	Kiln No. 6 Raw Mix Conveyor	40 CFR 52.21; 40 CFR Part 63, Subpart LLL; 391-3-1-.02(2)(2)(b); 391-3-1-.02(2)(2)(e); 391-3-1-.02(2)(2)(n)	3.2.8, 3.2.9, 3.2.15, 3.2.23, 3.2.24, 3.2.25, 3.2.26, 3.2.27, 3.2.28, 3.2.30, 3.2.32, 3.3.6, 3.3, 3.3.10, 3.3.11, 4.2.7, 4.2.25, 4.2.27, 5.2.14, 5.2.20, 5.2.25, 5.2.31, 6.2.10, 6.2.11, 6.2.12, 6.2.13, 6.2.14, 6.2.25, 6.2.26, 6.2.27, 6.2.30, 6.2.32	C010	Baghouse
6013	Kiln No. 6 Blending Silo			C013	Baghouse
614A	Kiln No. 6 Weigh Hopper			C014	Baghouse
614B	Kiln No. 6 Preheater Feed Bin				
6015	Kiln No. 6 Airslide 2			C012, C015	Baghouse
6016	Kiln No. 6 Bucket Elevator, Bottom			C011, C016	Baghouse
6017	Kiln No. 6 Bucket Elevator Top			C017	Baghouse
6011	Kiln No. 6 Raw Meal Vertical Roller Mill (Part of 6012)	40 CFR 52.21; 40 CFR Part 63, Subpart LLL; 391-3-1-.02(2)(2)(b); 391-3-1-.02(2)(2)(e); 391-3-1-.02(2)(2)(n)	3.2.8 thru 3.2.15, 3.2.23 thru 3.2.34, 3.3.6, 3.3.9, 3.3.10, 4.2.7, 4.2.8, 4.2.9, 4.2.11 thru 4.2.19, 4.2.25 thru 4.2.28, 5.2.14 thru 5.2.19, 5.2.21, 5.2.22, 5.2.24, 5.2.27, 5.2.28, 5.2.29, 5.2.31 thru 5.2.34, 6.2.30, 6.2.31, 6.2.32	C18A, C18B	Baghouse; SNCR; Hydrated Lime Injection
6012	Kiln No. 6 Raw Mill				
618A	Kiln No. 6				
618B	Clinker Cooler No. 6				
6019	Kiln No. 6 Buffer Bin	40 CFR 52.21; 40 CFR Part 63, Subpart LLL; 391-3-1-.02(2)(2)(b); 391-3-1-.02(2)(2)(e); 391-3-1-.02(2)(2)(n)	3.2.8, 3.2.9, 3.2.15, 3.2.23, 3.2.24, 3.2.25, 3.2.26, 3.2.27, 3.2.28, 3.2.30, 3.2.32, 3.3.6, 3.3.10, 3.3.11, 4.2.7, 4.2.25, 4.2.26, 5.2.14, 5.2.20, 5.2.25, 5.2.31, 6.2.10, 6.2.11, 6.2.12, 6.2.13, 6.2.14, 6.2.25, 6.2.26, 6.2.27, 6.2.30, 6.2.32	C019	Baghouse
6020	Clinker Conveyor – Deep Pan			C020	Baghouse
6021	Special Clinker Silo			C021	Baghouse
622A	Deep Pan Conveyor to Clinker Silos			C022	Baghouse
622B	Clinker Silo No. 1				Baghouse
622C	Clinker Silo No. 2				Baghouse
6023	Kiln No. 6 Truck Unloader Clinker Buffer			C023	Baghouse
6024	Finish Mill No. 7 Feed Conveyor			C024	Baghouse
6025	Cement Conveyor			C025	Baghouse
6026	Cement Bucket Elevator			C026	Baghouse
6027	Finish Grinding Vertical Roller Mill			C027	Baghouse
6028	Cement Conveyor from Silos			C028	Baghouse
6030	Kiln No. 6 Gypsum Silo Anhydrite			C030	Baghouse
6031	Kiln No. 6 Gypsum Silo Zynt			C031	Baghouse

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
6032	Kiln No. 6 Additive Silo	40 CFR 52.21; 40 CFR Part 63, Subpart LLL; 391-3-1-.02(2)(2)(b); 391-3-1-.02(2)(2)(e); 391-3-1-.02(2)(2)(n)	3.2.8, 3.2.9, 3.2.15, 3.2.23, 3.2.24, 3.2.25, 3.2.26, 3.2.27, 3.2.28, 3.2.30, 3.2.32, 3.3.6, 3.3.10, 3.3.11, 4.2.7, 4.2.25, 4.2.27, 5.2.14, 5.2.20, 5.2.25, 5.2.31, 6.2.10, 6.2.11, 6.2.12, 6.2.13, 6.2.14, 6.2.25, 6.2.26, 6.2.27, 6.2.30, 6.2.32	C032	Baghouse
6033	Gypsum and Additive Drop from Receiving Bin			C033	Baghouse
6036	Gypsum & Additive Transfer Belt Conveyor			C036	Baghouse
6034	Coke/Coal Railcar Unloading Conveyor	40 CFR 52.21; 40 CFR Part 60, Subpart Y; 391-3-1-.02(2)(2)(b); 391-3-1-.02(2)(2)(e); 391-3-1-.02(2)(2)(n)	3.2.8, 3.2.9, 3.2.12, 3.2.15, 3.2.24, 3.2.33, 3.3.6, 3.3.7, 3.3.8, 4.2.20, 4.2.25, 5.2.25, 5.2.31, 6.2.25, 6.2.28, 6.2.31, 6.2.32	C034	Baghouse
6035	Coke/Coal Transfer Belt Conveyor			C035	Baghouse
6037	Coke/Coal Transfer to Storage Piles			C037	Baghouse
638A	Coke Bin			C038	Baghouse
638B	Coal Bin				
6039	Kiln No. 6 Preheater 2 Fuel Bin			C039	Baghouse
6040	Kiln No. 6 Main Burner 2 Fuel Bin			C040	Baghouse
6050	Coal/Coke Conveyor			C050	Baghouse
6051	Coal/Coke Conveyor			C051	Baghouse
6052	Coal/Coke Conveyor			C052	Baghouse
6053	Coal/Coke Conveyor			C053	Baghouse
6054	Coal/Coke Conveyor			C054	Baghouse
6098	Coke/Coal Transfer Belt Conveyor		3.2.9, 3.2.12, 3.2.15, 3.2.24, 3.2.33, 3.3.6, 3.3.7, 3.3.8, 4.2.20, 5.2.26, 5.2.31, 6.2.25, 6.2.28, 6.2.31, 6.2.32	N/A	None
6099	Coal/Coke Conveyor				
6100	Coal/Coke Conveyor				
6101	Coal/Coke Conveyor				
6102	Coal/Coke Conveyor				
6103	Coal/Coke Conveyor				
6041	Kiln No. 6 Coal/Pet Coke Mill	40 CFR 52.21; 40 CFR Part 60, Subpart Y; 391-3-1-.02(2)(2)(b); 391-3-1-.02(2)(2)(e); 391-3-1-.02(2)(2)(n)	3.2.8, 3.2.9, 3.2.12, 3.2.14, 3.2.15, 3.2.23, 3.2.24, 3.3.6, 3.3.7, 3.3.8, 3.3.9, 4.2.7, 4.2.8, 4.2.14, 4.2.17, 4.2.20, 4.2.25, 5.2.14, 5.2.25, 5.2.31, 6.2.25, 6.2.26, 6.2.27, 6.2.28, 6.2.31, 6.2.32	C041	Baghouse
6042	Clinker Conveyor 1	40 CFR 52.21; 40 CFR Part 63, Subpart LLL; 391-3-1-.02(2)(2)(b); 391-3-1-.02(2)(2)(e);	3.2.8, 3.2.9, 3.2.15, 3.2.23, 3.2.24, 3.2.25, 3.2.26, 3.2.27, 3.2.28, 3.2.30, 3.2.32, 3.3.6, 3.3, 3.3.10, 3.3.11, 4.2.7, 4.2.25, 4.2.27, 5.2.14, 5.2.20, 5.2.25, 5.2.31, 6.2.10, 6.2.11, 6.2.12, 6.2.13, 6.2.14, 6.2.25, 6.2.26, 6.2.27, 6.2.30, 6.2.32	C042	Baghouse
6043	Clinker Conveyor 2			C043	Baghouse
6044	Clinker Conveyor 3			C044	Baghouse
6048	Clinker Conveyor			C048	Baghouse
6049	Clinker Conveyor			C049	Baghouse
6060	Cement Conveyor to Feed New Silos			C060	Baghouse
661A	Cement Conveyor to Existing Silos NW			C061	Baghouse
661B	Cement Conveyor to Existing Silos NW			C061	Baghouse
661C	Cement Conveyor to Existing Silos NW			C061	Baghouse

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
661D	Cement Conveyor to Existing Silos NW			C061	Baghouse
661E	Cement Conveyor to Existing Silos NW			C061	Baghouse
661F	Cement Conveyor to Existing Silos NW			C061	Baghouse
661G	Cement Conveyor to Existing Silos NW			C061	Baghouse
661H	Cement Conveyor to Existing Silos NW			C061	Baghouse
661I	Cement Conveyor to Existing Silos NW			C061	Baghouse
661J	Cement Conveyor to Existing Silos NW			C061	Baghouse
661K	Cement Conveyor to Existing Silos NW			C061	Baghouse
661L	Cement Conveyor to Existing Silos NW			C061	Baghouse
661M	Cement Conveyor to Existing Silos NW			C061	Baghouse
661N	Cement Conveyor to Existing Silos NW			C061	Baghouse
661O	Cement Conveyor to Existing Silos NW				
661P	Cement Conveyor to Existing Silos NW				
661Q	Cement Conveyor to Existing Silos NW				
661R	Cement Conveyor to Existing Silos NW				
6062	Cement Conveyor to Existing Silos SE			C062	Baghouse
6063	Cement Storage Silo 1			C063	Baghouse
6064	Cement Storage Silo 2			C064	Baghouse
6065	Cement Storage Silo 3			C065	Baghouse
6066	Cement Storage Silo 4			C066	Baghouse
6067	Cement Discharge Bin			C067	Baghouse
6068	Cement Airslide Conveyor 1			C068	Baghouse
6069	Cement Airslide Conveyor 2			C069	Baghouse
6070	Cement Airslide Conveyor 3			C070	Baghouse
6071	Cement Airslide Conveyor 4			C071	Baghouse
6072	Cement Loading Railcars 1			C072	Baghouse
6073	Cement Loading Railcars 2			C073	Baghouse
6074	Cement Loading Railcars 3			C074	Baghouse
6075	Cement Loading Railcars 4			C075	Baghouse
6045	Clay and Iron Ore Reception Conveyor 1	40 CFR 52.21; 40 CFR Part 60, Subpart OOO; 391-3-1-.02(2)(2)(b); 391-3-1-.02(2)(2)(e); 391-3-1-.02(2)(2)(n)	3.2.8, 3.2.9, 3.2.15, thru 3.2.21, 3.2.24, 3.3.6, 3.3.12, 4.2.21 thru 4.2.24, 4.2.25, 5.2.25, 5.2.30, 5.2.31, 6.2.17, 6.2.18, 6.2.32	C045	Baghouse
6046	Clay and Iron Ore Storage Conveyor 1			C046	Baghouse
6047	Clay and Iron Ore Transfer Conveyor 1			C047	Baghouse
6076	Conveyor from Quarry		3.2.9, 3.2.15, thru 3.2.21, 3.2.24, 3.3.6, 3.3.12, 4.2.21 thru 4.2.24, 4.2.25, 5.2.25, 5.2.30, 5.2.31, 6.2.17, 6.2.18, 6.2.29, 6.2.32	N/A	Wet Suppression as necessary
6077	Conveyor from Quarry				
6078	Raw Materials Conveyor				
6079	Raw Materials Conveyor				
6081	Raw Materials Conveyor				
6082	Raw Materials Conveyor				
6083	Raw Materials Conveyor				

Emission Units		Specific Limitations/Requirements		Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/ Standards**	**Corresponding Permit Conditions**	**ID No.**	**Description**
6098	Raw Materials Conveyor				
6080	Raw Materials Conveyor	40 CFR 52.21; 40 CFR Part 63, Subpart LLL; 391-3-1-.02(2)(2)(b); 391-3-1-.02(2)(2)(e); 391-3-1-.02(2)(2)(n) 40 CFR 52.21;	3.2.9, 3.2.23, 3.2.24, 3.2.25, 3.2.26, 3.2.27, 3.3.6, 3.3.11, 4.2.10, 4.2.14, 4.2.25, 5.2.14, 5.2.20, 5.2.26, 6.2.10, 6.2.11, 6.2.12, 6.2.13, 6.2.14, 6.2.32	N/A	None
6084	Kiln No. 6 Raw Meal Conveyor				
6085	Raw Mill Conveyor 1				
6086	Raw Mill Conveyor 2				
6087	Raw Mill Conveyor 3				
6088	Finish Mill No. 7 Feed Conveyor				
6089	Cement Conveyor to Silos				
6090	Conveyor to Cement Silo 1				
6091	Finish Mill Conveyor				
6092	Bucket Elevator to Finish Mill				
6093	Bucket Elevator				
6094	Clinker Conveyer				
6095	Clinker Conveyer				
6096	Clinker Conveyer				
6097	Finish Mill Conveyor				
6110	1,250 kW New Emergency Generator	40 CFR 52.21; 40 CFR Part 60, Subpart IIII; 40 CFR Part 63, Subpart ZZZZ; 391-3-1-.02(2)(2)(b); 391-3-1-.02(2)(2)(e); 391-3-1-.02(2)(2)(g)	3.2.8, 3.2.9, 3.2.35 thru 3.2.39, 3.3.13, 3.3.14, 5.2.23, 6.2.19 thru 6.2.24, 6.2.32	N/A	None

* Generally applicable requirements contained in this permit may also apply to emission units listed above.

