PERMIT NO. 3241-153-0075-P-01-0
ISSUANCE DATE: 6-29-2020

GEORGIA
DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Air Quality Permit

In accordance with the provisions of the Georgia Air Quality Act, O.C.G.A. Section 12-9-1, et seq and the Rules, Chapter 391-3-1, adopted pursuant to and in effect under that Act,

Facility Name:	**US Cement, LLC**
Facility Address:	**329 AE Harris Rd** **Perry, Georgia 31069 Houston County**
Mailing Address:	**PO Box 673541** **Marietta, GA 30006**
Facility AIRS Number:	**04-13-153-00075**

is issued a Permit for the following:

The construction and operation of a Portland cement manufacturing plant

This Permit 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.

This Permit 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. **27266** dated October 7, 2019; any other applications upon which this Permit is based; supporting data entered therein or attached thereto; or any subsequent submittals or supporting data; or for any alterations affecting the emissions from this source.

This Permit is further subject to and conditioned upon the terms, conditions, limitations, standards, or schedules contained in or specified on the attached **77** pages.

STATE OF GEORGIA
CONSTITUTION
WISDOM JUSTICE MODERATION
1776

Richard E. Dunn, Director
Environmental Protection Division

Table of Contents

PART 1.0 FACILITY DESCRIPTION

1.1 Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control.

1.2 Previous and/or Other Names

This new/greenfield facility, and as such, has no previous names.

1.3 Overall Facility Process Description

US Cement, LLC is a new/greenfield dry process Portland cement plant capable of producing 1.1 mmton/yr of clinker. The plant consists mainly of an on-site limestone-clay quarry, 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 mill, a finish mill, and cement storage, packaging and shipping operations.

The production process begins with quarrying of limestone and clay, and crushing of the limestone. Then the raw materials such as limestone, clay, fly ash and other additives are mixed according to specification, then ground and dried in the raw mill. The powdery material produced by the raw mill, referred to as dry kiln feed or raw meal, is then conveyed into the preheater, calciner, and kiln 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 produce Portland cement. The design capacity of the pyroprocessing system is 1.1 million tons (mmton) per year of clinker, with a design peak production rate of 140 tons per hour of clinker (30-kiln operating day rolling average). The design operating schedule is 8760 hours/year. These design rates are requested to be enforceable permit limits. The peak design rate of 140 ton/hr (30-kiln operating day rolling average) is 12 percent greater than the annual limit to allow periods of operational downtime, but still allow the kiln system to achieve its 12-month rolling production rate of 1.1 mmton/yr. Cement produced is stored or packaged as necessary and distributed via both truck and rail.

Fuel authorized for the kiln include, but are not limited to natural gas, coal, petroleum coke, fuel oils, propane, on-specification used oil fuels, tire-derived fuel, plastics, roofing materials, agricultural biogenic materials, cellulosic biomass, carpet-derived fuel, alternative fuel mix, biosolids, and engineered fuel. A coal mill with a design grinding rate of 20 tons per hour, with a requested maximum operating schedule of 8760 hours per year is used for coal and petroleum coke preparation. The mill design rate allows for downtime of the coal/petcoke mill when fuel is needed for the kiln.

The facility uses ammonia (NH_3) solution-injection based 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 and material handling units in the plant. Wet suppression/water spray and other precautions are utilized as necessary to reduce fugitive emissions from the quarry operations and the material handling processes. Plant operating practices, plant design and materials management are proposed as emission control strategies for SO2, CO, VOC/THC and HCl.

PART 2.0 REQUIREMENTS PERTAINING TO THE ENTIRE FACILITY

2.1 Facility Wide Emission Caps and Operating Limits

2.1.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate this source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Georgia Environmental Protection Division ("the Division") which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection or surveillance of the source. [391-3-1-.02(2)(a)10]

2.1.2 The Permittee shall not build, erect, install or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard that is based on the concentration of a pollutant in the gases discharged into the atmosphere. [391-3-1-.03(2)(c)]

2.1.3 The Permittee shall construct stacks discharging criteria and toxic air pollutants into the atmosphere such that the stacks can provide gaseous flows which disperse these pollutants into the atmosphere in such a manner that the ambient impacts of the emissions of these pollutants from this facility meet respectively the applicable requirements under NSR/PSD air quality analysis rules and the requirements determined following the *"Guideline for Ambient Impact Assessment of Toxic Air Pollutant Emissions"* pursuant to 391-3-1-.02(2)(a)3.(ii) of the Georgia Rules of Air Quality Control.
[40 CFR 52.21 and 391-3-1-.02(2)(a)3.(ii)]

2.1.4 If any of the emission standards or requirements in this permit are revised by EPA or the state after the issuance of this permit, the Permittee shall comply with the revised standard(s) or requirement(s) on and after its effective date.

2.2 Facility Wide Federal Rule Standards

2.2.1 The Permittee shall implement measures, including fencing, sign postings, or routine patrols to restrict public access along the entire Source Boundary utilized in the ambient impact assessment/modeling. Signs shall be posted along the property boundary no further than 100 feet apart, and patrols shall be conducted at least once weekly on boundaries that have public access and where fencing is not provided. The Permittee shall maintain a written plan outlining such measures, and shall be updated as required. The Division reserves the right to require enhancement of the plan.
[40 CFR 52.21]

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 Emission Units

Emission Units		Specific Limitations/Requirements	Air Pollution Control Devices	
ID No.	**Point Source or Fugitive Description; Equipment Description; Equipment Number**	**Applicable Requirements/ Standards**	**ID No.**	**Description**
Quarry and Crushing Operations (K101) – QA				
N/A	Mine Property at US Cement	391-3-1-.02(2)(n)	N/A	Water Truck
QA01	Primary Crusher 2D1.CR01	40 CFR 60 Subpart OOO 391-3-1-.02(2)(e) BACT 40 CFR 52.21(j)	None	None
QA02	Transfer Pt – Primary Crusher to Conveyor-2E1.BC01		None	None
QA03	Transfer Pt – Conveyor-2E1.BC01 to Conveyor-2E1.BC02		None	None
QA04	Transfer Pt – Conveyor-2E1.BC02 to Conveyor-2L1.BC01		None	None
QA05	Transfer Pt – Conveyor-2E1.BC02 to Conveyor-2G1.BC01		None	None
QA06	Transfer Pt – Conveyor-2G1.BC01 to Limestone Blending Building		None	Located Inside a Building
QA07	Transfer Pt – Conveyor-2L1.BC01 to pile in Raw Materials Building		None	Located Inside a Building
Raw Material Conveying, Storage and Processing (K102) – RM				
RM01	Raw Mill Bucket Elevator system, 3F1.BE01	391-3-1-.02(2)(e) 40 CFR 63 Subpart LLL BACT 40 CFR 52.21(j)	CD01	Dust Collector
RM02	Raw Mill Rejects Bin, 3F1.FB02		CD02	Dust Collector
RM03	Raw Meal Transport, 3J1.TC01		CD03	Dust Collector
RM04	Raw Meal Silo, 3K1.BL01		CD05	Dust Collector
RM05	Kiln Feed Transport, 3J1.AC01		CD07	Dust Collector
RM06	Raw Meal Mixing Bin, 4C1.AC01		CD06	Dust Collector
RM07	Filter Dust Surge Bin, 4E1.BN01		CD04	Dust Collector

Emission Units		Specific Limitations/Requirements	Air Pollution Control Devices	
ID No.	**Point Source or Fugitive Description; Equipment Description; Equipment Number**	**Applicable Requirements/ Standards**	**ID No.**	**Description**
Pyroprocessing System (K103) – KL				
KL01	**Kiln Pyroprocessing System** (140 tons/hr clinker) Raw Mill w/heater-3F1.SE01 (43 mmBtu/hr) Kiln-4K1.KC01 (400 mmBtu/hr) Clinker cooler-4R1.PQ01 Coal mill-CR1.SE01 Main Stack, 4E1.SK01	40 CFR Part 63, Subpart LLL 40 CFR 60, Subpart F 40 CFR 60, Subpart Y 391-3-1-.02(2)(b) and 391-3-1-.02(2)(e) PM BACT limit 52.21(j) 391-3-1-.02(2)(g) SO_2 BACT limit 52.21(j)	CD22 CD25 CD23 CD21	Kiln Dust Collector Water Spray SNCR Coal Mill Dust Collector
Clinker and Additive Storage and Handling (K104) – CL				
CL01	Clinker Transport-4R1-RR01	391-3-1-.02(2)(e) 40 CFR 63 Subpart LLL BACT 40 CFR 52.21(j)	CD08	Dust Collector
CL02	Clinker Silo No. 1-4V1.KL01		CD09	Dust Collector
CL03	Clinker Silo No. 2-4V1.KL02		CD10	Dust Collector
CL04	Clinker Silo Extraction No. 1-5E1.SV01-3		CD11	Dust Collector
CL05	Clinker Silo Extraction No. 2-5E1.SV04-6		CD12	Dust Collector
Finish Mill System (K105) – FM				
FM01	Finish Mill, 5F1.TMD1 Stack, 5F1.SK01	391-3-1-.02(2)(e) 40 CFR 63 Subpart LLL BACT 40 CFR 52.21(j)	CD13	Dust Collector
FM02	Finish Mill (SEPOL) Separator, 5F1.DS01 and Dust Shuttle Bin, 5F1.DH01 Stack, 5F1.SK02		C20B	Dust Collector
FM03	Finish Mill Bucket Elevator, 5F1.BE01		C20A	Dust Collector
FM04	Dust Shuttle Bin 4E1.PD01		C20C	Dust Collector
Cement Handling, Storage, Packing and Loadout (K106) – CH				
CH01	Cement Silos 1-4 5K1.NL01-4	391-3-1-.02(2)(e) 40 CFR 60 Subpart LLL BACT 40 CFR 52.21(j)	CD14	Dust Collector
CH02	Cement Silo 5 5K1.NL05		CD15	Dust Collector

Emission Units		Specific Limitations/Requirements	Air Pollution Control Devices	
ID No.	**Point Source or Fugitive Description; Equipment Description; Equipment Number**	**Applicable Requirements/ Standards**	**ID No.**	**Description**
CH03	Cement Loadout 1 6D2.LD01		CD17	Dust Collector
CH04	Cement Loadout 2 6D1.LD01	391-3-1-.02(2)(e) 40 CFR 60 Subpart LLL BACT 40 CFR 52.21(j)	CD16	Dust Collector
CH05	Cement Loadout 3 6E1.LD01		CD16	Dust Collector
CH06	Packing Plant, 6G1.PL01		CD19	Dust Collector
Coal Mill System (K107) – CM				
CM01	Pulverized Fuel Bin, CV1.BN01	391-3-1-.02(2)(e) 40 CFR 60 Subpart Y BACT 40 CFR 52.21(j)	CD18	Dust Collector
Stationary Emergency Generator (K108) – EM				
EM01	**1000 kW Emergency Stationary Diesel Generator**	40 CFR Part 60, Subpart IIII 40 CFR Part 63, Subpart ZZZZ 391-3-1-.02(2)(b) 391-3-1-.02(2)(e) 391-3-1-.02(2)(g)	No	No
Fugitive Emission Sources				
UR01	**Quarry Road to Crusher**	391-3-1-.02(2)(n)	No	Unpaved Road – Water Spray, Slow Speed
PR01	**Paved Roads at Cement Plant**	391-3-1-.02(2)(n)	No	Paved Road
PR02	**Raw Material Piles at Cement Plant**	40 CFR Part 63, Subpart LLL 391-3-1-.02(2)(n)	No	Located inside building
PR02	**Clinker Piles at Cement Plant**	40 CFR Part 63, Subpart LLL 391-3-1-.02(2)(n)	Per LLL	Per LLL
PR03	**Coal/Pet Coke Piles at Cement Plant**	40 CFR Part 60, Subpart Y 391-3-1-.02(2)(n)	No	Located inside coal/fuel building
PR03	**Alternative Fuel Piles at Cement Plant**	391-3-1-.02(2)(n)	No	Located inside coal/fuel building

* Generally applicable requirements contained in this permit may also apply to emission units listed above. The lists of applicable requirements/standards are intended as a compliance tool and may not be definitive.

3.2 Equipment Emission Caps and Operating Limits

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

3.2.1 The Permittee shall limit the production rate of the kiln to 140 tons per hour of clinker (30-kiln operating day rolling average), and 1,100,000 tons of clinker during any consecutive 12-month period.
[391-3-1-.03(2)(c), 40 CFR 52.21-BACT]

3.2.2 The twelve-month rolling total emissions from the facility shall not exceed the following amounts:
[391-3-1-.03(2)(c), 40 CFR 52.21-BACT]

Pollutant	Tons
Sulfur dioxide	220
Nitrogen oxides	825
Carbon monoxide (CO)	1595.0
Volatile organic compounds (VOC)	80
Particulate matter (PM)	76.6
Particulate matter less than 10 microns (PM_{10})	76.6
Particulate matter less than 2.5 microns ($PM_{2.5}$) (filterable + condensable)	18.5
Greenhouse Gases (GHGs) (in CO_2e)	1,045,000

3.2.3 Prior to burning any fuels deemed solid waste, as defined in Part 129 (including 40 CFR 60 Subparts AAAA and CCCC), the applicant must apply for, and obtain a change in this permit condition. If the kiln unit (K103) becomes subject to 40 CFR 60 Subpart CCCC, the Permittee shall meet the preconstruction siting analysis (per 40 CFR 60.2045 and 60.2050) and waste management plan (per 40 CFR 60.2055, 60.2060, and 60.2065) requirements before commencing operation of the kiln unit. The operator training and qualification (per 40 CFR 60.2070 through 60.2100), emission limitations (40 CFR 60.2105 and Table 8), operating limits (per 40 CFR 60.2110 and 60.2115), performance testing and compliance (per 40 CFR 60.2125 through 60.2160), monitoring (per 40 CFR 60.2165 and 60.2170), and most recordkeeping and reporting (per 40 CFR 60.2175 through 60.2240) requirements are met after the kiln unit begins operation.
[40 CFR 60.2040]

3.2.4 Change of Subpart CCCC/LLL Applicability Status.

a. Waste-to-Fuel Switch. If the Permittee combusts solid waste in the kiln, the kiln is subject to NSPS 40 CFR 60 Subpart CCCC (Subpart CCCC). If the Permittee ceases to combust solid waste in the kiln, the Permittee has the option of switching from compliance with NSPS Subpart CCCC to compliance with NESHAP 40 CFR 63 Subpart LLL (Subpart LLL). If the Permittee makes this election, the Permittee shall meet the following conditions.