3.2 Equipment Emission Caps and Operating Limits

New Conditions

40 CFR Part 52.21 – *Prevention of Significant Deterioration (PSD)/Best Available Control Technology (BACT)*

3.2.8 Reserved

3.2.9 The Permittee shall not discharge, or cause the discharge into the atmosphere, from the No. 6 Kiln and associated process units during any period of 12 consecutive months:
[40 CFR 52.21-PSD/BACT]

a. Sulfur dioxide (SO_2) in excess of 703 tons,

b. Nitrogen oxides (NO_x) in excess of 1,370 tons,

c. Carbon Monoxide (CO) in excess of 2,037 tons,

d. Volatile organic compounds (VOC) in excess of 351 tons, expressed in total hydrocarbons (THC) reported as propane corrected to 7% oxygen on a dry basis,

e. Particulate matter (PM) in excess of 243 tons. This emission limit includes particulate matter less than 10 microns (PM_{10}) in amounts not exceeding 199 tons.

For the purpose of this permit amendment, the Kiln No. 6 consists of the following sources (See Table 3.1.1 for details):

Emission Unit Nos. 6010 through 6013, 614A, 614B, 6015, 6016, 6017, 618A, 618B, 6019, 6020, 6021, 622A, 622B, 622C, 6023 through 6028, 6030 through 6037, 638A, 638B, 6039 through 6054, 6060, 661A through 661R, 6062 through 6110.

3.2.10 The production rate of the Kiln No. 6 shall not exceed 160.4 tons per hour of clinker (24-hour rolling average), and 1,405,104 tons of clinker during any consecutive 12-month period.
[40 CFR 52.21-PSD/BACT]

3.2.11 Reserved

3.2.12 The Kiln No. 6 shall only burn authorized fuels whose impacts on air pollutant emissions have been determined as acceptable based on a Division-approved fuel-specific performance test(s) required by Condition 4.2.27. Authorized fuels may include, but not to be limited to, coal, fuel oil, natural gas, petroleum coke, landfill gas, on-specification used oil, whole or shredded tires, oily water and other non-hazardous wastes as defined in 40 CFR Part 63, Subpart EEE – "*National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors"*. The Permittee shall demonstrate compliance with the usage requirements for any of the above or combination of the above-authorized fuels to the Division before using the fuel in the Kiln No. 6 in accordance with the following procedures/requirements:
[40 CFR 52.21-PSD/BACT]

a. Firing of an authorized non-hazardous liquid fuel shall not exceed the percentage of the total heat input of the kiln that was utilized during the most recent Division-approved performance test for firing the liquid fuel.

b. Firing of an authorized non-hazardous solid fuel shall not exceed the percentage of the calciner/kiln burner capacity that was utilized during the most recent Division-approved performance test for firing the solid fuel.

c. Total solid fuel usage including coal, petroleum coke and other non-hazardous alternative solid fuels shall not exceed 256,000 tons during any 12 consecutive month period.

d. Dry coal/fly ash may be injected directly into the calciner or kiln.

e. The air heater supplying hot air to the raw mill shall be fired only with natural gas, landfill gas or distillate fuel oil (No. 1 and No. 2) and No. 4 fuel oil.

f. The firing of the "on-specification" used oil shall not exceed 4,230 gallons per hour and 1,522,800 gallons during any consecutive 12-month period. The "on-specification" used oil shall meet the following specifications:

i. Arsenic shall not exceed 5.0 ppm

ii. Cadmium shall not exceed 2.0 ppm

iii. Chromium shall not exceed 10.0 ppm

iv. Lead shall not exceed 100.0 ppm

v. Total halogens shall not exceed 1000 ppm; and

vi. Flash point shall not be less than 100°F.

"On-specification" used oil may be generated from on site sources or purchased from a vendor, and shall not contain any PCB's.

3.2.13 The Permittee shall use the following technologies and/or procedures to comply with the relevant BACT emission limits.
[40 CFR 52.21-PSD/BACT]

a. Staged and controlled combustion (SCC) and NH_3 solution-injection based SNCR to reduce NO_x emissions. The NH_3 solutions shall be injected at a location with an appropriate temperature profile to support the SNCR process. To prevent excessive NH_3 slip, the ammonia injection rate shall not exceed a NH_3/NO_x molar ratio of 1.0. A maximum NH_3 injection rate that represents a NH_3/NO_x molar ratio of less than 1.0 shall be established via Division-approved performance testing.

b. Indirect firing and low NO_x burner(s) for reducing NO_x emissions.

c. Fabric filters/baghouses to reduce PM/PM_{10} emissions from process air and/or flue gas streams exhausting through vents/stacks.

d. Control of SO_2 emissions through equipment design/inherent dry scrubbing, judicious selection/use of raw materials, and hydrated lime injection (as necessary).

e. Control of CO and VOC emissions through equipment design and combustion process management with good operating practices (i.e., adequate combustion temperature, residence time and excess air), and judicious selection/use of raw materials.

The Permittee shall include, with the performance test reports as required in Part 4.0 of this permit amendment, written operation, inspection and maintenance procedures and work practice requirements. These procedures and requirements shall be developed to ensure the satisfaction of the operating requirements in this condition, including, for each baghouse, an operation and maintenance (O&M) plan, or as an alternative, the operation and maintenance plan as required in Condition 5.2.14. All inspections and maintenances activities shall be recorded in a permanent form suitable for inspection and submission to the Division.

3.2.14 To achieve the capture efficiencies demonstrated during the most recent Division-approved performance tests, the Permittee shall, during all periods of the operations, maintain the pressure drops across the baghouses at the levels or inside the ranges utilized during the most recent Division-approved performance tests. The Permittee shall equip the baghouse Nos. C18A, C027, and C041 with continuous pressure drop/differential monitoring systems. Records from such monitoring systems of any 3-hour period during which the average measured pressure drops fall below the levels or stray away from the ranges as utilized during the most recent Division-approved performance tests shall be reported as excursions per Condition 6.1.4.
[40 CFR 52.21-PSD/BACT]

3.2.15 A critical spare parts inventory for control equipment including measuring device(s) and/or monitoring system(s) shall be maintained by the Permittee as necessary. Critical spare parts include those such as bag filters and water spray nozzles which are most probable to fail under normal conditions of the control equipment operation and which can be practically inventoried and installed by the Permittee.
[40 CFR 52.21-PSD/BACT]

3.2.16 The Permittee shall operate, during all times when the quarry emission units associated with this modification are in operation, the wet suppression/water-spray control system, except when these units are processing wet materials and during natural wet conditions. When the use of wet suppression/water-spray control system is required, the Permittee shall only operate the emission units when there is sufficient water and water pressure to adequately supply the wet suppression/water-spray control system such that a fine conical water mist spray pattern is produced that wets the surface area of the materials being processed. The wet suppression/water-spray control system shall be installed and maintained according to manufacturers' specifications.
[40 CFR 52.21-PSD/BACT]

3.2.17 The Permittee shall apply water or other Division-approved equivalent work practice to stockpile when necessary to prevent dust from becoming airborne.
[40 CFR 52.21-PSD/BACT]

3.2.18 The Permittee shall take reasonable precautions to minimize fugitive dust generated by blasting operation.
[40 CFR 52.21-PSD/BACT]

3.2.19 The Permittee shall maintain and operate, at all times the drilling equipment is in operation, appropriate dust control systems when necessary to reduce fugitive dust emissions, except during natural wet conditions.
[40 CFR 52.21-PSD/BACT]

3.2.20 Except during natural wet conditions, the Permittee shall have, maintain, and operate at all times when truck travel is occurring on unpaved roads, a water truck equipped to effectively spray the unpaved roads which are being used, including roads used for in-plant travel, customer travel or construction travel, and this truck shall be equipped with a working water cannon.
[40 CFR 52.21-PSD/BACT]

3.2.21 Except during natural wet conditions, the Permittee shall install, maintain, and operate at all times when truck travel is occurring on paved roads, a fixed water sprinkle system adjusted to effectively spray the paved roads which are being used or a Division-approved equivalent dust control system, including roads used for in-plant travel and customer travel.
[40 CFR 52.21-PSD/BACT]

3.2.22 The Permittee shall not discharge, or cause the discharge into the atmosphere, from any baghouses listed below, PM_{10} emissions exceeding the following:
[40 CFR 52.21-PSD/BACT]

Emission Unit Description	Emission Unit ID No.	Air Pollution Control Device ID No.	Flow Rate acfm	Emission limit, gr./acf
Diverter Gate (to Masonry)	371	0369	2,500	0.01
Diverter Gate (to Silo)	373	0387	11,000	0.01
Kiln Feed Elevator East (525), Kiln Feed Elevator West (530), Kiln Feed Diverter Gate (531), 1st Stage Preheater (East) (550), 1st Stage Preheater (West)	525,530,531, 550, 551	0540	4,000	0.01
Kiln Feed Weigh Hopper	517	5080	5,000	0.01
Finish Mill No. 4	727	0716	20,000	0.01
Finish Mill No. 4 Air Separator/Airslide	728	0722	12,000	0.01
Finish Mill No. 5	825	0814	36,000	0.01
Finish Mill No. 5 Recirculating Elevator	826	0821	7,890	0.01
Finish Mill No. 6	920	0909	16,000	0.01
Finishing Mill No. 6 Recirculating Elevator	921	0916	50,000	0.01
Packaging Equipment 1 & 2 (1509 & 1510)	1509, 1510	1512	10,462	0.01
Old Storage Silos – North Side (1-8, A, B & C)	1625	1530	6,725	0.01
Old Storage Silos – Middle Section (9-14, D & E)	1625	1531	6,725	0.01
Old Storage Silos – South Section (15-18)	1625	1532	6,725	0.01
Old Storage Silos, South	1255	1600	13,000	0.01
Old Storage Silos, North	1255	1602	13,000	0.01
Bulk Silo Unloading (West)	1615	1605	3,128	0.01
Bulk Silo Unloading (East)	1616	1607	3,128	0.01
Kiln Dust Bin (400 Ton) (485), Kiln Dust Bucket Elevator (491)	491	0495	2,000	0.005
Kiln Feed Air Slide 365	370	0497	2,000	0.005
Finish Mill Bucket Elevator (688), Clinker Drag Conveyor (689), Clinker Drag Conveyor (690)	688,689,690	N/A	81,000, 2,000	0.017 0.005

SIP Requirements

3.2.23 The Permittee shall not discharge, or cause the discharge, into the atmosphere from the Kiln No. 6, total mass of mercury compounds (expressed as Hg) in amounts exceeding 190 pounds during any period of 12 consecutive months.
[391-3-1-.02(2)(a)]

3.2.24 Reserved

40 CFR Part 63, Subpart LLL: *National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry*

3.2.25 The Permittee shall comply with the applicable provisions under 40 CFR Part 63, Subpart A, "General Provisions", as indicated by Table 1 to 40 CFR Part 63, Subpart LLL: *National Emission Standards for Hazardous Air Pollutants from the Portland Cement Manufacturing Industry* (Subpart LLL). Specifically, the Permittee shall develop a written startup, shutdown, and malfunction (SSM) plan that describes, in detail, procedures for operating and maintaining the Kiln No. 6 during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The SSM plan shall be developed by the source's compliance date as specified in Condition 3.2.26.
[40 CFR 63.1342]

3.2.26 On and after the commencement of the operation/production of the Kiln No. 6 and associated process equipment subject to Subpart LLL, the Permittee shall comply with all the applicable emissions standards and work practice, monitoring, testing, record keeping and reporting requirements of the Subpart.
[40 CFR 63.1351(b)]

3.2.27 The affected sources subject to Subpart LLL include, but are not to be limited to, the following operations/process units constructed as part of the Kiln No. 6:
[40 CFR 63.1340(a), (b) and (c)]

a. Each in-line kiln/raw mill;

b. Each clinker cooler;

c. Each raw mill;

d. Each finish mill;

e. Each raw material dryer;

f. Each raw material, clinker, or finished product storage bin;

g. Each conveying system transfer point including those associated with coal preparation used to convey coal from the mill to the kiln; and

h. Each bagging and bulk loading and unloading system.

In addition, the first affected source in the sequence of materials handling operations subject to Subpart LLL is the raw material storage just prior to the raw mill. The first conveyor transfer point subject to Subpart LLL is the transfer point associated with the conveyor transferring material from the raw material storage to the raw mill.

3.2.28 The Permittee shall not allow the Kiln No. 6 to burn hazardous wastes as defined in 40 CFR Part 63, Subpart EEE – "*National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors"*.
[40 CFR 63.1340(b)(1)/Avoidance of 40 CFR part 63, Subpart EEE]

3.2.29 The Permittee shall operate the Kiln No. 6 such that the respective temperature limits for the inlet(s) to the baghouse No. C18A that exhausts to the main kiln stack No. K218 during raw mill on and off periods, as established during the most recent Division-approved performance test required by Condition 4.2.11d, are not exceeded.
[40 CFR 63.1344(a) & (b)]

3.2.30 The Kiln No. 6 may not use as a raw material or fuel any fly ash where the mercury (Hg) content of the fly ash has been increased through the use of activated carbon, or any other sorbent unless the Permittee can demonstrate that the use of such fly ash will not result in an increase in Hg emissions over baseline emissions (i.e. Hg emissions not using the fly ash). The Permittee has the burden of proving that there has been no Hg emissions increase over baseline.
[40 CFR 63.1344(g)]

3.2.31 The Kiln No. 6 shall not exceed the average hourly captured kiln dust (CKD) recycle rate measured during most recent Division-approved Hg emission performance testing. Any exceedance of this average hourly rate is considered a violation of the standard.
[40 CFR 63.1344(i)]

3.2.32 All the sources in the Kiln No. 6 system subject to Subpart LLL are exempt from any otherwise applicable new source performance standard (NSPS) contained in 40 CFR Part 60, Subpart F, "*Standard of Performance for Portland Cement Plants*" or 40 CFR Part 60, Subpart OOO, "*Standard of Performance for Nonmetallic Mineral Processing Plants*".
[40 CFR 63.1356(a)]

3.2.33 The requirements of NSPS 40 CFR Part 60, Subpart Y, "*Standards of Performance for Coal Preparation Plants,*" do not apply to conveying system transfer points used to convey coal from the coal mill to the Kiln No. 6.
[40 CFR 63.1356(b)]

3.2.34 The Permittee shall submit a SIP Air Permit Application and Part 70 Permit Application to obtain a permit amendment before constructing and operating an alkali bypass on this cement kiln.
[Avoidance of 40 CFR 63.1349(b)(iv)]

40 CFR Part 60, Subpart IIII: *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*

3.2.35 The accumulated maintenance check and readiness testing time for the new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) shall not exceed 100 hours per year. The Permittee may petition the Division for approval of additional hours for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of the new emergency stationary diesel engine/generator beyond 100 hours per year. Any operation other than emergency power generation, and maintenance check and readiness testing is prohibited.
[40 CFR 60.4211(e)]

3.2.36 The new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) shall be certified for emission standards for new nonroad compress ignition engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants, operated and maintained according to the manufacturer's written specifications/instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the entire life of the engine. The Permittee may only change engine/generator settings that are permitted by the manufacturer.
[40 CFR 60.4202(a)(2), 60.4206 & 60.4211(a)]

3.2.37 The new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) and any associated control devices if applicable, shall be installed and configured according to the manufacturer's written instructions.
[40 CFR 60.4211(c)]

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

3.2.38 The Permittee shall operate the new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) only in an emergency situation such as to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility is interrupted, or to pump water in the case of fire or flood, etc. It may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine.
[40 CFR 63.6590(b)(i)]

3.2.39 The Permittee shall submit an Initial Notification for the new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) no later than 120 days after the startup of the engine, following the applicable requirements under 40 CFR 63.9(b)(2)(i) through (v), and a statement that the engine has no additional requirements and explain the basis of the exclusion.
[40 CFR 63.6645(d)]

3.3 Equipment Federal Rule Standards

PSD/BACT

3.3.6 Emissions from the Kiln No. 6 shall not exceed the following BACT emissions standards:

TABLE 3.3.6: BACT Emission Limits

Pollutant	Operation	Emission Limit	Compliance Method	Averaging Time
PM	Air Heater, Raw Mill, Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler/Main Kiln Stack K218 downstream of Baghouse No. C18A; Control: Baghouse	0.153 lb PM/ton of clinker	Methods 5 and 202	Average of three 1-hour runs
		24.5 lb/hr	CEMS	Per EPA's pending requirement; may substitute the Method 9
PM_{10}		0.129 lb PM_{10}/ton of clinker	Methods 201 or 201A and 202	Per Methods 201 or 201A and 202
Visible		10% opacity	COMS	6-minute block average
PM/PM_{10}	Finish Mill	0.01 gr/dscf (0.0085 gr/dscf for PM_{10})	Methods 5 and 202	Average of three 1-hour runs
Visible		10% opacity	COMS	6-minute block average
PM/PM_{10}	All other point sources	0.01 gr/dscf (0.0085 gr/dscf for PM_{10})	Methods 5 and 202	Average of three 1-hour runs
Visible		10% opacity	Method 9	6-minute block average
Fugitive	All fugitive sources excluding the quarry operations	10% opacity	Method 9	6-minute block average
Fugitive	Fugitive sources in the modified part of the quarry operations excluding enclosed process building and wet processing units	10% opacity	Method 9	6-minute block average

Pollutant	Operation	Emission Limit	Compliance Method	Averaging Time
Fugitive	Fugitive emissions from enclosed buildings and wet process in the modified part of the quarry operations	No visible emissions	Method 9	6-minute block average
SO_2	Air Heater, Raw Mill, Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler/Main Kiln Stack K218 downstream of Baghouse No. C18A; Control: Inherent dry scrubbing, raw material management, hydrated lime injection if necessary	1.0 lb/ton clinker 160.0 lb/hr	CEMS	30-day rolling average
NO_x	Air Heater, Raw Mill, Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler/Main Kiln Stack K218 downstream of Baghouse No. C18A; Control: SCC, SNCR & Low NO_x burner control	1.95 lb/ton clinker 312.0 lb/hr	CEMS	30-day rolling average
NO_x (Initial Startup)	Air Heater, Raw Mill, Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler/Main Kiln Stack K218 downstream of Baghouse No. C18A; Control: SCC, SNCR & Low NO_x burner control	3.0 lb/ton clinker 480.0 lb/hr	CEMS	30-day rolling average
CO	Air Heater, Raw Mill, Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler/Main Kiln Stack K218 downstream of Baghouse No. C18A; Control: Good equipment design & combustion process	2.9 lb/ton clinker 464 lb/hr	CEMS	30-day rolling average

Pollutant	Operation	Emission Limit	Compliance Method	Averaging Time
VOC	Air Heater, Raw Mill, Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler/Main Kiln Stack K218 downstream of Baghouse No. C18A; Control: Good equipment design and combustion processes	0.5 lb/ton clinker 80.0 lb/hr.	CEMS	30-day rolling average

a. Continuous monitoring data collected during periods of startup, shutdown, and malfunction may be excluded from the compliance demonstration in accordance with applicable requirements in Conditions 4.2.7, 4.2.9, 4.2.12, 4.2.19, **Error! Reference source not found.**, 5.2.15, 5.2.18, 5.2.21, 5.2.22, and/or 5.2.27.

The following applicable State rules or emission limits are subsumed by the applicable and more stringent BACT, NSPS or MACT emission limits:

Georgia Air Quality Rule 391-3-1-.02(2)(b): *"Visible Emissions"*
Georgia Air Quality Rule 391-3-1-.02(2)(e): *"Particulate Emission from Manufacturing Processes"*
Georgia Rule 391-3-1-.02(2)(g): *"Sulfur Dioxide"*
Georgia Air Quality Rule 391-3-1-.02(2)(n)2: *"Fugitive Dust"*

b. Method 201 or 201A in conjunction with Method 202 shall be used to demonstrate compliance with the PM_{10} emission limits during the performance testing. As an alternative to Method 201 or 201A, the Permittee may assume that 100% of the PM emissions from the baghouses as determined via Method 5 are PM_{10} in the emission compliance demonstration. When an actual PM emission rate based on Method 5 exceeds its corresponding PM_{10} emission limit, additional test will be required to demonstrate compliance with the PM_{10} emission limit.

c. A PM CEMS shall be used for the PM emissions from the in-line kiln/raw mill once U.S. EPA promulgates procedural requirements and deadline for the application of the PM CEMS under 40 CFR 63.1350(k).

d. For shakedown and optimization of the SNCR system for NO_x emission control, during an "initial startup" period the NO_x emissions shall not exceed 3.0 lb/ton of clinker based on a 30-day rolling average. The "initial startup" period shall begin after initial certification of the NO_x CEMS and shall end when any of the following conditions are met:

i. The kiln system produces 75,000 tons of clinker or more in any 30-day rolling period;

ii. The kiln system produces 150,000 tons of clinker; or

iii. 365 calendar days elapse after the initial certification of the NO_x CEMS.

After the "initial startup" period ends, the NO_x emissions shall not exceed 1.95 lb/ton of clinker based on a 30-day rolling average.

e. The VOC emissions shall be measured by a THC CEMS, expressed as THC as propane and corrected to 7% oxygen on a dry basis.

40 CFR Part 60, Subpart Y - *"Standards of Performance for Coal Preparation Plants"*

3.3.7 The provisions of 40 CFR Part 60, Subpart Y are applicable to any of the following affected facilities associated with the Kiln No. 6:
[40 CFR 60.250(a)]

a. Coal processing and conveying equipment (including, but not limited to, breakers, crushers, screens, and conveyor belts); and

b. Coal storage systems, and coal transfer and loading systems.

Conveying system transfer points used to convey coal from the mill to the kiln as listed in Condition 3.2.33 are not subject to any provisions of the this NSPS standard.

3.3.8 On and after the date on which the performance test required by 40 CFR 60.8 is completed, the Permittee shall not cause to be discharged into the atmosphere from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal, gases which exhibit 20% opacity or greater.
[40 CFR 60.252]

40 CFR Part 63, Subpart LLL

3.3.9 On and after the initial startup of the Kiln No. 6, the Permittee shall not cause to be discharged respectively into the atmosphere from the main kiln exhaust stack No. K218 shared by the air heater, raw mill, preheater/precalciner, calciner, kiln, and clinker cooler, and from the coal mill stack No. K241 shared by the coal mill and the clinker cooler, any gases which:
[40 CFR 63.1343(b)]

a. Contain PM in excess of 0.05 kg/Mg (0.10 lb/ton) of dry feed to the kiln.

b. Exhibit opacity greater than 10%.

c. Contain D/F (dioxins/furans) in excess of (This limit only applies to the main kiln exhaust stack No. K218):

i. 0.20 ng/dscm (8.7×10^{-11} gr/dscf) (TEQ[1]); or

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

d. Contain THC in excess of 20 ppmv as propane corrected to 7% oxygen based on dry basis and hourly block average (This limit only applies to the main kiln exhaust stack No. K218). As an alternative, the Permittee may demonstrate a 98% reduction of the THC emissions. Rule 63 CFR 1343(c)(4), the basis of this condition, is currently being reconsidered by EPA. If EPA revises this rule section as a result of the reconsideration, this condition will be modified to be consistent with the revised rule.

e. Contain mercury in excess of 41µg/dscm (This limit only applies to the main kiln exhaust stack No. K218). Rule 63 CFR 1343(c)(5), the basis of this condition, is currently being reconsidered by EPA. If EPA revises this rule section as a result of the reconsideration, this condition will be modified to be consistent with the revised rule.

3.3.10 The Permittee shall not cause to be discharged from the mill sweep or air separator air pollution control devices for the raw mill or finish mill any gases that exhibit opacity in excess of 10%.
[40 CFR 60.1347]

3.3.11 The Permittee shall not cause to be discharged any gases exhibiting opacity in excess of 10% from each raw material, clinker, or finished product storage bin; conveying system transfer point; bagging system; bulk loading or unloading system; and raw material dryer subject to Subpart LLL.
[40 CFR 60.1348]

40 CFR Part 60, Subpart OOO: *Performance Standards for Nonmetallic Mineral Processing Plants*

3.3.12 The Permittee shall comply with the provisions of 40 CFR, Part 60, Subpart OOO, *"Standards of Performance for Nonmetallic Mineral Processing Plants"* for the new belt conveyors added to the existing on-site quarry as part of the Kiln No. 6 project. In particular, for sources subject to Subpart OOO, the Permittee shall comply with the following for each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station:
[40 CFR 60.672 (a) thru (h)]

[1] TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in U.S. EPA, Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-dioxins and -dibenzofurans (CDDs and CDFs) and 1989 Update, March 1989.