(1) The Permittee shall first establish an "effective date" for the waste-to-fuel switch, which shall be at least six (6) months after the date that the Permittee ceased combusting solid waste in the kiln, consistent with 40 CFR 60.2145,

(2) The kiln shall remain in compliance with Subpart CCCC until the "effective date" of the waste-to-fuel switch.

(3) The Permittee shall provide the Division with 30 days' advance notice per 40 CFR 60.2145(a)(4) prior to the "effective date" of the waste-to-fuel switch.

(4) The Permittee shall be in compliance with Subpart LLL on the "effective date" of the waste-to-fuel switch.

c. If the Permittee meets these conditions, the kiln will become subject to the applicable requirements of Subpart LLL on the effective date of the waste-to-fuel switch reflecting the Subpart LLL requirements will apply to the kiln, instead of the Subpart CCCC requirements.

d. Re-firing Solid Waste – Compliance Requirements. Following a waste-to-fuel switch and the applicability of Subpart LLL, if the Permittee begins using materials identified as a solid waste in the kiln, the kiln will again be subject to the Subpart CCCC requirements. The "effective date" of the fuel-to-waste switch is the first day that the Permittee introduces (or re-introduces) solid waste into the kiln. The Permittee shall complete all initial compliance demonstrations for any Subpart LLL standards that are applicable to the kiln before the Permittee commences or recommences combustion of solid waste. In addition, the Permittee must provide 30 days' prior notice of the fuel-to-waste switch "effective date." After the completion of any required testing and the 30-day notice, Subpart LLL requirements will no longer apply.

e. All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste shall be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks shall be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch. Relative accuracy testing for Subpart CCCC CEMS need not be repeated if that testing was previously performed consistent with section 112 (i.e., Subpart LLL) monitoring requirements.
[40 CFR 60.2145(a)]

3.2.5 The Permittee shall only burn authorized fuels whose impacts on air pollutant emissions from the in-line kiln/raw mill have been determined as acceptable based on a Division-approved fuel-specific performance test(s), or as otherwise required by Condition 4.2.30. Authorized fuels may include, but not to be limited to the following:

a. *coal*

b. *petroleum coke*

c. *natural gas*

d. *virgin fuel oil*

e. *on-specification used fuel oil*

f. *tire-derived fuel (TDF)* which includes whole and shredded tires with or without steel belt material including portions of tires such as tire fluff.

g. *plastics* which includes materials such as polyethylene plastic used in agricultural and silvicultural operations.

h. *roofing materials* which consists of roofing shingles and related roofing materials with the bulk of the incombustible grit material separated and which is not subject to regulations as an asbestos-containing material per 40 CFR 61, Subpart M.

i. *agricultural biogenic materials* which includes materials such as peanut hulls, rice hulls, corn husks, citrus peels, cotton gin byproducts, animal bedding and other similar types of materials.

j. *cellulosic biomass – untreated* which includes materials such as untreated lumber, tree stumps, tree limbs, slash, bark, sawdust, sander dust, wood chips scraps, wood scraps, wood slabs, wood millings, wood shavings and processed pellets made from wood or other forest residues.

k. *cellulosic biomass – treated* which includes preservative-treated wood that may contain treatments such as creosote, copper-chromium-arsenic (CCA), or alkaline copper quaternary (ACQ), painted wood, or resinated woods (plywood, particle board, medium density fiberboard, oriented strand board, laminated beams, finger-jointed trim and other sheet goods).

l. *carpet-derived fuel (CDF)* which includes shredded new, reject or used carpet materials. This material may contain incidental related materials (e.g., tack-down strips, nails, etc.).

m. *alternative fuel mix (AFM)* which includes a blended combination of two or more of any of the above materials.

n. *biosolids* which includes organic materials sanitized to meet EPA Class A sanitization standards and is derived from treatment processes of public treatment water systems.
; and/or

o. *engineered fuel (EF)* is engineered to have targeted, consistent fuel properties such as: calorific value, moisture, particle size, ash content, and volatility. The specific targeted properties are established based on available alternative fuel material supply and are carefully controlled through blending of non-hazardous combustible materials or through separation of non-hazardous incombustible materials from combustible materials (mixes of any alternative fuels where the blending and processing may also include the addition of on-specification used oils or other non-hazardous liquids to ensure consistent and predictable fuel properties). EF is engineered largely from the above materials and could include, but not be limited to materials such as animal meal, automotive manufacturing byproducts, clean-up debris from natural disasters, processed municipal solid waste, dried/sanitized biosolids, paint filter cake, hospital materials (non-infectious), pharmaceuticals (expired prescriptions), cosmetics, and confiscated narcotics that are not a hazardous waste (40 CFR 261).

3.2.6 The Permittee shall demonstrate compliance with the usage requirements for any of the above or combination of the above authorized fuels with the Division before using the fuel in the in-line kiln/raw mill in accordance with the following procedures/requirements:

a. Firing of an authorized non-hazardous liquid fuel shall not exceed the percentage of the total heat input of the in-line kiln/raw mill that was utilized during the most recent Division-approved performance test for firing the liquid fuel, unless otherwise approved in writing by the Division in accordance with Condition 4.2.30.

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, unless otherwise approved in writing by the Division in accordance with Condition 4.2.30. Dry coal/fly ash may be injected directly into the calciner or kiln without prior Division approval.

c. The “on-specification” used oil fuel 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 fuel may be generated from on-site sources or purchased from a vendor, and shall not contain any PCB’s.

3.2.7 Authorized Fuels for Air Heater - The raw mill air heater shall fire only the following fuels: [40 CFR 52.21-BACT]

a. natural gas;
b. propane
c. on-specification used oil; or
d. No. 2 or No. 4 fuel oil.

3.2.8 The Permittee shall not introduce into any part of the process any of the following fuels and materials:
[40 CFR 52.21-BACT]

a. hazardous wastes as defined in 40 CFR 261;
b. off-specification used oil;
c. solid fuels other than those allowed by this permit;
d. nuclear waste, and radioactive waste;
e. asbestos-containing materials per 40 CFR 61 Subpart M;
f. whole batteries, or
g. solid wastes, other than those allowed by this permit.

These prohibited materials shall not be used to manufacture engineered fuels.

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

a. **NOx** - Multi-staged combustion (MSC)/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. Indirect firing and low NO_x burner(s) for reducing NO_x emissions will also be employed.

b. **PM** - Fabric filters/baghouses to reduce filterable $PM/PM_{10}/PM_{2.5}$ emissions from process air and/or flue gas streams exhausting through vents/stacks.

c. **SO2 and HCl** – Control of emissions through equipment design/inherent dry scrubbing, and judicious selection/use of raw materials.

d. **CO and VOC/THC** – Control of 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.

e. **Hg** – control of emissions by water injection in the downcomer duct to control main baghouse temperature, kiln dust management and activated carbon injection, if needed.

f. **D/F** – Control of emissions through equipment design and combustion process management with good operating practices (i.e., adequate combustion temperature, residence time and excess air), and water injection in the downcomer duct to control main baghouse temperature.

g. **CO_2e** – Control of emissions by good combustion practices, plant design and raw material management to the degree practical.

The Permittee shall include, with the performance test reports as required in Part 4.0 of this permit, 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 5.2.1. All inspection and maintenance activities shall be recorded in a permanent form suitable for inspection and submission to the Division.

3.2.10 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 includes 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.

3.2.11 The Permittee shall operate, during all times when the primary crusher is in operation, the wet suppression/water-spray control system involved, except when the crusher is 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 primary crusher when there is sufficient water and water pressure to adequately supply the wet suppression/water-spray control system involved 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.

3.2.12 The Permittee shall apply water to stockpile when necessary to prevent dust from becoming airborne.

3.2.13 The Permittee shall take reasonable precautions to minimize fugitive dust generated by blasting operation.

3.2.14 The Permittee shall maintain and operate, at all times that the drilling equipment is in operation, appropriate dust control systems when necessary to reduce fugitive dust emissions, except during natural wet conditions.

3.2.15 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.

3.2.16 Except during natural wet conditions, the Permittee shall operate a high-efficiency vacuum sweeper truck on a regular schedule at all times when truck travel is occurring on paved roads, including roads used for in-plant travel and customer travel.

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

3.2.17 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 an Operation and Maintenance (O&M) plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The O&M plan shall be developed by the source's compliance date as specified in Condition 3.2.18.
[40 CFR 63.1347]

3.2.18 On and after the commencement of the operation/production of the in-line kiln/raw mill 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(d)]

3.2.19 The affected sources subject to Subpart LLL include, but are not to be limited to, the following operations/process units:
[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 primary and secondary crushers of the on-site nonmetallic mineral processing plant/quarrying operations, regardless of their locations in the process line, are not subject to Subpart LLL. 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.

3.2.20 The Permittee shall not allow the in-line kiln/raw mill 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]

3.2.21 All the sources subject to 40 CFR 63 Subpart LLL at this site 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]

3.2.22 The requirements of 40 CFR 60 Subpart Y do not apply to conveying system transfer points used to convey coal from the coal mill to the kiln. Subpart LLL applies to any conveying system transfer point associated with coal preparation used to convey coal from the coal mill to the kiln at any portland cement plant.
[40 CFR 63.1340(b)(7)]

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

3.2.23 The accumulated maintenance check and readiness testing time for the emergency stationary diesel engine/generator 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 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(f)]

3.2.24 The emergency stationary diesel engine/generator 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)]

3.2.25 The emergency stationary diesel engine/generator 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*

3.2.26 The Permittee shall operate the emergency stationary diesel engine/generator 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)]

3.2.27 The Permittee shall submit an Initial Notification for the emergency stationary diesel engine 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

3.3.1 Emissions from each of the listed process units shall comply with the following pertinent BACT limits:
[40 CFR 52.21 - PSD/BACT]

TABLE 3.3.1: Subpart LLL, Subpart OOO, Subpart Y, Subpart F and BACT Emission Standards

Pollutant [1]	Operation	Emission Limit [2, 3]	Compliance Method [5]	Averaging Time [4]	Basis [6]
PM/PM_{10}/ $PM_{2.5}$ (filterable + condensable)	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler and	0.036 lb/ton of clinker*	Stack Testing, Annual Method 5 and 202, RM-up	Average of three 1-hour runs	BACT

Pollutant [1]	Operation	Emission Limit [2, 3]	Compliance Method [5]	Averaging Time [4]	Basis [6]
PM	Coal Mill/Main Kiln Stack No. 4E1.SK01)	Equation 2 of 40 CFR 63.1343(b)(2)	Stack Testing, Annual Method 5, RM-up & RM-down and PM-CPMS	Average of three 1-hr runs and 30-kiln operating day rolling of PM-CPMS monitoring	LLL [8, 9]
SO_2	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler and Coal Mill/Main Kiln Stack No. 4E1.SK01)	0.4 lb/ton of clinker	CEM	30-day rolling CEMS average	BACT/ NSPS, Subpart F
NO_x	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler and Coal Mill/Main Kiln Stack No. 4E1.SK01)	1.5 lb/ton of clinker 2.5 lb/ton of clinker during initial kiln startup period[11]	CEM	30-day rolling average	BACT/ NSPS, Subpart F
CO	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler and Coal Mill/Main Kiln Stack No. 4E1.SK01)	2.9 lb/ton of clinker	CEM	30-day rolling average	BACT
VOC	K103 (Air Heater, Raw Mill, Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler and Coal Mill/Main Kiln Stack No. 4E1.SK01)	0.15 lb/ton of clinker	CEM	30-day rolling average	BACT [7]
THC		24 ppmvd (as propane) @ 7% O_2			LLL
Dioxins/ Furans (D/F)	K103 (Air Heater, Raw Mill, Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler and Coal Mill/Main Kiln Stack No. 4E1.SK01)	0.20 ng/dscm (TEQ) @ 7% O_2 (if T > 400 °F) or 0.40 ng/dscm (TEQ) @ 7% O_2 (if T < 400 °F)	Stack Testing, 30-month Method 23 & BH Inlet Temperature Monitor	Three 3-hr runs	LLL [10]
Mercury (Hg)	K103 (Air Heater, Raw Mill, Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler and Coal Mill/Main Kiln Stack No. 4E1.SK01)	21 lb/MM tons of clinker	Sorbent Trap CEMS or CEMS	30-kiln operating day rolling	LLL
Hydrochloric Acid (HCl)	K103 (Air Heater, Raw Mill,	3 ppmvd @ 7% O_2	CEMS or SO_2-continuous	30- kiln operating day rolling	LLL

Pollutant [1]	Operation	Emission Limit [2, 3]	Compliance Method [5]	Averaging Time [4]	Basis [6]
	Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler and Coal Mill/Main Kiln Stack No. 4E1.SK01)		parameter monitoring system		
$PM/PM_{10}/PM_{2.5}$ (filterable + condensable)	FM01 and FM02 only (Finish mill sweep and air separator PM control devices outlets)	0.008 gr/dscf	Method 5 and 202. Initial and upon TV permit renewal	Average of three 1-hour runs	BACT
Visible		10% opacity	Initial 3-hr Method 9. Daily Method 22 with Method 9 also required if Method 22 emissions observed after corrective action complete.	Method 9 is highest 6-minute block of 30-minute test Method 22 length is 6 minutes with compliance by no visible observed emissions	LLL
$PM/PM_{10}/PM_{2.5}$	All emission points from K102, K104, K105, and K106 except FM01 and FM02.	0.008 gr/dscf	Method 5 and 202. If requested.	Average of three 1-hour runs	BACT
Visible		10% opacity	Initial 3-hr Method 9. Periodic Method 22 with Method 9 also required if Method 22 emissions observed.	Method 9 is highest 6-minute block of 30-minute test Method 22 length is 10 minutes with compliance by no visible observed emissions	LLL
Visible	CM01 (Pulverized Fuel Bin)	10% opacity	Perform Initial and annual performance test	30 minutes (five 6-minute averages) duration	Y BACT
Visible	K101 (grinding mills, screening operations, bucket elevators, transfer points on belt conveyors, bagging operations, storage bins)	7% opacity	Perform Initial and within 5 years from the previous performance test	30 minutes (five 6-minute averages) duration	OOO BACT
Visible	K101 (crushers)	12% opacity	Perform Initial and within 5 years from the previous performance test	30 minutes (five 6-minute averages) duration	OOO BACT

Pollutant [1]	Operation	Emission Limit [2, 3]	Compliance Method [5]	Averaging Time [4]	Basis [6]
GHG	K103 (Air Heater, Raw Mill, Preheater/Precalciner, Calciner, Kiln, and Clinker Cooler and Coal Mill/Main Kiln Stack No. 4E1.SK01)	0.95 ton CO_2/ton clinker	CEM	12-month rolling average	BACT

* BACT PM limit is based on NESHAP Subpart LLL Equation 2 and is calculated from stack testing data where the conditions during testing of exhaust gas flow and dry ton of feed determines the site-specific PM limit.