The Permittee shall not discharge or cause the discharge into the atmosphere, from each of the processing equipment subject to 40 CFR 60 Subpart OOO, any

a. fugitive emissions greater than 10 percent opacity except for any crusher that does not use a capture system, which shall not exhibit fugitive emissions greater than 15 percent opacity. Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of this condition.

b. stack emissions which:

   i. Contain particulate matter in excess of 0.050 g/dscm (0.022 grains/dscf) except for any storage bin utilizing a dedicated bin vent.

   ii. Exhibit greater than 7% opacity, unless a wet scrubbing control device is used as the primary control device. A wet scrubbing control device shall comply with the 40 CFR 60.676 (c), (d), and (e).

c. visible emissions from:

   i. Wet screening operations and subsequent screening operations, bucket elevators, and belt conveyors that process saturated material in the production line up to the next crusher, grinding mill or storage bin.

   ii. Screening operations, bucket elevators, and belt conveyors in the production line downstream of wet mining operations, where such screening operations, bucket elevators, and belt conveyors process saturated materials up to the first crusher, grinding mill, or storage bin in the production line.

For processing equipment subject to the 40 CFR Part 60 Subpart OOO located inside a building, the Permittee shall comply with the above process equipment limits (a, b and c), or shall not discharge or cause the discharge into the atmosphere, any

d. visible fugitive emissions from the building except for powered building vents subject to limits according to “e”.

e. emissions from a powered building vent which:

   i. Contain particulate matter in excess of 0.050 g/dscm (0.022 grains/dscf).

   ii. Exhibit greater than 7% opacity.

40 CFR Part 60, Subpart IIII

3.3.13 On and after startup of the operation, the new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) shall comply with the applicable emission limits of 40 CFR Part 60, Subpart IIII during the entire life of the engine. The engine/generator is in compliance with these applicable emissions limits provided that it is certified by the manufacturer per 40 CFR 89.112 and 40 CFR 89.113 for all pollutants and operated and maintained according to manufacturer's specification.
[40 CFR 60.4205 & 60.4206]

3.3.14 The Permittee shall operate the new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) using diesel fuel that has a maximum sulfur content of 500 parts per million (ppm) (0.05% by weight) and either a minimum cetane index of 40 or maximum aromatic content of 35 volume percent. Beginning on October 1, 2010, the Permittee shall only use diesel fuel that has a maximum sulfur content of 15 ppm (0.0015% by weight) and either a minimum cetane index of 40 or maximum aromatic content of 35 volume percent.
[40 CFR 60.4207]

PART 4.0 REQUIREMENTS FOR TESTING

4.1 General Testing Requirements

Modified Condition

4.1.3 Performance and compliance tests shall be conducted and data reduced in accordance with applicable procedures and methods specified in the Division's Procedures for Testing and Monitoring Sources of Air Pollutants. The methods for the determination of compliance with emission limits listed under Sections 3.2, 3.3, 3.4 and 3.5 which pertain to the emission units listed in Section 3.1 are as follows:

e Method 1 or 1A for the determination of sample point locations;

f Method 2 for the determination of flow rate;

g Method 3, 3A, or 3B for the determination of stack gas molecular weight;

h Method 4 for the determination of stack gas moisture;

i Method 5 for the determination of PM emissions;

j Method 6 or 6C for the determination of SO_2 concentration;

k Method 7 or 7E for the determination of NO_x concentration;

l Method 9 and the procedures contained in Section 1.3 of the above reference document for the determination of opacity;

m Method 10 for the determination of CO emissions

n Method 19, when applicable, to convert particulate matter, carbon monoxide, sulfur dioxide, and nitrogen oxide concentrations (i.e., grains/dscf for PM, ppm for gaseous pollutants), as determined using other methods specified in this section, to emission rates (i.e., lb/MMBtu),

o Method 22 for the visual determination of fugitive visible emissions;

p Method 23 for the determination of dioxin and furan (D/F) emissions;

q Method 25A for the determination of total gaseous nonmethane organic emissions as propane;

r Method 29 of 40 CFR Part 60 for the determination of Hg emissions. ASTM D6784–02, *Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury Gas Generated from Coal-Fired Stationary Sources* (Ontario Hydro Method), is an acceptable alternative to Method 29 (portion for mercury only). And

s Method 201 or 201 A in conjunction with Method 202 for the determination of PM_{10} emissions.

Minor changes in methodology may be specified or approved by the Director or his designee when necessitated by process variables, changes in facility design, or improvement or corrections that, in his opinion, render those methods or procedures, or portions thereof, more reliable.
[391-3-1-.02(3)(a)]

4.2 Specific Testing Requirements

New Conditions

40 CFR Part 63, Subpart LLL Testing Requirements

4.2.7 Within 60 days after achieving the maximum production rate at which the affected process unit(s)/source(s) will be operated, but no later than 180 days of the initial startup of the source(s), the Permittee shall demonstrate initial compliance with the applicable emission limits in Conditions 3.3.9, 3.3.10 and 3.3.11 using the applicable test methods and/or procedures in Conditions 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.2.8, 4.2.9, 4.2.10, 4.2.11, 4.2.12 and 4.2.13 under 40 CFR 63.7. Performance test results shall be documented in complete test reports that contain the information required by paragraphs a through j of this condition, as well as all other relevant information. A testing plan shall be made available to the Division at least 60 days prior to testing.
[40 CFR 63.1349(a)]

a. A brief description of the process(es) and the air pollution control system(s);

b. Sampling location description(s);

c. A description of sampling and analytical procedures and any modifications to standard procedures;

d. Test results;

e. Quality assurance procedures and results;

f. Records of operating conditions during the test, preparation of standards, and calibration procedures;

g. Raw data sheets for field sampling and field and laboratory analyses;

h. Documentation of calculations;

i. All data recorded and used to establish parameters for compliance monitoring; and

j. Any other information required by the test method.

4.2.8 The Permittee shall demonstrate initial compliance with the applicable Subpart LLL PM emission limit in Conditions 3.3.9a by conducting separate performance tests on the main kiln stack No. K218 serving baghouse No. C18A (Air Pollution Control Device ID No. C18A) following paragraphs a through c of this condition while the raw mill is under normal operating conditions, i.e., "on", and while the raw mill is not operating, i.e., "off". Separate performance tests on the stack No. K241 serving baghouse No. C041 (Air Pollution Control Device ID No. C041) controlling the clinker cooler and the coal mill shall be conducted as specified in paragraphs a through c of this condition to demonstrate with the applicable Subpart LLL emission limits.
[40 CFR 63.1349(b)(1)(i) thru (iii)]

a. Use Method 5 to determine PM emissions. Each test shall consist of 3 separate 1-hour runs under the conditions that exist when the affected source is operating at the representative performance conditions. The minimum sample volume shall be 0.85 dscm (30 dscf) for each run. The average of the 3 runs shall be used to determine compliance. A determination of the PM collected in the impingers (''back half'') of the sampling train is not required to demonstrate initial compliance with the PM standards of Subpart LLL. This shall not preclude the Division from requiring a determination of the ''back half'' for other purposes.

b. Use suitable methods to determine the kiln or inline kiln/raw mill feed rate, except for fuels, for each run.

c. calculate the PM emission rate, *E*, for each run using Equation 4.2.8-1:

$$E = \frac{(C_s Q_{sd})}{P} \qquad \text{(Equation 4.2.8-1)}$$

Where:

E = PM emission rate, kg/Mg (lb/ton) of kiln feed.
C_s = concentration of PM, kg/dscm (lb/dscf).
Q_{sd} = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).
P = total kiln feed (dry basis), Mg/hr (ton/hr).

4.2.9 The opacity exhibited by the main kiln stack No. K218 serving the baghouse No. C18A during the Method 5 performance tests required by Condition 4.2.8a shall be determined using COMS. The maximum 6-minute average opacity during 3 test runs shall be determined during each Method 5 test run, and used to demonstrate initial compliance with the applicable opacity limits of Condition 3.3.9b. respectively.
[40 CFR 63.1349(b)(1)(v) and (vi)]

4.2.10 For any affected source subject to an opacity limit(s) under Subpart LLL but not subject to Condition 4.2.8, the Permittee shall demonstrate initial compliance with the applicable opacity limit by conducting a Method 9 test or using a COMS if equipped. The test shall be conducted under the conditions that exist when the affected source(s) is operating at the representative performance conditions in accordance with 40 CFR 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 test shall be 3 hours (thirty 6-minute averages), except that the duration of the Method 9 test may be reduced to 1 hour if the conditions of paragraph a and b of this condition apply:
[40 CFR 63.1349(b)(2)(i) and (ii)]

a. There are no individual readings greater than 10% opacity;

b. There are no more than 3 readings of 10% for the first 1-hour period.

4.2.11 The Permittee shall demonstrate initial compliance with the D/F emission limit in Condition 3.3.9 by conducting separate performance tests on the main kiln stack No. K218 serving the baghouse No. C18A while the raw mill is under normal operating conditions, i.e., "on" and while the raw mill is not operating, i.e., "off" using Method 23. Separate tests shall be conducted to demonstrate initial compliance during the raw mill on and off.
[40 CFR 63.1349(b)(3)(i) through (iv)]

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

b. The temperature at the inlet to the inline kiln/raw mill PM control device shall be continuously recorded during the Method 23 test, and the continuous temperature record(s) shall be included in the performance test report.

c. 1-minute average temperatures shall be calculated for each minute of each test run.

d. The run average temperature shall be calculated for each run, and the average of the run average temperatures shall be determined and included in the test report and will determine the applicable temperature limit in accordance with Condition 3.2.29 per 40 CFR 63.1344(b).

4.2.12 The Permittee shall demonstrate initial compliance with the applicable THC limit of Subpart LLL by operating a THC CEMS in accordance with Performance Specification 8A of Appendix B to 40 CFR Part 60. The test shall last 3 hours, and the average THC concentration (as calculated from the 1-minute averages) during the test shall be calculated. Separate tests shall be conducted for the inline kiln/raw mill to demonstrate initial compliance during raw mill on and off. [40 CFR 63.1349(b)(4)(i)]

4.2.13 The Permittee shall demonstrate compliance with the applicable mercury emission limit of Subpart LLL, using Method 29 of 40 CFR Part 60. ASTM D6784–02, *Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)*, is an acceptable alternative to Method 29 (portion for mercury only). The Permittee shall demonstrate compliance with both raw mill on and off, and record the hourly recycle rate of CKD during both test conditions and calculate an average hourly rate for the 3 test runs for each test condition.
[40 CFR 63.1349(b)(5)]

4.2.14 Except as provided in Conditions 4.2.16, 4.2.17 and 4.2.18, performance tests required under Conditions 4.2.8 and 4.2.10 shall be repeated every 5 years, except that no repeating of the initial performance test of opacity for the inline kiln/raw mill or clinker cooler is required.
[40 CFR 63.1349(c)]

4.2.15 Performance tests required under Condition 4.2.11 shall be repeated every 30 months.
[40 CFR 63.1349(d)]

4.2.16 If the Permittee plans to undertake a source change in operations that may adversely affect compliance with the applicable D/F standard, the Permittee shall conduct a performance test on the source and establish new temperature limit(s) as specified in Condition 4.2.11.
[40 CFR 63.1349(e)(1)]

4.2.17 If the Permittee plans to undertake a source change in operations that may adversely affect compliance with an applicable PM standard under Condition 3.3.9, the Permittee shall conduct a performance test on the source as specified in Condition 4.2.8.
[40 CFR 63.1349(e)(2)]

4.2.18 In preparation for and while conducting a performance test required in Condition 4.2.16, a source may be operated under the planned operational change conditions for a period not to exceed 360 hours, provided that the provisions of this condition are met. The Permittee shall submit temperature and other monitoring data that are recorded during the pretest operations.
[40 CFR 63.1349(e)(3)(i) through (iv)]

a. Provide the Division a written notice at least 60 days prior to the operational change specified in Condition 4.2.16, or as soon as practicable where 60 days advance notice is not feasible. The notice 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 Condition 4.2.16, including when the planned operational change period would begin.

b. The test results shall be documented in a test report according to Condition 4.2.7.

c. A test plan shall be made available to the Division prior to testing.

d. The performance test shall be conducted and completed within 360 hours after the planned operational change period begins.

4.2.19 When conducting PM CEMS correlation tests (that is, correlation with manual stack methods), the Permittee is exempt from the followings provided that the Permittee is in compliance with the applicable requirements in 40 CFR 63.1357(b) through (f):
[40 CFR 63.1357(a) through (f)]

a. Any applicable PM and opacity standards of Part 60 or Part 63;

b. Any applicable permit or other emission and operating parameters or workplace practice limitations that ensure compliance with such PM and opacity standards.