1. Pollutant: PM = particulate matter; PM_{10} = PM with a mean diameter of 10 micron or less; SO_2 = sulfur dioxide; NO_x = nitrogen oxides; CO = carbon monoxide; VOC = volatile organic compounds; D/F = dioxin and furans; Hg = mercury; THC = total hydrocarbons; HCl = hydrogen chloride.
2. Units of emission limits: lb/ton of clinker = pounds per ton of clinker; lb/MM tons of clinker = pounds per million tons of clinker; ng/dscm TEQ = nanograms per dry standard cubic meter, toxic equivalents; ppmvd = parts per million volume dry; T = Temperature; °F = degrees Fahrenheit.
3. Oxygen monitoring is required for compliance, all concentration limits require correction to 7% O_2.
4. "*30-kiln operating day rolling*" average shall be calculated per 40 CFR 63.1341 "*Operating day*" and "*Rolling average*" definitions.
5. Compliance Method: ST = periodic stack test; CEMS = continuous emission monitor system; SBT = sorbent trap CEMS; PM-CPMS = particulate matter-continuous parameter monitoring system, SO2-CPMS = SO2-continuous parameter monitoring system; RM up = Raw Mill in operation; RM down = Raw Mill not in operation. Except as provided in 40 CFR 63.1348(b), performance tests are required at regular intervals for affected sources that are subject to a dioxin/furan, organic HAP or HCl emissions limits. Performance tests required every 30 months must be completed no more than 31 calendar months after the previous performance test except where that specific pollutant is monitored using CEMS; performance tests required every 12 months must be completed no more than 13 calendar months after the previous performance test.
6. Pollutants limited by NESHAP Subpart LLL that comply by Continuous Monitoring Systems shall exclude all data during periods of startup and shutdown per 40 CFR 63.1343(a).
7. VOC emissions shall be measured by CEMS as either total hydrocarbons (THC) expressed as "propane" or methane/non-methane for the mass emissions rate. Permittee can demonstrate by annual Method 25A test that a fraction of THC is methane instead of operating methane/non-methane CEMS.
8. For purposes of BACT compliance, all PM emitted from the baghouse exhaust is assumed to be PM_{10}.
    a. Compliance with the Subpart LLL PM limits is considered compliance with the BACT PM/PM_{10} limits.
    b. The BACT requirements do not waive or vary any applicable LLL monitoring or record keeping requirements.
9. New kilns that combine the clinker cooler exhaust and coal mill exhaust with the kiln exhaust, and send the combined exhaust to a single stack may meet an alternative PM emissions limit calculated using Equation 2 of 40 CFR 63.1343(b)(2):

$$PM_{alt} = (0.0020 \times 1.65)(Q_k + Q_c + Q_{cm})/7000$$

Where:

PM_{alt} = Alternative PM emission limit for commingled sources.

0.0020 = The PM exhaust concentration (gr/dscf) equivalent to 0.020 lb per ton clinker where clinker cooler and kiln exhaust gas are not combined.

Pollutant [1]	Operation	Emission Limit [2, 3]	Compliance Method [5]	Averaging Time [4]	Basis [6]
1.65 = The conversion factor of ton feed per ton clinker. Q_k = The exhaust flow of the kiln (dscf/ton feed). Q_c = The exhaust flow of the clinker cooler (dscf/ton feed). Q_{cm} = The exhaust flow of the coal mill (dscf/ton feed). 7000 = The conversion factor for grains (gr) per lb. 10. Dioxin/furans shall not exceed 0.20 ng/dscm (TEQ) @ 7% oxygen when the average of the performance test run temperatures at the inlet to the particulate matter control device is greater than 204° C (400° F) and shall not exceed 0.40 ng/dscm (TEQ) @ 7% oxygen when the average of the performance test run temperatures at the inlet to the particulate matter control device is 204° C (400° F) or less. 11. Startup for NOx limitation is defined in Condition 3.3.1.c. Also see Condition 3.3.6					

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 Sections 4.2 and 5.2 of this permit.

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 in combination with Method 5 to demonstrate compliance with the relevant $PM_{10}/PM_{2.5}$ 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. Alternatively, $PM_{2.5}$ compliance may be determined as 35 percent of measured PM emissions by Method 5.

c. 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 2.5 lb/ton of clinker based on a 30-day rolling average. The "initial startup" period shall begin after upon initial fuel firing in the kiln 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 200,000 tons of clinker, or

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

After the "initial startup" period ends, the NO_x emissions shall not exceed 1.5 lb/ton of clinker based on a 30-day rolling average.

d. The VOC emissions shall be measured by a THC CEM, expressed as propane and corrected to 7% oxygen on a dry basis, and converted to the same unit as the emission limit.

3.3.2 Emissions from the pyroprocessing system (including the kiln, raw mill, raw mill air heater, clinker cooler and coal mill) main stack shall not exceed the emissions standards shown in the following table if 40 CFR 60, Subpart CCCC applies to K103 instead of 40 CFR Part 63, Subpart LLL:
[40 CFR 52.21 - PSD/BACT]

TABLE 3.3.2: Subpart CCCC and Subpart F, and BACT Emission Standards to 4E1.SK01

Pollutant [1]	**Operation**	**Emission Limit [2, 3, 7]**	**Compliance Method [5]**	**Averaging Time [4]**	**Basis [6]**
$PM/PM_{10}/PM_{2.5}$ (filterable + condensable)	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler, and coal mill/Main Kiln Stack No. 4E1.SK01)	0.036 lb/ton of clinker	Stack Testing, Annual Method 5, RM-up	Average of three 1-hour runs	BACT [10]
PM		4.9 milligrams per dry standard cubic meter (mg/dscm) @ 7% O_2	Stack Testing, Annual Method 5, RM-up & CPMS	Average of three 1-hr runs and 30-kiln operating day rolling of PM-CPMS monitoring	Table 7 to CCCC
SO_2	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler, and coal mill/Main Kiln Stack No. 4E1.SK01)	0.4 lb/ton of clinker	CEM	30-day rolling	BACT/ NSPS, Subpart F
		28 ppmvd @ 7% O2	CEMS or ST, Annual or greater Method 6C	30-day rolling	Table 7 to CCCC[11]
NO_x	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler, and coal mill/Main Kiln Stack No. 4E1.SK01)	1.5 lb/ton of clinker 2.5 lb/ton of clinker during initial kiln startup period[12]	CEM	30-day rolling average	BACT/ NSPS, Subpart F
		200 ppmvd @ 7% O_2	CEM	30-day rolling average	Table 7 to CCCC [8]

Pollutant [1]	Operation	Emission Limit [2, 3, 7]	Compliance Method [5]	Averaging Time [4]	Basis [6]
CO	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler, and coal mill/Main Kiln Stack No. 4E1.SK01)	2.9 lb/ton of clinker	CEM	30-day rolling average	BACT
		190 parts per million by volume, dry, corrected to 7% oxygen (ppmvd @ 7% O2)	CEMS or ST, Annual or greater Method 10	30-day rolling (CEMS) or Average Three 1-hr runs	Table 7 to CCCC [11]
VOC	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler, and coal mill/Main Kiln Stack No. 4E1.SK01)	0.15 lb/ton of clinker	CEM	30-day rolling average	BACT [9]
Dioxins/ Furans (D/F)	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler, and coal mill/Main Kiln Stack No. 4E1.SK01)	0.075 nanograms (ng)/dscm (Toxic Equivalency Basis (TEQ)) @ 7% O_2 **or** 0.51 ng/dscm (Total Mass Basis) @ 7% O_2	ST, Annual or greater Method 23, RM-up	3-run average	Table 7 to CCCC [11]
Mercury (Hg)	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler, and coal mill/Main Kiln Stack No. 4E1.SK01)	21 lb/MM tons of clinker	CEMS or SBT	30-day rolling	Table 7 to CCCC
Hydrochloric Acid (HCl)	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler, and coal mill/Main Kiln Stack No. 4E1.SK01)	3 ppmvd @ 7% O_2	CEMS or Annual or greater Method 321	30-day rolling (CEMS) or Three-run average	Table 7 to CCCC [11]
Cadmium (Cd)	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler, and coal mill/Main Kiln Stack No. 4E1.SK01)	0.0014 mg/dscm @ 7% O2	ST, Annual or greater Method 29	Three-run average	Table 7 to CCCC [11]
Lead (Pb)	K103 (Air Heater, Raw Mill, Preheater, Calciner, Kiln, Clinker Cooler, and coal mill/Main Kiln Stack No. 4E1.SK01)	0.014 mg/dscm @ 7% O2	ST, Annual or greater Method 29	Three-run average	Table 7 to CCCC [11]

Pollutant [1]	Operation	Emission Limit [2, 3, 7]	Compliance Method [5]	Averaging Time [4]	Basis [6]

1. Pollutant: PM = particulate matter; PM_{10} = PM with a mean diameter of 10 micron or less; SO_2 = sulfur dioxide; NO_x = nitrogen oxides; CO = carbon monoxide; VOC = volatile organic compounds; D/F = dioxin and furans; Hg = mercury; THC = total hydrocarbons; HCl = hydrogen chloride.
2. Units of emission limits: lb/ton of clinker = pounds per ton of clinker; lb/MM tons of clinker = pounds per million tons of clinker; ng/dscm TEQ = nanograms per dry standard cubic meter, toxic equivalents; ppmvd = parts per million volume dry; T = Temperature; °F = degrees Fahrenheit.
3. Oxygen monitoring is required for CCCC compliance, correction to 7% O_2.
4. 40 CFR 60.2265 defines "*30-day rolling*" average as: "the arithmetic mean of the previous 720 hours of valid operating data. Valid data excludes periods when this unit is not operating. The 720 hours should be consecutive, but not necessarily continuous if operations are intermittent."
5. Compliance Method: ST = periodic stack test; CEMS = continuous emission monitor system; SBT = sorbent trap CEMS; PM-CPMS = particulate matter-continuous parameter monitoring system; RM up = Raw Mill in operation; RM down = Raw Mill not in operation.
6. CCCC pollutants, except Hg, that are measured by Continuous Monitoring System shall not be oxygen corrected for periods of startup and shutdown pursuant to 40 CFR 60.2265.
7. On an annual basis no more than 12 months following the previous annual air pollution control device inspection, the permittee must complete the air pollution control device inspection as described in 40 CFR 60.2141.
8. All valid NO_x hourly averages shall be included into the 30-day rolling average. Compliance with NOx-BACT limit and monitoring requirements shall suffice for NOx-CCCC limit and monitoring.
9. VOC emissions shall be measured by CEMS as either total hydrocarbons (THC) expressed as "propane" or methane/non-methane for the mass emissions rate. Permittee can demonstrate by annual Method 25A test that a fraction of THC is methane instead of operating methane/non-methane CEMS.
10. For purposes of BACT compliance, all PM emitted from the baghouse exhaust is assumed to be PM_{10}.
    a. Compliance with the CCCC PM limit assure compliance with the BACT PM/PM_{10} limits.
    b. The BACT requirements do not waive or vary any applicable CCCC monitoring or recordkeeping requirements.
11. If conducting stack tests to demonstrate compliance and performance tests for this pollutant for at least 2 consecutive years show that emissions are at or below this limit, permittee can skip testing according to 40 CFR 60.2155 if all the other provisions of 40 CFR 60.2155 are met.
12. Startup for NOx limitation is defined in Condition 3.3.1.c. Also see Condition 3.3.6

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

3.3.3 The provisions of 40 CFR Part 60, Subpart Y are applicable to any of the following affected facilities at this site:
[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.

3.3.4 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

3.3.5 The Permittee shall comply with the applicable provisions of 40 CFR 63 Subpart LLL, *National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry*, for all subject equipment. In particular, the Permittee shall not cause to be discharged into the atmosphere from kilns, clinker coolers, raw material dryers, raw mills, and finish mills:
[40 CFR 63.1343(b)]

a. Kiln 4K1.KC01 any gases which:

i. Contain particulate matter in excess of the PM limit determined by Equation 2 of 40 CFR 63.1343(b);

ii. Contain mercury in excess of 21 lb/MM tons clinker;

iii. Contain dioxins and furans in excess of 0.2 ng/dscm toxicity equivalents (TEQ) corrected to seven percent oxygen *(If the average temperature, at the inlet to the first PM control device (fabric filter), during the D/F performance test is 400 °F, or less, this limit is changed to 0.40 ng/dscm TEQ).*

iv. Contain total hydrocarbon (THC) in excess of 24 parts per million by volume (ppmvd) corrected to seven percent oxygen (*As an alternative, any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP*).

v. Contain hydrogen chloride (HCl) in excess of 3 ppmvd corrected to seven percent oxygen during normal operations (During startup and shutdown: amount allowed due to work practices established in accordance with 40 CFR 63.1346(g)).

vi. The Permittee must operate Kiln 4K1.KC01 such that the temperature of the gas at the inlet to the kiln PM control device (PMCD) does not exceed the applicable temperature limit determined in accordance with 40 CFR 63.1349(b)(3)(iv).
[40 CFR 63.1346(a & b)]

b. The Clinker cooler 4R1.PQ01 any gases which:

i. Contain particulate matter in excess of the PM limit determined by Equation 2 of 40 CFR 63.1343(b).

c. Raw or finish mill any gases which:

i. Exhibit opacity greater than 10 percent.

ii. Contain total hydrocarbon (THC) in excess of 24 parts per million by volume (ppmvd) corrected to seven percent oxygen (*As an alternative, any source subject to the 24 ppmvd THC limit may elect to meet an alternative limit of 12 ppmvd for total organic HAP*).

3.3.6 During periods of startup and shutdown the Permittee must meet the requirements listed in a. through d.
[40 CFR 63.1346(g)]

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

b. Combustion of the primary kiln fuel may commence once the kiln temperature reaches 1200 degrees Fahrenheit.

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

d. The Permittee must keep records as specified in 40 CFR 63.1355 during periods of startup and shutdown.

3.3.7 The Permittee shall comply with the applicable provisions of 40 CFR 63 Subpart LLL, *National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry*, for all subject equipment. In particular, the Permittee must not cause to be discharged any gases which exhibit opacity in excess of 10 percent, from any new or existing raw material, clinker, or finished product storage bin, conveying system transfer point; bagging system, bulk loading or unloading system, raw and finish mills, and each existing raw material dryer.
[40 CFR 63.1345]

<u>40 CFR Part 60, Subpart OOO:</u>

<u>*Performance Standards for Nonmetallic Mineral Processing Plants*</u>

3.3.8 The Permittee shall comply with the provisions of 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants," for all subject equipment {for reference, see listing in Section 3.1}. In particular, for equipment in fixed or portable nonmetallic mineral processing plants which is subject to 40 CFR 60 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] [Vault NS-017-EL, 02/10]

a. The Permittee shall not discharge or cause the discharge into the atmosphere, from each affected facility/source constructed, modified, or reconstructed on or after April 22, 2008, any

   i. fugitive emissions (including those escaping capture systems) exhibiting greater than 7 percent opacity except for any crusher that does not use a capture system, which shall not exhibit fugitive emissions greater than 12 percent opacity.

   ii. stack emissions from capture systems feeding a dry control device which contain particulate matter in excess of 0.032 g/dscm (0.014 grains/dscf) except for individually enclosed storage bins.

   iii. Any dry control device that controls emissions from an individually enclosed storage bin is exempt from the stack PM concentration limit (and associated performance testing) in paragraph (a)(ii) but shall not exhibit greater than 7 percent stack opacity.

   In particular, for any transfer point on a conveyor belt or any other affected facility enclosed in a building, each enclosed affected facility shall comply with the emission limits in paragraphs a.i. and a.ii., or the building shall comply with the following emission limits:

   iv. Fugitive emissions from the building openings (except vents with mechanically induced air flow for exhausting PM emissions from the building) shall not exceed 7 percent opacity.

   v. PM emissions from any building vent with mechanically induced air flow for exhausting PM emissions shall not contain particulate matter in excess of 0.032 g/dscm (0.014 grains/dscf).

b. Truck dumping of nonmetallic minerals into any screening operation, feed hopper, or crusher is exempt from the requirements of paragraph a.

40 CFR Part 60, Subpart IIII

3.3.9 On and after startup of the operation, the stationary emergency diesel engine shall comply with the applicable emission limits of 40 CFR Part 63, Subpart IIII during the entire life of the engine. The engine 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]

3.3.10 The Permittee shall operate the stationary emergency diesel engines using diesel fuel that contains no more than 0.5% of sulfur by weight from startup of the engine. 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]

3.4 Equipment SIP Rule Standards

Georgia Rule 391-3-1-.02(2)(n): *Fugitive Emissions*

3.4.1 The Permittee shall take all reasonable precautions to prevent fugitive dust from becoming airborne. Reasonable precautions that should be taken to prevent dust from becoming airborne include, but are not limited to, the following:
[391-3-1-.02(2)(n)1]

a Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land;

b. Application of asphalt, water, or suitable chemicals on dirt roads, materials, stockpiles, and other surfaces that can give rise to airborne dusts;

c. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty materials. Adequate containment methods can be employed during sandblasting or other similar operations;

d. Covering, at all times when in motion, open bodied trucks, transporting materials likely to give rise to airborne dusts; and

e. The prompt removal of earth or other material from paved streets onto which earth or other material has been deposited.

3.5 Equipment Standards Not Covered by a Federal or SIP Rule and Not Instituted as an Emission Cap or Operating Limit

3.5.1 The Permittee shall operate all particulate matter-controlling baghouses at all times that associated equipment is being operated.
[391-3-1-.03(2)(c)]

3.5.2 The Permittee shall maintain an adequate inventory of replacement filter bags for all baghouses.
[391-3-1-.03(2)(c)]

3.5.3 Routine maintenance shall be performed on all air pollution control equipment. The Permittee shall record and maintain records of routine maintenance in a form suitable for inspection or submittal to the Division.
[391-3-1-.03(2)(c)]

PART 4.0 REQUIREMENTS FOR TESTING

4.1 General Testing Requirements

4.1.1 The Permittee shall cause to be conducted a performance test at any specified emission unit when so directed by the Environmental Protection Division ("Division"). The test results shall be submitted to the Division within 60 days of the completion of the testing. Any tests shall be performed and conducted using methods and procedures that have been previously specified or approved by the Division.
[391-3-1-.02(6)(b)1(i)]

4.1.2 The Permittee shall provide the Division thirty (30) days (or sixty (60) days for tests required by 40 CFR Part 63) prior written notice of the date of any performance test(s) to afford the Division the opportunity to witness and/or audit the test, and shall provide with the notification a test plan in accordance with Division guidelines.
[391-3-1-.02(3)(a) and 40 CFR 63.7(b)(1)]

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, and 3.4 are as follows:

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

b. Method 2 for the determination of flow rate;

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

d. Method 4 for the determination of stack gas moisture;

e. Method 5 or 5I for the determination of filterable PM emissions;

f. Method 6 or 6C for the determination of SO2 concentration;

g. Method 7 or 7E for the determination of NOx concentration;

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

i. Method 10 for the determination of CO concentration;

j. Method 22 for the visual determination of fugitive visible emissions;

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

l. Method 25A for the determination of total gaseous methane and nonmethane organic emissions as propane;

m. Method 29 of 40 CFR Part 60 for the determination of Cd, Pb, and 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), Method 30A, and/or Method 30B, are acceptable alternatives to Method 29 (portion for mercury only),

n. Method 201 or 201A in conjunction with Method 202 for the determination of PM10 emissions, and

o. Method 321 for determination of hydrochloric acid (HCl) emission.

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)]

4.1.4. All monitoring systems and/or monitoring devices required by the Division shall be installed, calibrated and operational prior to conducting any performance test(s). For any performance test, the Permittee shall, using the monitoring systems and/or monitoring devices, acquire data during each performance test run. All monitoring system and/or monitoring device data acquired during the performance testing shall be submitted with the performance test results.
[391-3-1-.02(3)(a)]

4.1.5 Should production rate(s) increase above the rate(s) at which the acceptable performance test(s) was made, the Division may require that the relevant emission control system(s) be tested for compliance at a higher production rate.
[391-3-1-.02(3)(a)]

4.1.6 The Permittee shall submit performance test results to the US EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI) in accordance with any applicable NSPS or NESHAP standards (40 CFR 60 or 40 CFR 63) that contain Electronic Data Reporting Requirements. This condition is only applicable if required by an applicable standard and for the pollutant(s) subject to said standard.
[391-3-1-.02(8)(a) and 391-3-1-.02(9)(a)]

4.1.7 The Permittee shall provide performance testing facilities as follows:
[391-3-1-.02(3)(a)]

a. Sampling ports adequate for test methods applicable to such source;
b. Safe sampling platform;
c. Safe access to sampling platforms; and
d. Electric power for sampling and testing equipment.

4.2 Specific Testing Requirements

40 CFR Part 63, Subpart LLL Testing Requirements

4.2.1 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 3.3.5, 3.3.6, and 3.3.7 using the applicable test methods and/or procedures in Conditions 4.1.1, 4.1.2, 4.1.3, 4.1.4, 4.1.5, and 4.2.2, through 4.2.12 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.

4.2.2 If the Permittee plans to undertake a change in operations that may adversely affect compliance with an applicable Subpart LLL standard, operating limit, or parametric monitoring value, the Permittee must conduct a performance test as specified in 40 CFR 63.1349(b).
[40 CFR 63.1349(e)]

4.2.3 In preparation for, and while conducting a performance test required in Section 4.2, 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)]

a. Provide the Division a written notice at least 60 days prior to the operational change, 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 conditions in Section 4.2, including when the planned operational change period would begin.

b. The test results shall be documented in a test report according to Condition 4.2.1.

c. A test plan shall be made available to the Division 60 days prior to testing.

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

4.2.4 If applicable, a single test can provide results to demonstrate compliance with multiple emission limits for the same pollutant.
[391-3-1-.03(2)(c)]

4.2.5 *Particulate Matter Test and PM CPMS*. The Permittee shall demonstrate initial compliance with PM emissions by conducting a test using Method 5 or Method 5I. The Permittee must also monitor continuous performance through use of a PM continuous parametric monitoring system (PM CPMS). PM CPMS monitoring is discussed in Section 5. For the PM CPMS, the Permittee will establish a site-specific operating limit from PM testing. The performance test must be repeated at least annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.
[40 CFR 63.1348(a)(1), 40 CFR 63.1349(b)(1)]

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

b. For each performance test, conduct at least three separate test runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur. Conduct each test run to collect a minimum sample volume of 2 dscm for determining compliance with a new source limit and 1 dscm for determining compliance with an existing source limit. Calculate the time weighted average of the results from three consecutive runs, including applicable sources as required by paragraph (b)(1) of 40 CFR 63.1349, to determine compliance. It is not necessary to determine the particulate matter collected in the impingers "back half" of the Method 5 or Method 5I particulate sampling train to demonstrate compliance with the PM standards of this subpart. This shall not preclude the permitting authority from requiring a determination of the "back half" for other purposes. For kilns with inline raw mills, testing must be conducted while the raw mill is on and while the raw mill is off. If the exhaust streams of a kiln with an inline raw mill and/or a clinker cooler and/or a coal mill are comingled, then the comingled exhaust stream must be tested with the raw mill on and the raw mill off.

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

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

4.2.6 *D/F Emissions Tests.* The Permittee must conduct separate performance tests while the raw mill is operating and the raw mill is not operating. Determine the D/F Toxic Equivalency (TEQ) concentration for each run and calculate the arithmetic average of the TEQ concentrations measured for the three runs to determine continuous compliance. Each performance test must consist of three separate runs conducted under representative conditions. The duration of each run must be at least 3 hours, and the sample volume for each run must be at least 2.5 dscm (90 dscf). The temperature at the inlet to the kiln or in-line kiln/raw mill PM control device must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report. Average temperatures must be calculated for each run of the performance test. The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with 40 CFR 63.1346(b).
[40 CFR 63.1348(a)(3), 40 CFR 63.1349(b)(3)]

4.2.7 *THC CEMS.* The Permittee must operate a CEMS in accordance with the requirements in 40 CFR 63.1350(i). For the purposes of conducting the accuracy and quality assurance evaluations for CEMS, the THC span value (as propane) is 50 to 60 ppmvw (ppm by volume wet basis) and the reference method (RM) is Method 25A of appendix A to part 60 of this chapter. The initial compliance test for the first 30 kiln operating days of kiln operation shall be conducted using THC CEMS. See 40 CFR 63.1348(a).
[40 CFR 63.1348(a)(4), 40 CFR 63.1349(b)(4)]

4.2.8 *Total Organic HAP Emissions Tests.* To demonstrate compliance with the total organic HAP emissions limit under 40 CFR 63.1343(b) in lieu of the THC emissions limit, the Permittee must demonstrate compliance with the total organic HAP emissions standards by using the performance test methods and procedures in 40 CFR 63.1349(b)(7). Use EPA Method 18 or Method 320 of appendix A to part 60 to determine organic HAP emissions. For each performance test, conduct at least three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur. If the source has an in-line kiln/raw mill the Permittee must conduct three separate test runs with the raw mill on, and three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur with the mill off. Conduct each Method 18 test run to collect a minimum target sample equivalent to three times the method detection limit. Calculate the average of the results from three runs to determine compliance.
[40 CFR 63.1348(a)(4), 40 CFR 63.1349(b)(7)]

4.2.9 *Mercury CEMS or sorbent trap*. The Permittee must demonstrate compliance by operating a mercury CEMS or a sorbent trap based CEMS. Compliance with the mercury emissions standard must be determined based on the first 30 operating days of operating a mercury CEMS or sorbent trap monitoring system. The Permittee must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the exhaust gas flow rate to the atmosphere according to the requirements in 40 CFR 63.1350(k)(5). Calculate the Hg emission rate using Equation 10 of 40 CFR 63.1349(b)(5).
[40 CFR 63.1348(a)(5), 40 CFR 63.1349(b)(5)]

4.2.10 *HCl emissions tests.* The Permittee must conduct performance testing by one of the following methods:
[40 CFR 63.1348(a)(6), 40 CFR 63.1349(b)(6)]

a. If the kiln is equipped with a wet scrubber, tray tower or dry scrubber, performance testing must be conducted using Method 321 unless a CEMS that meets the requirements 40 CFR 63.1350(l)(1) is installed. Testing must be conducted for the raw mill on and raw mill off conditions. The Permittee must establish site specific parameter limits by using the CPMS required in 40 CFR 63.1350(l)(1). For a dry scrubber, measure and record the sorbent injection rate in intervals of no more than 15 minutes during the HCl test. Compute and record the 24-hour average sorbent injection rate and average sorbent injection rate for each sampling run.

b. If the kiln is not controlled by a wet scrubber, tray tower or dry sorbent injection system, the Permittee must operate a CEMS in accordance with the requirements of 40 CFR 63.1350(l)(1). See 40 CFR 63.1348(a). The initial compliance test must be based on the 30 kiln operating days that occur after the compliance date of this rule in which the affected source operates using an HCl CEMS. Hourly HCl concentration data must be obtained according to 40 CFR 63.1350(l).

c. *SO2 CEMS surrogate for HCl.* As an alternative, SO_2 emissions may be monitored using a CEMS in accordance with the requirements of 40 CFR 63.1350(l)(3). The Permittee must establish a SO_2 operating limit equal to the average recorded during the HCl stack test where the HCl stack test run result demonstrates compliance with the emission limit. This operating limit will apply only for demonstrating HCl compliance. If SO_2 emissions are monitored using a CEMS to demonstrate HCl compliance, follow the procedures in 40 CFR 63.1349(b)(8)(i) through (ix) and in accordance with the requirements of 40 CFR 63.1350(l)(3). The Permittee must establish an SO_2 operating limit equal to the average recorded during the HCl stack test.

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

4.2.12 For any affected source subject to an opacity limit(s) under Subpart LLL, the Permittee shall demonstrate initial compliance with the applicable opacity limit by conducting a Method 9 test or using a COM 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.