40 CFR Part 60, Subpart Y Testing Requirements

4.2.20 Within 60 days after achieving the maximum production rate at which the affected source(s) will be operated, but no later than 180 days of the initial startup of the affected source(s), the Permittee shall use Method 9 and the procedures in 40 CFR 60.11 to demonstrate compliance with the visible emission standard in Condition 3.3.8.
[40 CFR 60.254]

40 CFR Part 60, Subpart OOO Testing Requirements

4.2.21 Within 60 days after achieving the maximum production rate at which the affected source(s) will be operated, but no later than 180 days of the initial startup of the affected source(s), the Permittee shall conduct applicable performance test(s) as required below:
[40 CFR 60.675(a), (b), (c)(1) and (2) and (e)]

a. Determining compliance with the visible emission standards in Condition 3.3.12a using Method 9 and the procedures 40 CFR 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) shall be followed.

iii. When a water mist caused by wet dust suppression/water spray is present, the observation of fugitive emissions is to be made at a point in the plume where the mist is no longer visible.

b. Use Method 22 to determine compliance with the fugitive emissions in Condition 3.3.12b and c. The performance test shall be conducted while all affected facilities inside the building are operating. The performance test for each building shall be at least 75 minutes in duration, with each side of the building and the roof being observed for at least 15 minutes.

4.2.22 When determining compliance with the fugitive emissions standard for any affected facility described under Condition 3.3.12a, the duration of the Method 9 observations may be reduced from 3 hours (thirty 6-minute averages) to 1 hour (ten 6-minute averages) only if the following conditions apply:
[40 CFR 60.675(c)(3)]

a. There are no individual readings greater than 10% opacity; and

b. There are no more than 3 readings of 10% for the 1-hour period.

4.2.23 If the fugitive emissions from two or more facilities continuously interfere so that the opacity from an individual affected facility cannot be read, the Permittee may use the following as alternatives to the reference methods and procedures specified in Conditions 4.2.21 and 4.2.22.
[40 CFR 60.675(e)]

a. Use for the combined emission stream the highest fugitive opacity standard applicable to any of the individual affected facilities contributing to the emissions stream.

b. Separate the emissions so that the opacity of emissions from each affected facility can be read.

4.2.24 If, after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting any rescheduled performance test required in this section, the Permittee shall submit a notice to the Division at least 7 days prior to any rescheduled performance test.
[40 CFR 60.675(g)]

PSD/BACT and SIP Testing Requirements

4.2.25 The appropriate testing results from Conditions 4.2.8, 4.2.9, 4.2.10, 4.2.12, 4.2.13, 4.2.14, 4.2.17, 4.2.19, 4.2.20, 4.2.21, 4.2.22, 4.2.23, and 4.2.24 may be used respectively to demonstrate initial compliance with the Hg, PM, visible and THC emission limits for the same or similar process units/affected sources under the pertinent PSD/BACT and State rules in Sections 3.3 and 3.4 of this permit. No additional testing is required. For the rest of process units/affected sources subject to any of the PM and/or visible emission limits in Condition 3.3.6, the Permittee shall demonstrate initial compliance with the limit(s) using Method 5 for PM emissions from point sources/stack outlets, Method 9 or COMS if equipped for visible emissions from point sources/stack outlets, and Method 22 for fugitive emission sources.
[391-3-1-.02(6)(b)]

The Permittee shall determine PM_{10} emissions from each of the stacks/point sources of PM emissions using Method 201 or 201A in conjunction with Method 202 when no Division-approved PM_{10} emission factor(s) is available for the source(s) or actual PM emissions from the source(s) indicated by Method 5 test exceed the applicable PM_{10} emission limit(s) for the source(s). All the performance tests shall be conducted within 60 days after achieving the maximum production rate at which the affected units/sources will be operated, but no later than 180 days of the initial startup of the sources.
[40 CFR 52.21-BACT/NSR Review]

4.2.26 Within 60 days after achieving the maximum production rate at which the affected process unit(s)/source(s) will be operated, but no later than 180 days of the initial startup of the source(s), the Permittee shall demonstrate initial compliance with the applicable CO, NO_x and SO_2 emission limits in Condition 3.3.6, using the CO, NO_x, and SO_2 CEMS specified in Condition 5.2.27. The compliance testing shall be conducted under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with 40 CFR 63.7(e). The Permittee shall conduct the SO_2 emission performance testing during the raw mill on and raw mill off respectively, and record if applicable the hourly input rate of fly ash and/or of the hydrated lime injection system during the testing. During the testing, the Permittee shall record the operating parameters and production conditions affecting the emissions involved in accordance with the appropriate methods and requirements in Part 5.0 of this permit. Such records shall include, but are not limited to, temperature, exhaust gas flow rate, operating parameters of the air pollution device(s) employed, quantities and sulfur content of the raw materials and fuels used, and quantities of the clinker produced. The Permittee shall submit a testing plan(s) to the Division for approval at least 60 days before the testing, including certifications for all the CEMS to be utilized in the testing.
[40 CFR 52.21-BACT/NSR Review]

The Permittee shall notify EPD in writing of the expiration date of the "Initial Startup" of the inline kiln/raw mill with regard to the BACT NO_x emissions, as specified in Condition 3.3.6, and conduct a NO_x emission performance test to demonstrate compliance with the BACT NO_x emission limits of 1.95 lb./ton clinker within 60 days of such expiration date.

For the compliance tests required by this condition, CO, NO_x, and SO_2 emissions from the main kiln stack No. K218 downstream of the baghouse No. C18A shall be monitored for 30 consecutive kiln operating days and the 30-day average emission rates are used to determine compliance with the CO, NO_x, and SO_2 emission standards in Condition 3.3.6. The 30-day average emission rate for each of the pollutants is calculated respectively as the average of all hourly emissions data recorded by the respect CEMS during the 30-day test period.

For the purpose of this condition, kiln operating day means a 24-hour period between 12:00 midnight and the following midnight during which any clinker is produced at any time by the kiln.

4.2.27 Before firing any fuel(s) that was not used during any previous Division-approved performance tests and that may adversely affect the emissions of a regulated air pollutant from the inline kiln/raw mill, the Permittee shall conduct a performance test(s) to determine the impact of the combustion of the fuel on the emissions of the relevant pollutant, using the applicable testing method(s) and/or procedure(s) in this permit and/or pertinent Federal and State regulations. A testing plan(s) shall be submitted to the Division for approval at least 60 days before the testing.

4.2.28 No later than 180 days of the initial startup of the Kiln No. 6, the Permittee shall demonstrate compliance with the PM_{10} emissions limits for the finish mills and associated process units (Emission Unit ID Nos. 727, 728, 825, 826, 920 and 921) specified in Condition 3.2.22 using the applicable testing methods specified in Condition 4.1.3. The Permittee may, in lieu of determining the PM_{10} emission rates, demonstrate compliance with the PM_{10} emissions limits using PM emission rates obtained from Division-approved Method 5 performance tests provided that: (1) Each Method 5 test is conducted within five (5) years of the initial startup of the Kiln No. 6; and (2) No modification that could adversely affect the relevant PM/PM_{10} emissions was made to the baghouse(s) involved after the performance tests.
[40 CFR 52.21-BACT/NSR Review]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.2 Specific Monitoring Requirements

New Conditions

40 CFR Part 63, Subpart LLL Monitoring Requirements

5.2.14 The Permittee shall prepare for each affected source subject to Subpart LLL a written operations and maintenance plan. The plan shall be submitted to the Division for review and approval as part of the application for a Part 70/Title V operating permit and shall include the following information:
[40 CFR 63.1350(a) and (b)]

a. Procedures for proper operation and maintenance of the affected source and air pollution control devices to meet the emission and operating limits of Conditions 3.3.9, 3.3.10, 3.3.11 and 3.2.29;

b. Corrective actions to be taken when required by Condition 5.2.16;

c. Procedures to be used during an inspection of the components of the combustion system of the inline kiln/raw mill at least once per year; and

d. Procedures used to periodically monitor the affected sources subject to the opacity standards of Condition 3.3.11. Such procedures shall include the paragraphs i through iv below:

i. Conduct a monthly 1-minute visible emissions test of each affected source in operation using Method 22.

ii. If no visible emissions are observed in 6 consecutive monthly tests for any affected source, the Permittee may decrease the frequency of testing from monthly to semiannually for that affected source. If visible emissions are observed during any semi-annual test, the Permittee shall resume the monthly testing of that affected source and maintain that schedule until no visible emissions are observed in 6 consecutive monthly tests.

iii. If no visible emissions are observed during the semi-annual test for any affected source, the Permittee 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 Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in 6 consecutive monthly tests.

iv. If visible emissions are observed during any Method 22 test, the Permittee shall conduct a 6-minute test of opacity using Method 9 within 1 hour of any observation of visible emissions.

v. The requirement to conduct Method 22 visible emissions monitoring under this condition 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 Permittee may opt to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs d.(i) through (iv) of this condition for each such conveying system transfer point, or for the building itself, according to paragraph d(vii) of this condition.

vii. If visible emissions from a building are monitored, the requirements of paragraphs d(i) through (iv) of this condition apply to the monitoring of the building, and the Permittee shall also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test shall be conducted under normal operating conditions.

Failure to comply with any provision of the operations and maintenance plan developed in accordance with this condition shall be a violation of the standard.

5.2.15 The Permittee shall monitor opacity at each point/stack where emissions are vented from kiln and the clinker cooler subject to the emission limits in Condition 3.3.9 as below: [40 CFR 63.1350(c) and (d)]

a. Except as provided in paragraph b of this condition, install, calibrate, maintain, and continuously operate a COMS at the outlet of the PM control device to continuously monitor the opacity. The COMS shall be installed, maintained, calibrated, and operated as required by 40 CFR Part 63, Subpart A and according to PS–1 of Appendix B to 40 CFR Part 60.

b. When the baghouse(s) involved has multiple stacks, or exhausts through a monovent, or the use of a COMS in accordance with the installation specifications of PS-1 of Appendix B to 40 CFR Part 60 is not feasible, the Permittee may, in lieu of using COMS, monitor and record each 6-minute block average opacity of the visible emissions from the sources using Method 9 for at least 30 minutes each day.

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

5.2.16 The Permittee shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PM control device of the raw mill or finish mill using Method 22. The Method 22 test shall be conducted while the affected source is operating at the representative performance conditions and last 6 minutes. If visible emissions are observed during any test, the Permittee shall:
[40 CFR 63.1350(e)]

a. Initiate, within 1 hour, the corrective actions specified in the site specific operating and maintenance plan developed according to Conditions 5.2.14a and 5.2.14b; and

b. Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a follow up Method 22 test on each stack from which visible emissions were observed during the previous test. If visible emissions are observed during the follow up test from any stack from which visible emissions were observed during the previous test, conduct a 30-minute visual opacity test on that specific stack using Method 9.

5.2.17 The Permittee shall monitor D/F emissions in accordance with paragraphs a through e of this condition.
[40 CFR 63.1350(f)]

a. Install, calibrate, maintain, and continuously operate a continuous monitoring device to record the temperature of the exhaust gases from the inline kiln/raw mill at the inlet to, or upstream of the baghouse(s) serving the inline kiln/raw mill.

i. The recorder response range shall include zero and 1.5 times either of the average temperatures established according to the requirements in Condition 4.2.11d; and

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

b. Calculate the 3-hour/180-minute rolling average temperature as the average of 180 successive 1-minute average temperatures.

c. Periods of time when 1-minute averages are not available shall be ignored when calculating the 3-hour/180-minute rolling averages. When 1-minute averages become available, the first 1-minute average is added to the previous 179 values to calculate the 3-hour/180-minute rolling average.

d. When the operating status of the inline kiln/raw mill is changed from off to on, or from on to off, the calculation of the 3-hour/180-minute rolling average temperature shall begin anew, without considering previous recordings.

e. The calibration of all thermocouples and other temperature sensors shall be verified at least once every 3 months.

5.2.18 The Permittee shall comply with the monitoring requirements of this condition to demonstrate continuous compliance with the applicable THC emission standard:
[40 CFR 63.1350(h)(1) and (4)]

a. Install, operate and maintain a THC CEMS according to Performance Specification 8A of Appendix B to 40 CFR Part 60, and comply with all the requirements for CEMS found in 40 CFR Part 63, Subpart A.

b. Calculate hourly rolling averages according to section 4.9 of Performance Specification 8A. Any hourly average THC concentration in any gas discharged from the main exhaust stack of the inline kiln/raw mill (Stack No. K218) that exceeds the applicable THC emission limit in Condition 3.3.9, reported in ppmv expressed as propane, corrected to 7% oxygen and on a dry basis, is a violation of that THC standard.

5.2.19 The Permittee shall inspect the components of the combustion system of the in-line kiln/ raw mill of the Kiln No. 6 at least once per year.
[40 CFR 63.1350(i)]

5.2.20 The Permittee shall monitor opacity for any affected source subject to the opacity limit in Condition 3.3.11 according to the operation and maintenance plan developed according to Condition 5.2.14.
[40 CFR 63.1350(j)]

5.2.21 The Permittee shall install, calibrate, maintain and operate a PM CEMS to measure the PM emissions from an affected source subject to the PM emission limit in Condition 3.3.9a once the requirements for the installation, calibration, maintenance, operation and performance of the PM CEMS are promulgated by the U.S. EPA.
[40 CFR 63.1350(k)]

5.2.22 The requirements under Condition 5.2.16 to conduct daily Method 22 testing shall not apply to any specific raw mill or finish mill equipped with a COMS or bag leak detection system (BLDS). If the Permittee chooses to install a COMS in lieu of conducting the daily Method 22 visual emissions testing, then the COMS shall be installed at the outlet of the PM control device of the raw mill or finish mill. The COMS shall be installed, maintained, calibrated, and operated as required by 40 CFR Part 63, Subpart A and according to PS–1 of Appendix B to 40 CFR Part 60. To remain in compliance, the opacity shall be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10%. If the average opacity for any 6-minute block period exceeds 10%, this shall constitute a violation of the standard. If the Permittee chooses to install a BLDS in lieu of conducting the daily visual emissions testing required in Condition 5.2.16, the following requirements apply to each BLDS:
[40 CFR 63.1350(m)]

a. The BLDS shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 mg/acm (0.0044 gr./acf) 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 mg/acm (0.0044 gr./acf) or less.

b. The sensor on the BLDS shall provide output of relative PM emissions.

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

d. The presence of an alarm condition should be clearly apparent to facility operating personnel.

e. For a positive-pressure baghouse, each compartment or cell shall have a BLDS. For a negative pressure or induced-air baghouse, the BLDS shall be installed downstream of the filter bag. If multiple BLDS are required (for either type of baghouse), the BLDS may share the system instrumentation and alarm.

f. All BLDS shall be installed, operated, adjusted, and maintained according to manufacturer's written specifications and recommendations. It is recommended that where appropriate, the standard operating procedures manual for each BLDS include concepts from EPA's *''Fabric Filter Bag Leak Detection Guidance''* (EPA–454/R–98–015, September 1997).

g. The baseline output of the system shall 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.

h. 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. In no event may the range be increased by more than 100% or decreased by more than 50% over an one calendar year period unless a responsible official as defined in 40 CFR 63.2 certifies in writing to the Division that the fabric filter has been inspected and found to be in good operating condition.

i. The Permittee shall maintain and operate the baghouse such that the BLDS alarm is not activated and alarm condition does not exist for more than 5% 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 Permittee to initiate corrective actions. If inspection of the baghouse demonstrates that no corrective actions are necessary, no alarm time will be counted. The Permittee shall 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.

40 CFR Part 60, Subpart IIII Monitoring Requirements

5.2.23 The new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) shall be equipped with a non-resettable hour meter to track the number of hours operated during any type of operation and during each calendar month. The Permittee shall record the time of operation and the reason the engine/generator was in operation during that time.
[40 CFR 60.4209(c), 60.4214(b)]

PSD/BACT & SIP Monitoring Requirements
[40CFR 52.21 and 391-3-1-.02(6)(b)(1)]

5.2.24 The following monitoring requirements/conditions for PM, THC and visible emissions under the NESHAP MACT standard 40 CFR Part 63, Subpart LLL have been deemed to be adequate for the monitoring of the same emissions from the same sources subject also to the PM, THC and/or visible emissions limits under PSD/BACT rules. No additional monitoring is required provide that the relevant monitoring data can be processed appropriately to demonstrate compliance with the pertinent PSD/BACT emission limits. The Permittee shall notify the Division within one working day of discovering emissions in excess of any pertinent BACT limit/standard.

a. Condition 5.2.15 for using COMS to monitor the visible emissions from the inline kiln/raw mill system vent(s)/stack(s) equipped with COMS, per 40 CFR 63.1350(c).

b. Condition 5.2.16 for daily visual emission observation of the mill sweep and air separate PM control device(s) using Method 22, per 40 CFR 63.1350(e).

c. Condition 5.2.18 for using THC CEMS to monitor the THC/VOC emissions from the in-line kiln/raw vent(s)/stack(s), per 40 CFR 63.1350(h)(1) and (4).

d. Condition 5.2.21 for using PM CEMS to the PM emissions from the in-line kiln/raw vent(s)/stack(s), per 40 CFR 63.1350(k).

e. Condition 5.2.22 if applicable for using COMS or BLDS, per 40 CFR 63.1350(m).

5.2.25 The Permittee shall perform a daily check of visible emissions (VE) on baghouses listed in Section 3.1.1/Table 3.1.1 of this permit amendment except those covered by the monitoring requirements in Conditions 5.2.24a and e. The Permittee shall retain a daily VE check log suitable for inspection or submittal. The visual check of VE shall be conducted at least once for each day or portion of each day of operation and shall be conducted using the following procedure:

a. Determine in accordance with the procedures specified in paragraph d. of this condition if VE are present at the discharge point to the atmosphere from such vent(s)/stack(s) aforementioned, and record the result(s) in daily VE check log. For any sources that exhibit VE, the Permittee shall comply with paragraph b.

b. For each source determined to be emitting visible emissions, the Permittee shall determine whether the emissions equal or exceed the opacity action level using the procedure specified in paragraph d of this condition, except that the person performing the determination shall have received additional training acceptable to the Division to recognize the appropriate opacity level and the determination shall cover a period of 3 minutes. The opacity action level is greater than 0% for all the baghouses involved. The results shall be recorded in the daily (VE) log. For sources that exhibit visible emissions of greater than or equal to the opacity action level, the Permittee shall comply with paragraph c of this condition.

c. For each source that requires action in accordance with paragraph a. or b., the Permittee shall determine the cause of the visible emissions and correct the problem in the most expedient manner possible. The Permittee shall note the cause of the visible emissions, the pressure drop of the baghouse(s) involved, any other pertinent operating parameters, and the corrective action taken such as bag/filter replacement in the maintenance log.

d. The person performing the determination shall stand at a distance, of at least 15 feet, which is sufficient to provide a clear view of the plume against a contrasting background with the sun in the 140° sector at his or her back. Consisting with this requirement, the determination shall be made from a position such that the line of vision is approximately perpendicular to the plume direction. Only one plume shall be in the line of sight ban any time when multiple stacks/vents are in proximity to each other.

5.2.26 Once each day or portion of each day of operation, the Permittee shall inspect all emission points from the emission units listed in Section 3.1.1/Table 3.1.1 for which no air pollution control device (APCD) is utilized. Boilers, wet processes, stationary engines, and emission units monitored with COMS are exempt from this condition. The inspection shall be conducted by performing a walk through of the facility and noting the occurrence of the following in a daily (VE) log:

a. Any visible emissions. The visible emission check may be performed on the building containing the emission unit or directly on the emission unit.

b. Any mechanical failure or malfunction that results in increased air emissions.

For each emission point noted with visible emissions, mechanical problems or malfunctions, the Permittee shall take corrective action in the most expedient manner possible and re-inspect the unit within 24 hours to verify that no visible emissions exist.

5.2.27 The Permittee shall install, calibrate, maintain, and operate CEMS to continuously monitor and record the indicated pollutants discharged from the inline kiln/raw mill according to manufacturer's specifications and/or the requirements under pertinent EPA or state rules, and in a manner sufficient to demonstrate continuous compliance with the applicable emission standards in this permit. Each CEMS shall also meet performance specifications of the Division's monitoring requirements if applicable. The Permittee shall notify the Division within one working day of discovering emissions in excess of a CEMS emission standard over a specified averaging period.
[391-3-1-.02(6)(b) 1 and 40 CFR 52.21]

a. **CO**: 30-day rolling arithmetic average of all valid hourly averages collected during the last 30 operating days. The CO CEMS shall meet the requirements of Performance Specification 4 or 4A in Appendix B of 40 CFR 60. The required RATA tests shall be performed using EPA Method 10 in Appendix A of 40 CFR 60. Quality assurance procedures shall conform to the requirements of Appendix F in 40 CFR 60.

b. **NO_x**: 30-day rolling arithmetic average of all valid hourly averages collected during the last 30 operating days. The NO_x CEMS shall meet the requirements of Performance Specification 2 or 2A in Appendix B of 40 CFR 60. The required RATA tests shall be performed using EPA Method 7E in Appendix A of 40 CFR 60. Quality assurance procedures shall conform to the requirements of Appendix F in 40 CFR 60.

c. **SO_2**: 30-day rolling arithmetic average of all valid hourly averages collected during the last 30 operating days. The SO_2 CEMS shall meet the requirements of Performance Specification 2 in Appendix B of 40 CFR 60. The required RATA tests shall be performed using EPA Method 6C in Appendix A of 40 CFR 60. Quality assurance procedures shall conform to the requirements of Appendix F in 40 CFR 60.

d. **THC**: 30-day rolling arithmetic average of all valid hourly averages collected during the last 30 operating days. The THC CEMS shall meet the requirements of Performance Specification 2 in Appendix F of 40 CFR 60. The valid 1-hour arithmetic averages shall be the THC monitoring data obtained in accordance with Condition 5.2.18.

The operation of the each CEMS shall meet the following requirements:

Sample Frequency: Each CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over each hour of operation at a minimum of one measurement per minute. All valid measurements collected during an hour shall be used to calculate an 1-hour block average that begins at the top of each hour. Each 1-hour block average shall be computed using at least one data point in each 15-minute quadrant of an hour, when the affected process unit/affected source combusting fuel (or producing clinker) during that quadrant of an hour. Notwithstanding this requirement, an 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes. If less than two of such data points are available, there is insufficient data and the 1-hour block average is not valid. Hours during which there is no kiln feed and no fuel fired are not valid hours. The CEMS shall express emissions in units of "pounds per ton of clinker produced" and "pounds per hour". THC emissions data shall also be expressed as "ppmvd (as propane) @ 7% oxygen".

Monitor Availability: Monitor availability for each CEMS shall be 95% or greater in any calendar quarter, and be reported in the quarterly report in Condition 6.1.4. In the event 95% availability is not achieved, the Permittee shall provide the Division with a report identifying the problems in achieving the 95% availability and a plan of corrective actions to be taken to achieve the 95% availability. The Permittee shall implement the reported corrective actions within the next calendar quarter. Failure to take corrective actions or continued failure to achieve the minimum monitor availability shall be violations of this permit, except as otherwise authorized by the Division.

Data Exclusion: Except for monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, each CEMS shall monitor and record emissions during all operations including episodes of startups, shutdowns, and malfunctions.

5.2.28 To support the CEMS monitoring data, the Permittee shall install, calibrate, maintain, and operate devices/systems to continuously monitor and record the indicated parameters on the following equipment. Where such performance specification(s) exist, each system shall also meet the applicable performance specification(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b) 1 and 40 CFR 52.21]

a. The temperature of the exhaust air/flue gas stream at each location where CO, NO_x, SO_2 or THC emissions are monitored by respective CEMS. The temperature continuous monitor shall be operated according to Condition 5.2.17.

b. The oxygen content of the exhaust air/flue gas stream at each location where CO, NO_x, SO_2 or THC emissions are monitored by respective CEMS.

c. The flow rate of the exhaust air/flue gas stream at each location where CO, NO_x, SO_2 or THC emissions are monitored by respective CEMS in accordance with Performance Specification No. PS-6 (Specifications and Test Procedures For Continuous Emission Rate Monitoring Systems in Stationary Sources) in Appendix B of 40 CFR 60.

d. The pressure drop across each of the baghouse Nos. 7018, 7027 and 7041 that is not equipped with BLDS.

e. The hourly usage rate of each fuel fired (1-hour block averages). Each monitoring system shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations.

f. The hourly average rate of dry feed entering the kiln and clinker exiting from the clinker cooler.

g. The hydrated lime injection rate (1-hour block average). The monitoring system shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations.

h. The ammonia injection rate of the SNCR system and the molar ratio of NH_3/NO_x (1-hour block average). The monitoring system shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations.

i. The input/injection rate of fly ash to the kiln system (1-hour block average).

5.2.29 The Permittee shall perform quarterly accuracy determinations and daily calibration drift tests on the CO, NO_x, SO_2 and THC CEMS, and the oxygen continuous monitor, according to Procedure 1 in Appendix F of 40 CFR Part 60.

5.2.30 The Permittee shall perform the following daily operation and maintenance checks on each dust suppression device specified in Conditions 3.2.16, 3.2.19, 3.2.20, and 3.2.21. The inspection shall be conducted at least once each day of operation. If a device is found to be operating improperly, or in a manner inconsistent with the following criteria, a description of the corrective actions taken shall be recorded in accordance with Condition 6.11 (a checklist or other similar log may be used for this purpose).
[40 CFR 52.21]

a. Visually inspect wet suppression/water-spray control systems to ensure that the designated nozzle water spray pattern is produced (i.e., a fine, conical mist).

b. Check water-spray nozzles to ensure that they are properly directed.

c. Check water spray nozzles to ensure none are clogged, and there is proper and adequate water flow sufficient to wet the surface area of the materials being processed.