40 CFR Part 60, Subpart CCCC Testing Requirements

4.2.13 Initial performance tests must be conducted within 60 days after the kiln unit reaches the *normal clinker production rate* (for this condition, clinker production rate is 140 tph for a 24-hour period) at which it will operate, but no later than 180 days after its initial startup. The Permittee must meet the operating limits established during the initial performance test 60 days after the kiln reaches the *normal clinker production rate* at which it will operate, but no later than 180 days after its initial startup.
[40 CFR 60.2110(b), 40 CFR 60.2140(a)]

4.2.14 The Permittee must conduct a performance test, as required under 40 CFR 60.2125 and 60.2105 to determine compliance with the emission limitations in Condition 3.3.2 to establish PM CPMS operating limits using the procedures in 40 CFR 60.2110(i). The performance test must be conducted using the test methods listed in Condition 3.3.2 and the procedures in 40 CFR 60.2125. An annual performance test must be conducted for the pollutants listed in Condition 3.3.2 for K103 as required under 40 CFR 60.2125. The annual performance test must be conducted using the test methods listed in Condition 3.3.2 and the procedures in 40 CFR 60.2125. Annual performance tests are not required if CEMS or continuous opacity monitoring systems are used to determine compliance.
[40 CFR 60.2110, 40 CFR 60.2135, 40 CFR 60.2145(b)]

4.2.15 As an alternative to conducting a performance test, as required under 40 CFR 60.2125 and 60.2105, a 30-day rolling average of the 1-hour arithmetic average CEMS data, including CEMS data during startup and shutdown as defined in Subpart CCCC may be used, to determine compliance with the emission limitations in Condition 3.3.2. The Permittee must conduct a performance evaluation of each continuous monitoring system within 180 days of installation of the monitoring system. The initial performance evaluation must be conducted prior to collecting CEMS data that will be used for the initial compliance demonstration.
[40 CFR 60.2135(b)]

4.2.16 *Cd/Pb, CO, D/F tests and HCl CEMs*. The Permittee must conduct an annual performance test for cadmium, lead, carbon monoxide, dioxins/furans and hydrogen chloride as listed in Condition 3.3.2, unless CEMS are used to demonstrate initial and continuous compliance. If acid gas wet scrubber or dry scrubber is not used, the Permittee must determine compliance with the hydrogen chloride emissions limit using a HCl CEMS according to the requirements in 40 CFR 60.2145(j)(1) or must use a SO2 CEMS as a surrogate monitor for HCl in accordance with Condition 4.2.10.c.

For kilns not equipped with a wet scrubber or dry scrubber, the Permittee must install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions discharged to the atmosphere, as specified in 40 CFR 60.2145(j), and record the output of the system. The Permittee may substitute use of a HCl CEMS for conducting the HCl initial and annual testing with EPA Method 321 at 40 CFR part 63, appendix A. Alternatively, a SO2 CEMS can be used as a surrogate for continuously monitoring HCl emissions in accordance with the requirements of Condition 4.2.10.c.
[40 CFR 60.2165(g), 40 CFR 60.2145(j)]

4.2.17 *Particulate Matter Test and PM CPMS.* The Permittee must determine compliance with particulate matter using CPMS. The Permittee must establish PM CPMS operating limit and determine compliance with it according to paragraphs 40 CFR 60.2110(i)(1) through (5). The Permittee must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs 40 CFR 60.2165(b)(1) through (8).
[40 CFR 60.2165, 40 CFR 60.2110]

4.2.18 *SO2 CEMS.* The Permittee must determine compliance with sulfur dioxide using CEMS. For facilities using a CEMS to demonstrate initial and continuous compliance with the sulfur dioxide emission limit, compliance may be demonstrated by using the CEMS specified in 40 CFR 60.2165(l). The sulfur dioxide CEMS must follow the procedures and methods specified in 40 CFR 60.2145(s).
[40 CFR 60.2145(s)]

4.2.19 *NOx CEMS.* The Permittee must determine compliance with nitrogen oxides using CEMS. The nitrogen oxides CEMS must follow the procedures and methods specified in 40 CFR 60.2145(t)(1) through (4). To demonstrate initial and continuous compliance with the nitrogen oxides emissions limit, a facility may substitute the use of a CEMS for the nitrogen oxides initial and annual performance test.

For units equipped with a nitrogen oxides CEMS, it is not required to monitor the charge rate, secondary chamber temperature, and reagent flow for selective noncatalytic reduction.
[40 CFR 60.2145(j and t), 40 CFR 60.2165(k)]

4.2.20 *Hg CEMS or Sorbent Trap.* Waste-burning kilns must install, calibrate, maintain, and operate a mercury CEMS or an integrated sorbent trap monitoring system as specified in 40 CFR 60.2145(j). For units equipped with a mercury CEMS or an integrated sorbent trap monitoring system, it is not required to monitor the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the mercury emission limit.
[40 CFR 60.2145(u), 40 CFR 60.2165(j)]

4.2.21 *Clinker Production Monitoring.* If the Permittee is required to monitor clinker production in order to comply with the production-rate based mercury limit for the waste-burning kiln, the Permittee must:
[40 CFR 60.2165(t)]

a. Determine hourly clinker production by one of two methods:

i. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ±5 percent accuracy, or

ii. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within ±5 percent accuracy. Calculate the hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. If this ratio changes at clinker reconciliation, the new ratio must be used going forward, but it is not necessary to retroactively change clinker production rates previously estimated.

b. Determine the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before the effective date and during each quarter of source operation.

c. Conduct accuracy checks in accordance with the procedures outlined in the site-specific monitoring plan under 40 CFR 60.2145(l).

4.2.22 *CO CEMS.* To demonstrate initial and continuous compliance with the carbon monoxide emissions limit, the Permittee may substitute use of a CEMS for the carbon monoxide initial and annual performance test:
[40 CFR 60.2165(o)]

a. Install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 4A or 4B of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under 40 CFR 60.13 must be followed for installation, evaluation, and operation of the CEMS; and

b. Compliance with the carbon monoxide emission limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using CEMS outlet data, as outlined in 40 CFR 60.2145(u).

4.2.23 The Permittee must conduct annual performance tests between 11 and 13 months of the previous performance test.
[40 CFR 60.2150]

4.2.24 The Permittee must conduct annual performance tests according to the schedule specified in 40 CFR 60.2150, with the following exceptions:
[40 CFR 60.2155(a)(4)]

a. A repeat performance test may be conducted at any time to establish new values for the operating limits, as specified in 40 CFR 60.2160. New operating limits become effective on the date that the performance test report is submitted to the EPA's Central Data Exchange or postmarked, per the requirements of 40 CFR 60.2235(b). The Administrator may request a repeat performance test at any time;

b. The performance test must be conducted within 60 days of a process change, as defined in 40 CFR 60.2265;

c. Performance tests can be conducted less often if the following conditions are met: performance tests for the pollutant for at least 2 consecutive performance tests demonstrates that the emission level for the pollutant is no greater than the emission level specified in paragraph (a)(3)(i) or (ii) of 40 CFR 60.2155, as applicable; there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions; and the Permittee is not required to conduct a performance test for the pollutant in response to a request by the Administrator in paragraph (a)(1) of 40 CFR 60.2155 or a process change in paragraph (a)(2) of 40 CFR 60.2155. In this case, the Permittee does not have to conduct a performance test for that pollutant for the next 2 years. A performance test must be conducted for the pollutant no more than 37 months following the previous performance test for the pollutant. If the emission level for a CISWI continues to meet the emission level specified in paragraph (a)(3)(i) or (ii) of 40 CFR 60.2155, as applicable, the Permittee may choose to conduct performance tests for the pollutant every third year, as long as there are no changes in the operation of the affected source or air pollution control equipment that could increase emissions. Each such performance test must be conducted no more than 37 months after the previous performance test.

d. For particulate matter, hydrogen chloride, mercury, nitrogen oxides, sulfur dioxide, cadmium, lead and dioxins/furans, the emission level equal to 75 percent of the applicable emission limit in Condition 3.3.2.

e. If there is a need to conduct less frequent testing for a pollutant as provided in paragraph above and a subsequent performance test for the pollutant indicates that the CISWI does not meet the emission level specified in paragraph (a)(3)(i) or (ii) of 40 CFR 60.2155, as applicable, annual performance tests must be conducted for the pollutant according to the schedule specified in paragraph (a) of this section until the Permittee qualify for less frequent testing for the pollutant as specified in paragraph (a)(3) of 40 CFR 60.2155.

40 CFR Part 60, Subpart Y Testing Requirements

4.2.25 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 3.3.4.
[40 CFR 60.255]

40 CFR Part 60, Subpart OOO Testing Requirements

4.2.26 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 performance tests as required below:
[40 CFR 60.675(a), (c)(1) and (e)]

a. Determining compliance with the visible emission standards in Condition 3.3.8a 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.

4.2.27 When determining compliance with the fugitive emissions standard for any affected facility described under 40 CFR 60.672(b) or 40 CFR 60.672(e)(1), the duration of the Method 9 observations must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Condition 3.3.8a for emission units subject to Subpart OOO must be based on the average of the five 6-minute averages.
[40 CFR 60.675(c)(3)]

4.2.28 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 4.2.26 and 4.2.27:
[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.

4.2.29 If, after a 30 day 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 permit, 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/Other Testing Requirements

4.2.30 Before firing any fuel(s) which was not used during any previous Division-approved performance tests and which may adversely affect the emissions of a regulated air pollutant from the in-line kiln/raw mill, the Permittee shall either provide the Division with documentation approved by the Division demonstrating that the fuel(s) in question will not adversely affect emissions of a regulated pollutant or shall conduct a performance test(s) for PM/PM10 and dioxin/furans if operating as a Subpart LLL kiln, or for PM/PM10, dioxin/furans, cadmium and lead if operating as a Subpart CCCC kiln 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. During the Performance Test period, the emission rates of SO2, NOx, CO, THC/VOC, mercury and HCl shall be determined by CEMSs. A testing plan(s) shall be submitted to the Division for approval at least 60 days before the testing.
[40 CFR 52.21 & 391-3-1-.03(2)(c)]

4.2.31 CO_2 CEMS. CO_2 and related gas flow monitoring shall be conducted per 40 CFR 98 for Mandatory GHG Reporting.
[40 CFR 98 Subpart H]

PART 5.0 REQUIREMENTS FOR MONITORING (Related to Data Collection)

5.1 General Monitoring Requirements

5.1.1 Any continuous monitoring system required by the Division and installed by the Permittee shall be in continuous operation and data recorded during all periods of operation of the affected facility except for continuous monitoring system breakdowns and repairs. Monitoring system response, relating only to calibration checks and zero and span adjustments, shall be measured and recorded during such periods. Maintenance or repair shall be conducted in the most expedient manner to minimize the period during which the system is out of service.
[391-3-1-.02(6)(b)1]

5.2 Specific Monitoring Requirements

40 CFR Part 63, Subpart LLL Monitoring Requirements

5.2.1 The Permittee shall develop a written operation and maintenance (OM) plan that describes, in detail, procedures for operating and maintaining the source during periods of startup, shutdown, and malfunction; and a program of corrective action for malfunctioning process, air pollution control, and monitoring equipment used to comply with the relevant standard. The OM plan shall be developed by the source's compliance date as specified in 40 CFR 63.1347. The OM plan for purposes of Subpart LLL compliance will suffice for BACT.

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 52.21-BACT. For sources subject to 40 CFR 63.1347]

a. Procedures for proper operation and maintenance of the affected source and air pollution control devices to meet the emission and operating limits;
b. Corrective actions to be taken when required by the Plan;
c. Procedures to be used during an inspection of the components of the combustion system of the in-line kiln/raw mill at least once per year;
d. Procedures used to comply to periodically monitor the affected sources subject to the opacity standards;
e. Periodic Monitoring for sources subject to the opacity standards shall include that of 40 CFR 63.1350(f)

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.

5.2.2 *Particulate Matter Monitoring and PM CPMS*. The Permittee must monitor PM continuous performance through use of a PM continuous parametric monitoring system (PM CPMS). For the PM CPMS, a site-specific operating limit shall be established from PM testing. The Permittee must repeat the performance test annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

The Permittee must determine operating limits as specified in paragraphs 40 CFR 63.1349(b)(1)(iii) through (iv). If the PM performance test demonstrates PM emission levels to be below 75 percent of the emission limit the average PM CPMS value recorded during the PM compliance test, the milliamp or digital equivalent of zero output from the PM CPMS, and the average PM result of the compliance test will be used to establish a scaled operating limit. If the PM compliance test demonstrates PM emission levels to be at or above 75 percent of the emission limit, the average PM CPMS value recorded during the PM compliance test to establish the operating limit will be used. The Permittee must verify an existing or establish a new operating limit after each repeated performance test. The performance test shall be repeated at least annually and reassess and adjust the site-specific operating limit in accordance with the results of the performance test.

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

30 $kiln\ operating\ day\ parametric\ average = (\sum_{i=1}^{n} Hpv_i)/n$
(Equation 7)

Where:

Hpvi = The hourly parameter value for hour i.

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

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

For any exceedance of the 30 process operating day PM CPMS average value from the established operating parameter limit, the Permittee must:

a. Within 48 hours of the exceedance, visually inspect the APCD;

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

Within 30 days of the exceedance, or at the time of the annual compliance test, whichever comes first, conduct a PM emissions compliance test to determine compliance with the PM emissions limit and to verify or re-establish the PM CPMS operating limit. It is not required to conduct additional testing for any exceedances that occur between the time of the original exceedance and the PM emissions compliance test required under this paragraph.

PM CPMS exceedances leading to more than four required performance tests in a 12-month process operating period (rolling monthly) constitute a presumptive violation of Subpart LLL.

The Permittee must develop an emissions monitoring plan in accordance with 40 CFR 63.1350(p)(1) through (p)(4) for this system.
[40 CFR 63.1348(a)(1), 40 CFR 63.1349(b)(1)]

5.2.3 *Opacity Monitoring.* The Permittee must conduct required opacity monitoring in accordance with the provisions of 40 CFR 63.1350(f)(1)(i) through (vii), if subjected to a limitation on opacity under 40 CFR 63.1345, as stated below, and in accordance with monitoring plan developed under 40 CFR 63.1350(p).
[40 CFR 63.1350(f)]

a. The Permittee must conduct a monthly 10-minute visible emissions test of each affected source except FM01 and FM02 in accordance with Method 22. The performance test must be conducted while the affected source is in operation.

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

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

iii. If visible emissions are observed during any Method 22 performance test, the Permittee must conduct 30 minutes of opacity observations, recorded at 15-second intervals, in accordance with Method 9. The Method 9 performance test must begin within 1 hour of any observation of visible emissions.

iv. Any totally enclosed conveying system transfer point, regardless of the location of the transfer point, is not required to conduct Method 22 visible emissions monitoring under this paragraph. The enclosures for these transfer points must be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

v. If any partially enclosed or unenclosed conveying system transfer point is located in a building, the Permittee must conduct a Method 22 performance test, according to the requirements of paragraphs 40 CFR 63.1350(f)(1)(i) through (iv) for each such conveying system transfer point located within the building, or for the building itself, according to paragraph 40 CFR 63.1350(f)(1)(vii).

vi. If visible emissions from a building are monitored, the requirements of paragraphs 40 CFR 63.1350(f)(1)(i) through (f)(1)(iv) apply to the monitoring of the building. The Permittee must also test visible emissions from each side, roof, and vent of the building for at least 10 minutes.

b. The Permittee must monitor opacity from FM01 and FM02 by conducting daily visible emissions observations of the mill sweep and air separator PM control devices (PMCD) of these affected sources in accordance with the procedures of Method 22. The duration of the Method 22 performance test must be 6 minutes.

i. Within 24 hours of the end of the Method 22 performance test in which visible emissions were observed, the Permittee must conduct a follow up Method 22 performance test of each stack from which visible emissions were observed during the previous Method 22 performance test.

ii. If visible emissions are observed during the follow-up Method 22 performance test required by paragraph 40 CFR 63.1350 (f)(2)(ii) from any stack from which visible emissions were observed during the previous Method 22 performance test required by paragraph 40 CFR 63.1350(f)(2)(i), the Permittee must then conduct an opacity test of each stack from which emissions were observed during the follow up Method 22 performance test in accordance with Method 9. The duration of the Method 9 test must be 30 minutes.

iii. If visible emissions are observed during any Method 22 visible emissions test conducted under paragraphs 40 CFR 63.1350(f)(1) or (2), the Permittee must initiate, within one-hour, the corrective actions specified in the operation and maintenance plan as required in 40 CFR 63.1347.

iv. The requirements under paragraph 40 CFR 63.1350 (f)(2) to conduct daily Method 22 testing do not apply to any finish mill equipped with a COMS or bag leak detection system (BLDS).

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

d. The Permittee may install a BLDS in lieu of conducting the daily visible emissions testing required under paragraph 40 CFR 63.1350(f)(2), and if so, the requirements in paragraphs 40 CFR 63.1350 (m)(1) through (m)(4), (m)(10) and (m)(11) apply.

An opacity monitoring plan shall be developed in accordance with paragraphs 40 CFR 63.1350(p)(1) through (4).

5.2.4 *D/F Emissions Temperature Monitoring.* The Permittee must operate the kiln's D/F Emissions Temperature Monitoring such that the temperature of the gas at the inlet to the kiln PM control device (PMCD) (i.e., stack 4E1.SK01, baghouse) does not exceed the applicable temperature limit.

The Permittee must operate the in-line kiln/raw mill, such that:
[40 CFR 63.1346(b), 40 CFR 63.1348(a)(3), 40 CFR 63.1349(b)(3), 40 CFR 63.1350(g)]

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

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

(1) The Permittee must install, calibrate, maintain, and continuously operate a CMS to record the temperature of the exhaust gases from the kiln at the inlet to, or upstream of, the kiln PMCD.

i. The temperature recorder response range must include zero and 1.5 times the average temperature limit established according to the requirements in 40 CFR 63.1349(b)(3)(iv).

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

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

(2) The Permittee must monitor and continuously record the temperature of the exhaust gases from the kiln at the inlet to the kiln PMCD.

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

(4) Every hour, record the calculated rolling three-hour average temperature using the average of 180 successive one-minute average temperatures. See 40 CFR 63.1349(b)(3).

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

An emissions monitoring plan shall be developed in accordance with 40 CFR 63.1350(p)(1) through (p)(4) for this temperature system.

5.2.5 *THC CEMS Monitoring.* The Permittee must operate a THC CEMS in accordance with the requirements in 40 CFR 63.1350(i). For the purposes of conducting the accuracy and quality assurance evaluations for CEMS, the THC span value (as propane) is 50 to 60 ppmvw and the reference method (RM) is Method 25A of appendix A to part 60 of this chapter. Use the THC CEMS to conduct the initial compliance test for the first 30 kiln operating days of kiln operation. See 40 CFR63.1348(a). If the THC level exceeds by 10 percent or more of the site-specific THC emissions limit, the Permittee must;

a. As soon as possible but no later than 30 days after the exceedance, conduct an inspection and take corrective action to return the THC CEMS measurements to within the established value; and

b. Within 90 days of the exceedance, or at the time of the 30 month compliance test, whichever comes first, conduct another performance test to demonstrate compliance with the THC emission limit, or conduct a performance test to demonstrate compliance with the organic HAP limit and to verify or re-establish the site-specific THC emissions limit.

An emissions monitoring plan shall be developed in accordance with 40 CFR 63.1350(p)(1) through (p)(4) for this system.
[40 CFR 63.1348(a)(4), 40 CFR 63.1349(b)(4)]

5.2.6 *Total Organic HAP Monitoring.* To comply with Total Organic HAP monitoring requirements, the Permittee may demonstrate compliance with the total organic HAP emissions limit under 40 CFR 63.1343(b) in lieu of the THC emissions limit, by demonstrating compliance with the total organic HAP emissions standards using the performance test method, procedures, and monitoring in 40 CFR 63.1349(b)(7), to develop a site-specific THC limit.

An emissions monitoring plan shall be developed in accordance with 40 CFR 63.1350(p)(1) through (p)(4) for this system.
[40 CFR 63.1348(a)(4), 40 CFR 63.1349(b)(4)]

5.2.7 *Total Mercury CEMS or Sorbent Trap Monitoring.* The Permittee must demonstrate compliance by operating a mercury CEMS or a sorbent trap based CEMS. Compliance with the mercury emissions standard must be determined based on the first 30 operating days of operating a mercury CEMS or sorbent trap monitoring system. The Permittee must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the exhaust gas flow rate to the atmosphere according to the requirements in 40 CFR 63.1350(k)(1) through (5). Calculate the Hg emission rate using Equation 10 of 40 CFR 63.1349(b)(5).
[40 CFR 63.1348(a)(5), 40 CFR 63.1349(b)(5)]

a. The Permittee must use a span value for any Hg CEMS that represents the mercury concentration corresponding to approximately two times the emissions standard and may be rounded up to the nearest multiple of 5 $\mu g/m^3$ of total mercury or higher level if necessary to include Hg concentrations which may occur (excluding concentrations during in-line raw "mill off" operation). As specified in 40 CFR 60 Appendix B Performance Specification (PS) 12A, Section 6.1.1, the data recorder output range must include the full range of expected Hg concentration values which would include those expected during "mill off" conditions. Engineering judgments made and calculations used to determine the corresponding span concentration from the emission standard shall be documented in the site-specific monitoring plan and associated records.

b. In order to quality assure data measured above the span value, the Permittee must use one of the four options in paragraphs 40 CFR 63.1350(k)(2)(i) through (iv).

An emissions monitoring plan shall be developed in accordance with 40 CFR 63.1350(p)(1) through (p)(4) for this system.

5.2.8 *HCl emissions Monitoring.* The Permittee must operate a HCl CEMS in accordance with the requirements of 40 CFR 63.1350(l)(1). See 40 CFR 63.1348(a). If the kiln is not controlled by a wet scrubber, tray tower or dry sorbent injection system, hourly HCl concentration data must be obtained according to 40 CFR 63.1350(l).
[40 CFR 63.1350(l)]

a. If compliance with the HCl emissions limit is monitored by operating an HCl CEMS, it must do so in accordance with Performance Specification (PS) 15 or PS 18 of appendix B to part 60. The Permittee must operate, maintain, and quality assure a HCl CEMS installed and certified under PS 15 according to the quality assurance requirements in Procedure 1 of appendix F to part 60 of this chapter except that the Relative Accuracy Test Audit requirements of Procedure 1 must be replaced with the validation requirements and criteria of sections 11.1.1 and 12.0 of PS 15. If an HCl CEMS is installed and operated in accordance with PS 18, the Permittee must operate, maintain, and quality assure the HCl CEMS using the associated Procedure 6 of appendix F to part 60 of this chapter. For any performance specification used, the Permittee must use Method 321 of appendix A to this part as the reference test method for conducting relative accuracy testing. The span value and calibration requirements in paragraphs 40 CFR 63.1350(l)(1)(i) and (ii) apply to HCl CEMS other than those installed and certified under PS 15 or PS 18.

b. The Permittee must use a measurement span value for any HCl CEMS of 0-10 ppmvw. The HCl CEMS data recorder output range must include the full range of expected HCl concentration values which would include those expected during "mill off" conditions. The corresponding data recorder range shall be documented in the site-specific monitoring plan and associated records.

c. In order to quality assure data measured above the span value, one of the three options in paragraphs 40 CFR 63.1350(l)(1)(ii)(A) through (C) must be used.

An emissions monitoring plan shall be developed in accordance with 40 CFR 63.1350(p)(1) through (p)(4) for this system.

5.2.9 *HCl emissions Monitoring.* The Permittee must conduct performance testing by one of the following methods listed in Condition 4.2.10 if a surrogate for HCl monitoring is used. [40 CFR 63.1348(a)(6), 40 CFR 63.1349(b)(8)]

a. If the kiln is equipped with a wet scrubber, tray tower or dry scrubber, the Permittee must conduct performance testing using Method 321 unless a CEMS was installed that meets the requirements 40 CFR 63.1350(l)(1). Testing must be conducted for the raw mill on and raw mill off conditions. The Permittee must establish site specific parameter limits by using the CPMS required in 40 CFR 63.1350(l)(1). For a dry scrubber, measure and record the sorbent injection rate in intervals of no more than 15 minutes during the HCl test. Compute and record the 24-hour average sorbent injection rate and average sorbent injection rate for each sampling run.

b. If the kiln is not controlled by a wet scrubber, tray tower or dry sorbent injection system, a CEMS must be operated in accordance with the requirements of 40 CFR 63.1350(l)(1). See 40 CFR 63.1348(a). The initial compliance test must be based on the 30 kiln operating days that occur after the compliance date of this rule in which the

affected source operates using an HCl CEMS. Hourly HCl concentration data must be obtained according to 40 CFR 63.1350(l).

c. As an alternative, SO_2 CEMS may act as surrogate for HCl monitoring. SO_2 emissions may be monitored using a CEMS in accordance with the requirements of 40 CFR 63.1350(l)(3). The Permittee must establish an SO_2 operating limit equal to the average recorded during the HCl performance test where the HCl performance test result demonstrates compliance with the emission limit. This operating limit will apply only for demonstrating HCl compliance. If SO_2 emissions are monitored using a CEMS to demonstrate HCl compliance, follow the procedures in 40 CFR 63.1349(b)(8)(i) through (ix) and in accordance with the requirements of 40 CFR 63.1350(l)(3). An SO_2 operating limit equal to the average recorded during the HCl stack test must be established.

Use EPA Method 321 of appendix A to part 60 to determine HCl emissions. For each performance test, conduct at least three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur. If the source has an in-line kiln/raw mill, three separate test runs must be conducted with the raw mill on, and three separate runs under the conditions that exist when the affected source is operating at the level reasonably expected to occur with the mill off.

If the SO_2 level exceeds by 10 percent or more over the site-specific SO_2 emissions limit, the Permittee must:

i. As soon as possible but no later than 30 days after the exceedance, conduct an inspection and take corrective action to return the SO_2 CEMS measurements to within the established value;

ii. Within 90 days of the exceedance or at the time of the periodic compliance test, whichever comes first, conduct another performance test to determine compliance with the HCl limit and to verify or re-establish the site-specific SO_2 emissions limit.

An emissions monitoring plan must be developed in accordance with 40 CFR 63.1350(p)(1) through (p)(4) for this system if a surrogate HCl system is used.

5.2.10 *Clinker Production Monitoring.* The Permittee must determine clinker production by monitoring as follow:
[40 CFR 1350(d)]

a. Determine hourly clinker production by one of two methods:

i. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ±5 percent accuracy, or

ii. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within ±5 percent accuracy. Calculate the hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. Note that if this ratio changes at clinker reconciliation, the new ratio must be used going forward, but it is not necessary to retroactively change clinker production rates previously estimated.

b. Determine, record, and maintain a record of the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before initial use (for new sources) or by the effective compliance date of this rule (for existing sources). During each quarter of source operation, the Permittee must determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow).

c. If clinker production is measured directly, record the daily clinker production rates; if the kiln feed rates and calculate clinker production is measured, record the hourly kiln feed and clinker production rates.

5.2.11 The Permittee must install, operate, calibrate, and maintain instruments, according to the requirements in 40 CFR 63.1530(n)(1) through (10), for continuously measuring and recording the stack gas flow rate to allow determination of the pollutant mass emissions rate to the atmosphere from sources subject to an emissions limitation that has a pounds per ton of clinker unit and that is required to be monitored by a CEMS.

An emissions monitoring plan must be developed in accordance with 40 CFR 63.1350(p)(1) through (p)(4) for this system.
[40 CFR 63.1350(n)]

<u>40 CFR Part 60, Subpart CCCC Monitoring Requirements</u>

5.2.12 All monitoring systems necessary for compliance with any newly applicable monitoring requirements which apply as a result of the cessation or commencement or recommencement of combusting solid waste must be installed and operational as of the effective date of the waste-to-fuel, or fuel-to-waste switch. All calibration and drift checks must be performed as of the effective date of the waste-to-fuel, or fuel-to-waste switch.
[40 CFR 60.2145(a)(6)]

5.2.13 The Permittee must continuously monitor the operating parameters specified in Condition 3.3.2 (PM CPMS) where the averaging time for each operating parameter is a 30-day rolling, calculated each hour as the average of the previous 720 operating hours. Operation above the established operating limit constitutes a deviation from the operating limits, except during performance tests conducted to determine compliance with the emission and operating limits or to establish new operating limits. Operating limits are confirmed or reestablished during performance tests.
[40 CFR 2145(c)]

5.2.14 For each continuous monitoring system required or optionally allowed under 40 CFR 60.2165, data must be collected according to this section:
[40 CFR 60.2170]

a. The Permittee must operate the monitoring system and collect data at all required intervals at all times compliance is required except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods (as specified in 40 CFR 60.2210(o)), and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments). A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. The Permittee is required to effect monitoring system repairs in response to monitoring system malfunctions or out-of-control periods and to return the monitoring system to operation as expeditiously as practicable;

b. The Permittee may not use data recorded during monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. All the data collected during all other periods, including data normalized for above scale readings, must be used in assessing the operation of the control device and associated control system; and

c. Except for periods of monitoring system malfunctions or out-of-control periods, repairs associated with monitoring system malfunctions or out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation of the monitoring requirements.