5.2.31 The Permittee shall develop and implement a Preventive Maintenance Program (PMP) for all baghouses to assure that the provisions of Condition 8.17.1 are met. The program shall be subject to review and, if necessary to assure compliance, modification by the Division and shall include the pressure drop ranges that indicate proper operation for each baghouse. At a minimum, the following operation and maintenance checks shall be made on at least a

weekly basis, and a record of the findings and corrective actions taken shall be kept in a maintenance log:

a. Record pressure across each baghouse and ensure that it is within the appropriate range (not applicable to the baghouses subject to Condition 3.2.14).

b. For baghouses equipped with compressed air cleaning systems, check the system for proper operation. This may include checking for low pressure, leaks, proper lubrication, and proper operation of timer and valves.

c. For baghouses equipped reverse air cleaning systems, check the system for proper operation. This may include checking damper, bypass, and isolation valves for proper operation.

d. For baghouses equipped with shaker cleaning systems, check the system for proper operation. This may include checking shaker mechanism for loose or worn bearings, drive components, mounting; proper operation of outlet/isolation valves; proper lubrication.

The Permittee shall install, calibrate, maintain, and operate monitoring devices for the measurement of the baghouse pressure drop/differential. Where such performance specification(s) exist, each pressure measuring device shall meet the applicable performance specification(s) of the Division's monitoring requirements.
[391-3-1-.02(6)(b) 1 and 40 CFR 70.6(a)(3)(i)]

PART 6.0 OTHER RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

New Condition

6.1.8 For the purpose of reporting excess emissions, exceedances or excursions in the report required in Condition 6.1.4, the following excess emissions, exceedances, and excursions shall be reported:
[391-3-1-.02(6)(b)1, 40 CFR Part 60, Subparts Y, OOO, IIII, 40 CFR Part 63, Subpart LLL, and 40 CFR 52.21]

a. Excess emissions: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping which is specifically defined, or stated to be, excess emissions by an applicable requirement)

i. The total continuous monitoring system downtime for any CEMS, COMS or continuous monitoring systems (CMS) for the reporting period is 10% or greater of the total operating time for the reporting period per 40 CFR 63.1354(b)(10).

b. Exceedances: (means for the purpose of this Condition and Condition 6.1.4, any condition that is detected by monitoring or record keeping that provides data in terms of an emission limitation or standard and that indicates that emissions (or opacity) do not meet the applicable emission limitation or standard consistent with the averaging period specified for averaging the results of the monitoring)

i. Any 12-month rolling total of emissions of any of the pollutants listed below that exceeded its BACT emission limit:

Pollutant	Rolling 12-Month Limit, ton
CO	2,037
NO_x	1,370
SO_2	703
VOC/THC	351

ii. Any 12-month rolling total of Hg emissions that exceeded 190 pounds;

iii. Each exceedance of any of the following process-specific BACT emission standards:

Pollutant	BACT Emission Standard for the Kiln No. 6/the Main Kiln Exhaust Stack No. K218		Averaging Time
	lb/ton of clinker	lb./hr.	
CO	2.90	464	30-day rolling CEMS average

Pollutant	BACT Emission Standard for the Kiln No. 6/the Main Kiln Exhaust Stack No. K218		Averaging Time
	lb/ton of clinker	lb./hr.	
NO_x	1.95	312	30-day rolling CEMS average
NO_x (During Initial Startup Period)	3.0	480	30-day rolling CEMS average
SO_2	1.0	160	30-day rolling CEMS average
VOC/THC	0.5	80	30-day rolling CEMS average

iv. Each exceedance of the following BACT visible emission limits:

- 10% opacity (6-minute block average) at any exhaust/stack/vent as monitored by COMS or Method 9 as required by Condition 5.2.14,5.2.15,5.2.16 or 5.2.22.

v. Each exceedance of the BACT following operating limits:

- 160.4 tons per hour of clinker (24-hour rolling average);
- 1,401,600 tons of clinker during any period of 12 consecutive months;
- Firing more than 4,230 gallons of the "on-specification" used oil during period of any 24 consecutive hours or 1,522,800 gallons during any 12 consecutive months; or
- Firing any fuel(s) that is not authorized by Condition 3.2.12.

vi. Each instance that any of the following Subpart LLL emission standards in Condition 3.3.9 was exceeded:

- D/F: 0.20 ng/dscm ($8.7x10^{-11}$ gr/dscf) TEQ **or** 0.40 ng/dscm ($17x10^{-11}$ gr/dscf) TEQ when the average of the performance test run average temperatures at the inlet to the PM control device serving the inline kiln/raw mill is 204°C (400°F) or less (3-hour/180-minute rolling average);
- Opacity: 10% from the main kiln stack No. K218 or from the finish mill stack No. K241 as indicated by COMS (6-minute block average);
- THC: 20 ppmdv as propane corrected to 7% oxygen on hourly average from the inline kiln/raw mill (1 hour block average).

vii. Any instant of firing the new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) subject to Condition 3.3.14 with diesel fuel that:

- Contains more than 0.05% sulfur by weight; contains either more than 35% by volume of aromatic content or has a cetane index of less than 40; or
- Contains more than 0.0015% sulfur by weight; contains either more than 35% by volume of aromatic content **or** has a cetane index of less than 40 on and after October 1, 2010;

c. Excursions: (means for the purpose of this Condition and Condition 6.1.4, any departure from an indicator range or value established for monitoring consistent with any averaging period specified for averaging the results of the monitoring)

i. Each instance that a baghouse pressure drop reading falls below the level or drifts outside the range established during the most recent Division-approved performance testing per Condition 3.2.14.

ii. Each instance that the fly ash usage limitation/requirement of Condition 3.2.30 was not observed.

iii. Each instance of firing the inline kiln/raw mill system with any hazardous wastes prohibited by Condition 3.2.28.

iv. Each instance that any of the reasonable precautions to reduce fugitive emissions in Condition 3.4.4 was not observed.

v. Each instance that the inspection and/or filter replacement, as required by Condition 5.2.25, was not performed and/or recorded.

vi. Each instance that a fuel(s) other than those authorized by Condition 3.2.12 was used to fire the inline kiln/raw mill or the air heater.

vii. Each instance that the quantities of a fuel(s) fired exceeded the applicable limit(s) in Condition 3.2.12.

viii. Each instance of not following the procedure in the SSM plan in Condition 3.2.25.

ix. For the baghouses subject to Condition 5.2.25, any two consecutive required daily determinations of visible emissions that require action in accordance with Condition 5.2.25a. or Condition 5.2.25b.

x. Any visible emissions or its cause(s) discovered during the walk through described in Condition 5.2.26 that are not eliminated or corrected within 24 hours of the first discovering the visible emissions or its cause(s).

xi. Any instance in which the visual inspection of VE required by Condition 5.2.25 was not performed.

xii. Each instance that the hourly cement kiln dust (CKD) recycle rate exceeded that specified in Condition 3.2.31 per Subpart LLL.

xiii. Each instance that a 3-hour/180-minute rolling average of the temperature(s) at the inlet(s) of the baghouse C18A serving the in-line kiln/raw mill exceeded the maximum control device inlet gas temperature limits specified in Conditions 3.2.29 as established during the most recent Division-approved performance test;

xiv. Each instance of failure to comply with any provision of the operations and maintenance plan developed in accordance with Condition 5.2.14 unless specified otherwise.

xv. Each instance of failure to calibrate thermocouples, other temperature sensors, or CEMS.

xvi. Each instance the check of Condition 5.2.19 is not completed as required.

xvii. Each instance a problem is found through the checks of Condition 5.2.31.

6.2 Specific Record Keeping and Reporting Requirements

New Conditions

40 CFR Part 63, Subpart LLL Record keeping, Compliance Demonstration and Report Requirements

6.2.10 The Permittee shall comply with all the notification provisions under 40 CFR Part 63, Subpart A applicable to the Kiln No. 6, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.
[40 CFR 63.1353(a)]

6.2.11 The Permittee shall comply with the notification requirements in 40 CFR 63.9 as follows:
[40 CFR 63.1353(b)]

a. Initial notifications as required by 40 CFR 63.9(b) through (d).

b. Notification of performance tests, as required by 40 CFR 63.7 and 63.9(e).

c. Notification of opacity and visible emission observations required by Part 4.0 of this permit per 40 CFR 63.1349 according to 40 CFR 63.6(h)(5) and 63.9(f).

d. Notification, as required by 40 CFR 63.9(g), of the date that the CEMS performance evaluation required by 40 CFR 63.8(e) is scheduled to begin.

e. Notification of compliance status, as required by 40 CFR 63.9(h).

6.2.12 The Permittee shall comply with all the reporting provisions under 40 CFR Part 63, Subpart A applicable to the Kiln No. 6, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.
[40 CFR 63.1354(a)]

6.2.13 The Permittee shall comply with the reporting requirements specified in 40 CFR 63.10 as follows:
[40 CFR 63.1354(b)]

a. Report the results of performance tests as part of the notification of compliance status.

b. Report the opacity results from tests required by Part 4.0 of this permit per 40 CFR 63.1349.

c. Submit, as applicable, progress reports as a condition of receiving an extension of compliance under 40 CFR 63.6(i) by the dates specified in the written extension of compliance.

d. If actions taken 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 SSM plan specified Condition 3.2.25 according to 40 CFR 63.6(e)(3), 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.

e. Any time an action taken during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the SSM plan, 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 Permittee 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.

f. Submit a written report of the results of the performance evaluation for the CEMS required by 40 CFR 63.8(e). The Permittee shall submit the report simultaneously with the results of the performance test.

g. Report the results of the COMS performance evaluation conducted under 40 CFR 63.8(e), when using the COMS to determine opacity compliance during any performance test required under 40 CFR 63.7 and described in 40 CFR 63.6(d)(6).

h. Submit an excess emissions and CEMS performance report for any event when the CEMS data indicate the source involved is not in compliance with the applicable emission limitation or operating parameter limit.

i. Submit a semiannual summary report which contains the information specified in 40 CFR 63.10(e)(3)(vi). In addition, the summary report shall include:

i. All exceedances of maximum control device inlet gas temperature limits specified in Conditions 3.2.29 per 40 CFR 63.1344(a) and (b);

ii All failures to calibrate thermocouples and other temperature sensors as required by Condition 5.2.17 per 40 CFR 63.1350(f)(7);

iii. The results of any combustion system component inspections conducted within the reporting period as required by Condition 5.2.19 per 40 CFR 63.1350(i).

iv. All failures to comply with any provision of the operation and maintenance plan developed in accordance with Condition 5.2.14 per 40 CFR 63.1350(a).

j. If the total downtime for any CEMS or any COMS for the reporting period is 10% or greater of the total operating time for the reporting period, submit an excess emissions and continuous monitoring system performance report along with the summary report.

6.2.14 The Permittee shall record files of all information (including all reports and notifications) required by this condition in a form suitable and readily available for inspection and review as required by 40 CFR 63.10(b)(1). The files shall be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent 2 years of data shall be retained on site. The remaining 3 years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.
[40 CFR 63.1355]

a. Records for each affected source as required by 40 CFR 63.10(b)(2) and (b)(3);

b. All documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9;

c. All records of applicability determination, including supporting analyses;

d. If granted a waiver under 40 CFR 63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements;

e. All CEMS records as required by 40 CFR63.10(c);

f. Annual records of the amount of CKD removed from the kiln system and either disposed of as solid waste or otherwise recycled for a beneficial use outside of the kiln system;

g. Records of the amount of CKD recycled on an hourly basis; and

h. Records of all fly ash supplier certifications as required by Condition 6.2.15 per 40 CFR 63.1350(o).

6.2.15 When complying with the requirements in Condition 3.2.30, the Permittee shall obtain a certification from the supplier for each shipment of fly ash received to demonstrate that the fly ash was not derived from a source in which the use of activated carbon or any other sorbent is a method of mercury emissions control. The certification shall include the name of the supplier and a signed statement from the supplier confirming that the fly ash was not derived from a source in which the use of activated carbon or any other sorbent is a method of mercury emission control.
[40 CFR 63.1350(o)]

6.2.16 If the Permittee opts to use a fly ash derived from a source in which the use of activated carbon, or any other sorbent, is for mercury emissions control and to demonstrate that the use of this fly ash does not increase mercury emissions, the Permittee shall obtain daily fly ash samples, composites monthly, and analyze the samples for mercury.
[40 CFR 63.1350(p)]

<u>40 CFR Part 60, Subpart OOO Record keeping, Compliance Demonstration and Report Requirements</u>

6.2.17 The Permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the applicable standards in Condition 3.3.12 per 40 CFR 60.672, including reports of opacity observations made using Method 9 or Method 22 to demonstrate compliance with Condition 3.3.12.
[40 CFR 60.676(f)]

6.2.18 The Permittee shall submit to the Division a written notification of the actual date of initial startup of each affected facility, or a single notification of startup for a combination of affected facilities in a production line that begin actual initial startup on the same day. The notification shall be postmarked within 15 days after such date and shall include a description of each affected facility, equipment manufacturer, and serial number of the equipment, if available.
[40 CFR 60.676(i) and (l)(1)]

40 CFR Part 60, Subpart IIII Record keeping, Compliance Demonstration and Report Requirements

6.2.19 The Permittee shall maintain monthly operating records of the new emergency stationary diesel engine/generator (Emission Unit ID No. 6110), including operating hours and reasons of the operation, i.e., emergency power generation and/or fire extinguishing, readiness testing and/or maintenance check. These records shall be kept available for inspection or submittal for five (5) years from the date of record.
[40 CFR 60.4214(b)]

6.2.20 The Permittee shall use monthly operating time records required by Condition 6.2.19 to calculate monthly the 12 month rolling total of the maintenance check and readiness testing time for the engine specified in Condition 6.2.19 for each 12-consecutive month period. All the calculations shall be kept as part of the records required in Condition 6.2.19. The Permittee shall notify the Division in writing if any of the 12 month rolling total of maintenance check and readiness-testing time exceeds 100 hours. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with Condition 3.2.35.
[40 CFR 60.4211(e)]

6.2.21 The Permittee shall demonstrate compliance with the applicable emission limits in Condition 3.3.13 by purchasing a new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) that is certified to the applicable emission standards in 40 CFR 60.4205(b), for the same model year and maximum engine power. The engine shall be installed and configured according manufacturer's specifications.
[40 CFR 60.4211(c)]

6.2.22 The Permittee shall keep records verifying that each shipment of diesel fuel received for firing the new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) complies with the applicable requirements in Condition 3.3.14. Verification shall consist of either the fuel oil receipts and/or fuel supplier certifications or results of analyses of the fuel oils conducted by methods of sampling and analysis that have been specified or approved by the EPA or the Division. These records shall be kept available for inspection or submittal for 5 years from the date of record.
[40 CFR 60.4207]

6.2.23 The Permittee shall comply with all the applicable requirements of the General Provisions of 40 CFR Part 60 as listed in Table 8 to 40 CFR Part 60, Subpart IIII.
[40 CFR 60.4218]

6.2.24 The Permittee shall furnish the Division written notification of the date of the initial startup of the new emergency stationary diesel engine/generator (Emission Unit ID No. 6110) within 15th days after such date.
[391-3-1-.03(2)(c)]

PSD/BACT and/or SIP Record Keeping, Compliance Demonstration and Report Requirements

6.2.25 To demonstrate compliance with the limitations specified in this permit, the Permittee shall maintain the following records on site:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

a. For each 1-hour block of operation, continuously monitor and record the dry (preheater/precalciner) feed input rate, clinker production rate, fuel firing rate, heat input rate (as determined by the representative heating value of each fuel and the hourly fuel firing rate), and NH_3/NO_x molar ratio or ammonia injection rate. Records shall also document the dry (preheater/precalciner) feed rate and clinker production rates for each 24-hour rolling period and 12-month rolling period.

b. For each fuel delivery, maintain records of the quantity of the fuel delivered and a representative analysis of the fuel. Such records shall include the higher and lower heating value, proximate analysis, and ultimate analyses.

c. Maintain records demonstrating compliance with the mercury emission limit in Condition 3.2.23, as required in Condition 6.2.28.

d. Maintain the following records for each equipment malfunction resulting in excluded monitoring data: date and time of event, duration of event, suspected cause of event, and any corrective actions taken. All records shall be made available to the Division upon request.

6.2.26 The Permittee shall use the appropriate data in Conditions 5.2.27, 5.2.28 and 6.2.25 to calculate respectively the monthly total emissions of CO, NO_x, SO_2 and THC/VOC for each calendar month. The Permittee shall notify the Division in writing if any monthly total emissions exceed the corresponding notification level listed below (1/12 of the annual emission limits in Condition 3.2.9 during any calendar month. This notification shall be postmarked by the 15th day of the following month and shall include an explanation of how the Permittee intends to maintain compliance with the emission limit involved.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

Table 6.2.26-1: Emission Notification Level

Pollutant	Emission Notification Rate, ton/month[2]
CO	170
NO_x	114
SO_2	59
VOC/THC	29

[2] SIP notification emissions levels are equal to one twelfth of the rolling twelve month totals in Condition 3.2.9.

6.2.27 The Permittee shall use the monthly emissions data in Condition 6.2.26 to demonstrate compliance with the applicable BACT emission limits in Condition 3.2.9. The Permittee shall notify the Division in writing if any 12-month rolling total emissions exceed the corresponding annual emission limit in Condition 3.2.9. This notification shall be postmarked by the fifteenth day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with the annual emission limit involved.
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

6.2.28 The Permittee shall demonstrate compliance with the mercury emission limitation in Condition 3.2.23 by material balance and maintaining records of the monthly and rolling 12-month total mercury throughput as below:

a. Collect samples of the raw mill feed, fly ash and fuels used each day. A single composite daily sample shall be made from all samples collected for each material and fuel during a day. A monthly composite sample shall be made from each of the daily composite samples.

b. Determine the representative mercury concentration for the month from the monthly composite samples using EPA or ASTM methods such as EPA Method 7471A (Mercury in Solid or Semisolid Waste). No other methods may be used unless prior written approval is received from the Division. For samples with levels below the detection limit, the Permittee shall report the detection limit as the corresponding level.

c. Calculate the monthly total mercury throughput rate (pounds per month), i.e., the product of the mercury concentration from the monthly composite sample and the corresponding monthly processing rate. For each month, the mass of mercury introduced into the inline kiln/raw mill (pounds per month) shall be the sum of the monthly mercury throughput rates for the raw mill feed, fly ash and fuel.

d. calculate the 12-month rolling total mercury throughput rate (pounds of mercury per consecutive/rolling 12-months) as the sum of the current monthly total mercury throughput and the monthly total mercury throughputs of preceding 11 months.

The Permittee shall notify the Division in writing if the 12-month rolling total of mercury emissions exceeded 190 pounds. This notification shall be postmarked by 15th day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with the annual mercury emission limit in Condition 3.2.23.
[391-3-1-.02(2)(a)]

6.2.29 The Permittee shall maintain daily records of water truck usage, if applicable, to demonstrate compliance with Conditions 3.2.20. The records shall be kept in accordance with Condition 6.1.1, and shall include a minimum of the following data:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)]

a. The hours that each section is open for vehicle traffic.

b. The section of road watered.

c. The date and time of each water spray application.

d. The total volume in gallons of water applied during each application.

e. Ambient conditions (dry, wet, precipitation, hot, windy, etc.)

6.2.30 The Permittee shall submit to the Division a semiannual report (or as a part of the quarterly report in Condition 6.1.4), within 30 days following the end of each such period (July 30 and January 30), regarding the fuel oil(s) fired in the air heater, and the on-specification used fuel oil(s) fired in the inline-kiln/raw mill (preheater/precalciner, calciner and/or kiln) during the reporting period. The report shall contain:
[391-3-1-.02(6)(b)1]

a. Calendar dates in the report period.

b. The fuel oil supplier certifications for each batch of the fuel oil shipment received during the reporting period.

c. Analyses of each batch of "on-specification" used oil fuels received or generated during the reporting period showing that the fuel oils are in compliance with the specifications of Condition 3.2.12f.

d. A certified statement, signed by an official of the company, affirming that the records of fuel oil supplier certifications and analyses of "on-specification" used oil fuels, submitted in accordance with subparagraph b of this condition, represent all of the fuel oil and the "on-specification" used oil fuels fired during the quarterly period.

e. The hourly and 12-month rolling totals of the "on-specification" used oil fuels burned during the reporting period.

6.2.31 The Permittee shall include the following information in the quarterly report required in Condition 6.1.4:
[391-3-1-.02(6)(b)]

a. The results of any combustion system inspection conducted within the reporting period as required by Condition 5.2.14c.

b. The daily total of CO, NO_x, SO_2 and THC/VOC emissions (in tons) for each working day during the reporting period.

c. The monthly total of CO, NO_x, SO_2 and THC/VOC emissions (in tons) for each calendar month during the reporting period.

d. The 12-month rolling total of CO, NO_x, SO_2 and THC/VOC emissions (in tons) for each period of 12-consecutive months during the reporting period.

e. Monthly usage rate (in tons) and 12-month rolling total of coal and/or other non-hazardous solids/fuels (in tons) for each period of 12-consecutive months during the reporting period.

f. Daily total input of dry feed (in tons) into the kiln and clinker output from the kiln (in tons) for each working day during the reporting period.

g. Monthly total input of dry feed input into the kiln (in tons) for each calendar month, and 12-month rolling total input of dry feed into the kiln (in tons) for each period of 12-consecutive months during the reporting period.

h. Monthly total output of clinker output from the kiln (in tons) for each calendar month, and 12-month rolling total output of clinker from the kiln (in tons) for each period of 12-consecutive months during the reporting period.

6.2.32 The Permittee shall furnish the Division written notification of the date of the initial startup of the Kiln No. 6 and associated process units (including the new primary rock crusher within 15^{th} days after such date.
[40 CFR 52.21(6)(b)]

PART 7.0 OTHER SPECIFIC REQUIREMENTS

7.1 Operational Flexibility Associated with this Amendment

None.

7.2 Off-Permit Changes Associated with this Amendment

None.

7.3 Alternative Requirements Associated with this Amendment

[White Paper #2]

Not Applicable

7.4 Insignificant Activities Associated with this Amendment

(see Attachment B for the list of Insignificant Activities in existence at the facility at the time of permit issuance)

7.5 Temporary Sources Associated with this Amendment

[391-3-1-.03(10)(d)5 and 40 CFR 70.6(e)]

Not Applicable

7.6 Short-term Activities Associated with this Amendment

(see Form D5 "Short Term Activities" of the Permit application and White Paper #1)

Not Applicable

7.7 Compliance Schedule/Progress Reports Associated with this Amendment

[391-3-1-.03(10)(d)3 and 40 CFR 70.6(c)(4)]

None applicable.

7.8 Emissions Trading Associated with this Amendment

[391-3-1-.03(10)(d)1(ii) and 40 CFR 70.6(a)(10)]

Not Applicable

7.9 Acid Rain Requirements Associated with this Amendment

Not Applicable

7.12 Revocation of Existing Permits and Amendments

The following Air Quality Permits and Amendments are subsumed by this permit and are hereby revoked:

Air Quality Permit Number(s)	Dates of Original Permit Issuance or Amendment
N/A	N/A

7.13 Pollution Prevention Associated with this Amendment

Not Applicable

7.14 Specific Conditions Associated with this Amendment

7.14.1 The permittee shall construct and operate the source or modification that is subject to Georgia Rule 391-3-1-.02(7) in accordance with the application submitted pursuant to that rule. If the permittee construct or operate the source or modification not in accordance with the application submitted pursuant to that rule or with the terms of any approval to construct, the permittee shall be subject to appropriate enforcement action.
[40 CFR 52.21(r)(1)]

7.14.2 Approval of construction shall become invalid if construction is not commenced within 18 months after receipt of such approval, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. The Director may extend the 18-month period upon a satisfactory showing that an extension is justified. This provision does not apply to the time period between construction of the approved phases of a phased construction project; each phase must commence construction within 18 months of the projected and approved commencement date.
[40 CFR 52.21(r)(2)]

Attachments

A. List of Standard Abbreviations and List of Permit Specific Abbreviations

ATTACHMENT A

List Of Standard Abbreviations

AIRS	Aerometric Information Retrieval System
APCD	Air Pollution Control Device
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BTU	British Thermal Unit
CAAA	Clean Air Act Amendments
CEM	Continuous Emission Monitor
CERMS	Continuous Emission Rate Monitoring System
CFR	Code of Federal Regulations
CMS	Continuous Monitoring System(s)
CO	Carbon Monoxide
COM	Continuous Opacity Monitor
dscf/dscm	Dry Standard Cubic Foot / Dry Standard Cubic Meter
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right to Know Act
gr	Grain(s)
GPM (gpm)	Gallons per minute
H_2O (H2O)	Water
HAP	Hazardous Air Pollutant
HCFC	Hydro-chloro-fluorocarbon
MACT	Maximum Achievable Control Technology
MMBtu	Million British Thermal Units
MMBtu/hr	Million British Thermal Units per hour
MVAC	Motor Vehicle Air Conditioner
MW	Megawatt
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x (NOx)	Nitrogen Oxides
NSPS	New Source Performance Standards
OCGA	Official Code of Georgia Annotated

PM	Particulate Matter
PM_{10} (PM10)	Particulate Matter less than 10 micrometers in diameter
PPM (ppm)	Parts per Million
PSD	Prevention of Significant Deterioration
RACT	Reasonably Available Control Technology
RMP	Risk Management Plan
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2 (SO2)	Sulfur Dioxide
USC	United States Code
VE	Visible Emissions
VOC	Volatile Organic Compound

List of Permit Specific Abbreviations

None	N/A