5.2.15 *Particulate Matter Monitoring and PM CPMS.* The Permittee must determine compliance with particulate matter using CPMS. The PM CPMS operating limit and compliance determination must be established in accordance with paragraphs 40 CFR 60.2110(i)(1) through (5). The Permittee must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs 40 CFR 60.2165(1) through (8).

For waste-burning kilns, the Permittee must install, calibrate, maintain, and operate a PM CPMS and record the output of the system as specified in paragraphs (x)(1) through (8) of 40 CFR 60.2145(x). PM CPMS are suitable in lieu of using other CMS for monitoring PM compliance (*e.g.*, bag leak detectors, PM scrubber pressure).
[40 CFR 60.2145(x), 40 CFR 60.2165I, 40 CFR 60.2110]

5.2.16 *HCl Emissions Monitoring.* The Permittee must install, calibrate, maintain, and operate a CEMS for monitoring hydrogen chloride emissions discharged to the atmosphere, as specified in 40 CFR 60.2145(j), and record the output of the system. The Permittee may substitute use of a HCl CEMS for conducting the HCl initial and annual testing with EPA Method 321 at 40 CFR part 63, appendix A.
[40 CFR 60.2165(g), 40 CFR 60.2145(j)]

5.2.17 *SO2 Emissions Monitoring.* The Permittee must determine compliance with sulfur dioxide using CEMS. For facilities using a CEMS to demonstrate initial and continuous compliance with the sulfur dioxide emission limit, compliance with the sulfur dioxide emission limit may be demonstrated by using the CEMS specified in 40 CFR 60.2165(l) to measure sulfur dioxide. The sulfur dioxide CEMS must follow the procedures and methods specified in 40 CFR 60.2145(s).
[40 CFR 60.2145(s)]

5.2.18 *NOx Emissions Monitoring.* The Permittee must use CEMS to demonstrate initial and continuous compliance with the nitrogen oxides emission limit. Compliance with the nitrogen oxides emission limit may be demonstrated by using the CEMS specified in 40 CFR 60.2165 to measure nitrogen oxides. The nitrogen oxides CEMS must follow the procedures and methods specified in 40 CFR 60.2145(t)(1) through (4). To demonstrate initial and continuous compliance with the nitrogen oxides emissions limit, a facility may substitute use of a CEMS for the nitrogen oxides initial and annual performance test to demonstrate compliance with the nitrogen oxides emissions limits.

For units equipped with a nitrogen oxides CEMS, the Permittee is not required to monitor the charge rate, secondary chamber temperature, and reagent flow for selective noncatalytic reduction,
[40 CFR 60.2145(j and t), 40 CFR 60.2165(k)]

5.2.19 *CO Emissions Monitoring.* To demonstrate initial and continuous compliance with the carbon monoxide emissions limit, the Permittee may substitute use of a CEMS for the carbon monoxide initial and annual performance test. If determining compliance using CO CEMS:
[40 CFR 60.2165(o)]

a. Install, calibrate, maintain, and operate a CEMS for measuring carbon monoxide emissions discharged to the atmosphere and record the output of the system. The requirements under performance specification 4A or 4B of appendix B of this part, the quality assurance procedure 1 of appendix F of this part and the procedures under 40 CFR 60.13 must be followed for installation, evaluation, and operation of the CEMS; and

b. Compliance with the carbon monoxide emission limit shall be determined based on the 30-day rolling average of the hourly arithmetic average emission concentrations, including CEMS data during startup and shutdown as defined in this subpart, using CEMS outlet data, as outlined in 40 CFR 60.2145(u).

5.2.20 *Hg CEMS or Sorbent Trap Monitoring.* Waste-burning kilns must install, calibrate, maintain, and operate a mercury CEMS or an integrated sorbent trap monitoring system as specified in 40 CFR 60.2145(j). For units equipped with a mercury CEMS or an integrated sorbent trap monitoring system, the Permittee is not required to monitor the minimum sorbent flow rate, if activated carbon sorbent injection is used solely for compliance with the mercury emission limit.

The Permittee must operate a mercury CEMS system in accordance with performance specification 12A of 40 CFR part 60, appendix B or an integrated sorbent trap monitoring system in accordance with performance specification 12B of 40 CFR part 60, appendix B; these monitoring systems must be quality assured according to procedure 5 of 40 CFR 60, appendix F. For the purposes of emissions calculations when using an integrated sorbent trap monitoring system, the mercury concentration determined for each sampling period must be assigned to each hour during the sampling period.

If the Permittee chooses to comply with the production-rate based mercury limit for the waste-burning kiln, hourly clinker production shall be monitored and the hourly mercury emissions rate in pounds per million ton of clinker produced shall be determined. Compliance with the mercury emissions limit must be demonstrated using a 30-day rolling average of these 1-hour mercury concentrations or mass emissions rates, including CEMS and integrated sorbent trap monitoring system data during startup and shutdown as defined in Subpart CCCC, calculated using equation 19-19 in section 12.4.1 of EPA Reference Method 19 at 40 CFR part 60, appendix A-7. Integrated sorbent trap monitoring system and CEMS data during startup and shutdown, as defined in Subpart CCCC, are not corrected to 7 percent oxygen, and are measured at stack oxygen content.
[40 CFR 60.2145(j)(2), 40 CFR 60.2145(u), 40 CFR 60.2165(j)]

5.2.21 *Hg CEMS or Sorbent Trap Monitoring.* If the Permittee is required to monitor clinker production because of compliance with the production-rate based mercury limit for a waste-burning kiln per 40 CFR 60.2165(t), the Permittee using a mercury CEMS or integrated sorbent trap monitoring system to determine mass emission rate must install, operate, calibrate, and maintain an instrument for continuously measuring and recording the mercury mass emissions rate to the atmosphere according to the requirements of performance specification 6 of 40 CFR part 60, appendix B, and conducting an annual relative accuracy test of the continuous emission rate monitoring system according to section 8.2 of performance specification 6.
[40 CFR 60.2145(j)(2), 40 CFR 60.2165(t)]

5.2.22 *Stack Gas Flow Monitoring.* If there is an operating limit that requires the use of a stack gas flow monitoring system, the Permittee must meet the requirements in paragraphs 40 CFR 60.1245(l) and (m)(1) through (4) as follows:

[40 CFR 60.2145]

a. Install the flow sensor and other necessary equipment in a position that provides a representative flow;

b. Use a flow sensor with a measurement sensitivity at full scale of no greater than 2 percent;

c. Minimize the effects of swirling flow or abnormal velocity distributions due to upstream and downstream disturbances; and

d. Conduct a flow monitoring system performance evaluation in accordance with the monitoring plan at the time of each performance test but no less frequently than annually.

5.2.23 *Clinker Production Monitoring.* If clinker production monitoring is required because of compliance with the production-rate based mercury limit for the waste-burning kiln, the Permittee must:
[40 CFR 60.2165(t)]

a. Determine hourly clinker production by one of two methods:

i. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of clinker produced. The system of measuring hourly clinker production must be maintained within ±5 percent accuracy, or

ii. Install, calibrate, maintain, and operate a permanent weigh scale system to measure and record weight rates in tons-mass per hour of the amount of feed to the kiln. The system of measuring feed must be maintained within ±5 percent accuracy. Calculate the hourly clinker production rate using a kiln-specific feed to clinker ratio based on reconciled clinker production determined for accounting purposes and recorded feed rates. Update this ratio monthly. Note that if this ratio changes at clinker reconciliation, the new ratio must be used going forward, but it is not necessary to retroactively change clinker production rates previously estimated.

b. Determine the accuracy of the system of measuring hourly clinker production (or feed mass flow if applicable) before the *effective date* and during each quarter of source operation.

c. Conduct accuracy checks in accordance with the procedures outlined in the site-specific monitoring plan under 40 CFR 60.2145(l).

5.2.24 If an air pollution control device was used to meet the emission limitations in this subpart, the Permittee must conduct an initial and annual inspection of the air pollution control device.
[40 CFR 60.2145(k)]

a. For each continuous monitoring system required by Subpart CCCC, the Permittee must develop and submit to the Division for approval a site-specific monitoring plan according to the requirements of 40 CFR 60.2145(l)(1)-(3).
[40 CFR 60.2145(l), 40 CFR 60.2165]

40 CFR Part 60, Subpart OOO Monitoring Requirements

5.2.25 The Permittee of any affected facility for which construction, modification, or reconstruction commenced on or after April 22, 2008, that uses wet suppression to control emissions from the affected facility must perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The Permittee must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the Permittee finds that water is not flowing properly during an inspection of the water spray nozzles. The Permittee must record each inspection of the water spray nozzles, including the date of each inspection and any corrective actions taken, in the logbook required under 40 CFR 60.676(b).
[40 CFR 60.674(b)]

a. If an affected facility relies on water carryover from upstream water sprays to control fugitive emissions, then that affected facility is exempt from the 5-year repeat testing requirement specified in Table 3 of this subpart provided that the affected facility meets the criteria in paragraphs (1) and (2):

i. The Permittee of the affected facility conducts periodic inspections of the upstream water spray(s) that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to paragraph 40 CFR 60.674(b) and 40 CFR 60.676(b), and

ii. The Permittee of the affected facility designates which upstream water spray(s) will be periodically inspected at the time of the initial performance test required under 40 CFR 60.11 of this part and 40 CFR 60.675 of this subpart.

b. If an affected facility that routinely uses wet suppression water sprays ceases operation of the water sprays or is using a control mechanism to reduce fugitive emissions other than water sprays during the monthly inspection (for example, water from recent rainfall), the logbook entry required under 40 CFR 60.676(b) must specify the control mechanism being used instead of the water sprays.

40 CFR Part 60, Subpart Y Monitoring Requirements

5.2.26 The Permittee that has one or more *mechanical vents* must install, calibrate, maintain, and continuously operate the monitoring devices specified in paragraphs (b)(1) through (3) of this section, as applicable to the mechanical vent and any control device installed on the vent. [40 CFR 60.256]

a. For mechanical vents with fabric filters (baghouses) with design controlled potential PM emissions rates of 25 Mg (28 tons) per year or more, a bag leak detection system according to the requirements of 40 CFR 60.256(c).

The Permittee must develop and submit to the Administrator or delegated authority for approval a site-specific monitoring plan for each bag leak detection system per 40 CFR 60.256(c)(2).

40 CFR Part 60, Subpart IIII Monitoring Requirements

5.2.27 The emergency stationary diesel generator/engine 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 of each generator and engine and the reason the generator or engine was in operation during that time. [40 CFR 60.4209I, 60.4214(b)]

PSD/BACT and SIP Monitoring Requirements

5.2.28 The Permittee shall perform a check of visible emissions from all baghouses (including process baghouses) controlling emissions from sources listed in Section 3.1 of this permit, and from sources added or replaced in accordance with this permit and Rule 391-3-1-.03. Emission units monitored using COMS are exempt from this condition. Baghouses controlling emissions from silos with dedicated bin vents, wet screening operations, bucket elevators, screw conveyors, bagging operations, and pneumatic conveyors are exempt from this condition. The Permittee shall retain a record in a daily visible emissions (VE) log suitable for inspection or submittal. The check shall be conducted at least once for each day or portion of each day of operation using procedures a. through d. below, except when atmospheric conditions or sun positioning prevents any opportunity to perform the daily VE check. Any operational day when atmospheric conditions or sun position prevents a daily reading shall be reported as monitor downtime in the report required by Condition 6.1.4. The Permittee shall schedule a daily VE check only when an emission unit is in operation. [391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

a. Determine, in accordance with the procedures specified in paragraph d. of this condition, if visible emissions are present at the discharge point to the atmosphere from each of the sources and record the results in the daily VE log. For sources that exhibit visible emissions, the Permittee shall comply with paragraph b. or c. of this condition.

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 5 percent. 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 paragraphs a. or b. of this condition, 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, any other pertinent operating parameters, and the corrective action taken 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/her back. Consistent 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 at any time when multiple stacks are in proximity to each other.

5.2.29 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 for which no air pollution control device (APCD) is utilized. Boilers, wet processes and stationary engines, and emission units monitored with COMS are exempt from this condition. The inspection shall be conducted by performing a walkthrough of the facility and noting the occurrence of the following in a daily (VE) log:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)]

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.

5.2.30 The Permittee shall implement a Preventive Maintenance Program for the baghouses. All QA/QC practices and criteria shall be stated in the Preventive Maintenance Program. 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:
[391-3-1-.02(6)(b)1 and 40 CFR 70.6(a)(3)(i)] [Vault OT-058-MO, 10/12]

a. Record the pressure drop across each baghouse and ensure that it is within the appropriate range.

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 with 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, mountings; proper operation of outlet/isolation valves; proper lubrication.

e. Check dust collector hoppers and conveying systems for proper operation.

5.2.31 The Permittee shall install, calibrate, maintain, and operate CEMS to continuously monitor and record the indicated BACT pollutants discharged from the in-line 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 CEM 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 CEM emission standard over a specified averaging period. BACT pollutant monitoring requirements shall comply with 40 CFR 60.13.

a. **CO**: 2.9 lb/ton clinker - *30 kiln-operating day average*. The CO CEM 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**: 1.5 lb/ton clinker (2.5 lb/ton of clinker during initial kiln startup period) - *30 kiln-operating day average*. The NO_x CEM 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 7 or 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**: 0.4 lb/ton clinker - *30 kiln-operating day average*. The SO_2 CEM 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 6 or 6C in Appendix A of 40 CFR 60. Quality assurance procedures shall conform to the requirements of Appendix F in 40 CFR 60.

d. **VOC**: 0.15 lb/ton clinker - *30 kiln-operating day average*. The THC CEM shall meet the requirements of Performance Specification 8A in Appendix F of 40 CFR 60. The permittee may operate a methane/non-methane CEMS to determine the VOC emissions. The Permittee can demonstrate by annual Method 25A test that a fraction of THC is methane instead of operating methane/non-methane CEMS.

e. **CO_2**: 0.95 ton/ton clinker - *annual average*. The CO_2 CEM shall meet the requirements of Performance Specification 3 in Appendix B of 40 CFR 60. The required RATA tests shall be performed using EPA Method 3A in Appendix A of 40 CFR 60. Quality assurance procedures shall conform to the requirements of Appendix F in 40 CFR 60.

The Permittee shall perform quarterly accuracy determinations and daily calibration drift tests on all BACT-required CEM, including the oxygen and flow CMS, according to Procedure 1 in Appendix F of 40 CFR Part 60.

5.2.32 The Permittee shall operate a CO_2 CEMS as specified in 40 CFR 98.83 to report GHG emissions. The quantity of clinker must be monitored for purposes of GHG emissions per 40 CFR 98.84(d). Therefore, whenever a quality-assured value of a required parameter is unavailable, a substitute data value for the missing parameter shall be used in the calculations. The Permittee must document and keep records of the procedures used for all such estimates. If the CEMS approach is used to determine combined process and combustion CO_2 emissions, the missing data procedures in 40 CFR 98.35 apply. For each missing value of monthly clinker production the substitute data value must be the best available estimate of the monthly clinker production based on information used for accounting purposes, or use the maximum tons per day capacity of the system and the number of days per month.
[40 CFR 52.21-BACT, 40 CFR 98.83, 40 CFR 98.84, 40 CFR 98.85]

PART 6.0 RECORD KEEPING AND REPORTING REQUIREMENTS

6.1 General Record Keeping and Reporting Requirements

6.1.1 Unless otherwise specified, all records required to be maintained by this Permit shall be recorded in a permanent form suitable for inspection and submission to the Division and to the EPA. The records shall be retained for at least five (5) years following the date of entry. [391-3-1-.02(6)(b)1(i)]

6.1.2 In addition to any other reporting requirements of this Permit, the Permittee shall report to the Division in writing, within seven (7) days, any deviations from applicable requirements associated with any malfunction or breakdown of process, fuel burning, or emissions control equipment for a period of four hours or more which results in excessive emissions.

The Permittee shall submit a written report that shall contain the probable cause of the deviation(s), duration of the deviation(s), and any corrective actions or preventive measures taken.
[391-3-1-.02(6)(b)1(iv)]

6.1.3 The Permittee shall submit written reports of any failure to meet an applicable emission limitation or standard contained in this permit and/or any failure to comply with or complete a work practice standard or requirement contained in this permit which are not otherwise reported in accordance with Conditions 6.1.4 or 6.1.2. Such failures shall be determined through observation, data from any monitoring protocol, or by any other monitoring which is required by this permit. The reports shall cover each quarterly period ending March 31, June 30, September 30, and December 31 of each year, shall be postmarked by April 30, July 30, October 30, and January 30, respectively following each reporting period, and shall contain the probable cause of the failure(s), duration of the failure(s), and any corrective actions or preventive measures taken.
[391-3-1-.03(10)(d)1.(i)]

6.1.4 The Permittee shall submit a written report containing any excess emissions, exceedances, and/or excursions as described in this permit and any monitor malfunctions for each quarterly period ending March 31, June 30, September 30, and December 31 of each year. All reports shall be postmarked by the 30th day following the end of each reporting period, April 30, July 30, October 30, and January 30, respectively. In the event that there have not been any excess emissions, exceedances, excursions or malfunctions during a reporting period, the report should so state. Otherwise, the contents of each report shall be as specified by the Division's *Procedures for Testing and Monitoring Sources of Air Pollutants* and shall contain the following:
[391-3-1-.02(6)(b)1]

a. A summary report of excess emissions, exceedances and excursions, and monitor downtime, in accordance with Section 1.5(c) and (d) of the above referenced document, including any failure to follow required work practice procedures.

b. Total process operating time during each reporting period.

c. The magnitude of all excess emissions, exceedances and excursions computed in accordance with the applicable definitions as determined by the Director, and any conversion factors used, and the date and time of the commencement and completion of each time period of occurrence.

d. Specific identification of each period of such excess emissions, exceedances, and excursions that occur during startups, shutdowns, or malfunctions of the affected facility. Include the nature and cause of any malfunction (if known), the corrective action taken or preventive measures adopted.

e. The date and time identifying each period during which any required monitoring system or device was inoperative (including periods of malfunction) except for zero and span checks, and the nature of the repairs, adjustments, or replacement. When the monitoring system or device has not been inoperative, repaired, or adjusted, such information shall be stated in the report.

f. Certification by a Responsible Official that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

6.1.5 Where applicable, the Permittee shall keep the following records:
[391-3-1-.02(6)(b), NSPS, MACT, and BACT/NSR]

a. The date, place, and time of sampling or measurement;

b. The date(s) analyses were performed;

c. The company or entity that performed the analyses;

d. The analytical techniques or methods used;

e. The results of such analyses; and

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

6.1.6 The Permittee shall maintain files of all required measurements, including continuous monitoring systems, monitoring devices, and performance testing measurements; all continuous monitoring system or monitoring device calibration checks; and adjustments and maintenance performed on these systems or devices. These files shall be kept in a permanent form suitable for inspection and shall be maintained for a period of at least five (5) years following the date of such measurements, reports, maintenance and records.
[391-3-1-.02(6)(b), NSPS, MACT, and BACT/NSR]

6.1.7 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]

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)

None Applicable.

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 time the production rate of the kiln exceeds 140 tons per hour of clinker (30-kiln operating day rolling average), or 1,100,000 tons of clinker during any consecutive 12-month period.

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

Pollutant	**Tons**
Sulfur dioxide	220
Nitrogen oxides	825
Carbon monoxide (CO)	1595.0
Volatile organic compounds (VOC)	80
Particulate matter (PM)	76.6
Particulate matter less than 10 microns (PM_{10})	76.6
Particulate matter less than 2.5 microns ($PM_{2.5}$)	18.5
Greenhouse Gases (GHGs) (in CO_2e)	1,045,000

iii. Firing of fuel(s) other than those authorized by Conditions 3.2.5 and 3.2.7 in the in-line kiln/raw mill or the air heater.

iv. Firing of fuel(s) prohibited by Condition 3.2.8.

v. Each exceedance of any of the process-specific BACT emission standards in Conditions 3.3.1 and 3.3.2.

vi. Each exceedance of visible emission limit of 20% opacity in Condition 3.3.4 for any coal processing and conveying equipment, coal storage system, or coal transfer and loading system.

vii. Each exceedance of the 10% opacity limit in Condition 3.3.7 for each raw material, clinker, or finished product storage bin, conveying system transfer

point; bagging system, bulk loading or unloading system, raw and finish mills, and raw material dryer.

viii. For Kiln 4K1.KC01: Each exceedance of the particulate matter, mercury, dioxins and furans, total hydrocarbon (THC) and Hydrogen chloride (HCl) limits in Condition 3.3.5a.

ix. For Clinker cooler 4R1.PQ01: Each exceedance of the particulate matter limit in Condition 3.3.5b.

x. Each exceedance of the opacity and THC limit in Condition 3.3.5c for each raw or finish mill.

xi. Any instance of firing any of the stationary emergency diesel engines subject to Condition 3.3.10 with diesel fuel that contains more than 0.0015% sulfur (15 ppm) by weight; contains either more than 35% by volume of aromatic content or has a cetane index of less than 40.

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. Any failure to comply with any provision of the Operational and Maintenance Plan developed in accordance with Condition 5.2.1.

ii. Any failure to comply with any of the applicable monitoring provisions required for 40 CFR 63, Subpart LLL in Conditions 5.2.2 through 5.2.11.

iii. Any failure to comply with any of the applicable monitoring provisions required for 40 CFR 60, Subpart CCCC in Conditions 5.2.12 through 5.2.24.

iv. For the Baghouses specified in Condition 5.2.28, any two consecutive required daily determinations of visible emissions that require action in accordance with 5.2.28(a) or 5.2.28(b).

v. Any instance in which the visual inspection of VE required by Condition 5.2.28 was not performed.

vi. Any visible emissions, mechanical failure, or malfunction discovered during the walk through described in Condition 5.2.29 that are not eliminated or corrected with 24 hours of first discovering the visible emissions, mechanical failure, or malfunction.

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

6.2 Specific Record Keeping and Reporting Requirements

PSD/BACT & SIP Record Keeping and Reporting Requirements

6.2.1 GHG Emissions Reporting - In addition to the information required by 40 CFR 98.3(c), each annual report must contain the information specified below. If a CEMS is used to measure CO_2 emissions, the Permittee must report the relevant information required by 40 CFR 98.36(e)(2)(vi) and the following information:
[40 CFR 98.86, 40 CFR 52.21-BACT]

a. Monthly clinker production from each kiln at the facility.
b. Annual facility clinker and cement production.
c. Number of kilns and number of operating kilns.
d. Monthly CO_2 emission (ton CO_2/ton clinker)
e. Annual CO_2 emission (ton CO_2/ton clinker)

6.2.2 The Permittee shall include the following information in the quarterly report required in Condition 6.1.4:

a. The 30 kiln-operating day total of CO, NO_x, SO_2, VOC, and CO2 emissions (in tons/metric tons) for each working day during the reporting period.

b. The 12-month rolling total of CO, NO_x, SO_2, THC/VOC, and CO2 emissions (in tons/metric tons) for each period of 12-consecutive months during the reporting period.

c. The 30 kiln-operating day total output of clinker from the kiln (in tons), and 12-month rolling total output of clinker from the kiln (in tons) for each period of 12-consecutive months during the reporting period.

6.2.3 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 during the reporting period. The report shall contain:
[391-3-1-.02(6)(b)1]

a. Calendar dates in the report period.

b. The used oil and/or 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 3.2.5.

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

40 CFR Part 63, Subpart LLL Record Keeping and Reporting Requirements

6.2.4 The Permittee shall comply with all the applicable notification provisions under 40 CFR Part 63, Subpart A, as listed in Table 1 of 40 CFR Part 63, Subpart LLL.
[40 CFR 63.1353(a)]

6.2.5 The Permittee must submit the following notices:
[40 CFR 63.9, 40 CFR 63.1353]

a. Notification of any 40 CFR 63, Subpart LLL performance tests (i.e., PM and D/F), as required by 40 CFR 63.7 and 63.9(e).

b. Notification of 40 CFR 63, Subpart LLL opacity and visible emission observations per 40 CFR 63.1349 in accordance with 40 CFR 63.6(h)(5) and 63.9(f).

c. Notification of the date that the 40 CFR 63, Subpart LLL continuous emission monitor performance evaluation (i.e., PM-CPMS, THC CEMS, HCl CEMS, SO2 CEMS surrogate for HCl, Hg CEMS/sorbent trap) required by 40 CFR 63.8(e) is scheduled to begin.

d. Notification of 40 CFR 63, Subpart LLL compliance status, as required by 40 CFR 63.9(h).

e. Within 48 hours of an exceedance that triggers retesting to establish compliance and new operating limits, notify the appropriate permitting agency of the planned performance tests. The notification requirements of 40 CFR 63.7(b) and 63.9(e) do not apply to retesting required for exceedances under this subpart.

6.2.6 As required by 40 CFR 63.10(d)(2), the Permittee shall report the results of performance tests as part of the notification of compliance status.

6.2.7 The Permittee must submit the following information no later than 60 days following the initial performance test. All reports must be signed by a responsible official.

a. The initial performance test data.

b. The values for the site-specific operating limits (PM-CPMS, OHAP surrogate for THC, SO2 surrogate for HCl) or parameters and a description, including sample calculations, of how the operating parameters were established during the initial performance test.

6.2.8 Within 60 days after the date of completing each performance evaluation or test conducted to demonstrate compliance with any 40 CFR 63, Subpart LLL limit, the Permittee must submit the relative accuracy test audit data and performance test data to the EPA electronically via CEDRI and by using the Electronic Reporting Tool (ERT) (see *https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert*). For any performance evaluations with no corresponding RATA pollutants listed on the ERT website, the Permittee must submit the results of the performance evaluation to the Administrator at the appropriate address listed in 40 CFR 63.13.

For PM performance test reports used to set a PM CPMS operating limit, the electronic submission of the test report must also include the make and model of the PM CPMS instrument, serial number of the instrument, analytical principle of the instrument (*e.g.* beta attenuation), span of the instruments primary analytical range, milliamp value equivalent to the instrument zero output, technique by which this zero value was determined, and the average milliamp signals corresponding to each PM compliance test run.
[40 CFR 63.1354(b)(11)]

6.2.9 *Excess Emissions and Continuous Monitoring System Performance Report.* As required by 40 CFR 63.10(e)(3), the Permittee of an affected source equipped with a continuous emission monitor (PM-CPMS, THC, HCl CEMS, SO2 CEMS as a surrogate for HCl, and Hg CEMS or sorbent trap system) shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit.
[40 CFR 63.1354(b)(8)]

6.2.10 *Semi-annual Summary Report.* The Permittee shall submit a summary report semiannually within 60 days of the reporting period to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). The Permittee must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri*) may be submitted, once the XML schema is available.
[40 CFR 63.1354(b)(9)]

6.2.11 *Semi-annual Compliance Report.* For each failure to meet a standard or emissions limit caused by a malfunction at an affected source, the Permittee must report the failure in the semi-annual compliance report required by 40 CFR 63.1354(b)(9). The report must contain the date, time and duration, and the cause of each event (including unknown cause, if applicable), and a sum of the number of events in the reporting period. The report must list for each event the affected source or equipment, an estimate of the amount of each regulated pollutant emitted over the emission limit for which the source failed to meet a standard, and a description of the method used to estimate the emissions. The report must also include a description of actions taken by the Permittee during a malfunction of an affected source to minimize emissions in accordance with 40 CFR 63.1348(d), including actions taken to correct a malfunction.
[40 CFR 63.9, 40 CFR 63.1354]

6.2.12 The Permittee shall maintain records for each affected source as required by 40 CFR 63.10(b)(2) and (b)(3) and all documentation supporting initial notifications and notifications of compliance status under 40 CFR 63.9.

The Permittee of an affected source equipped with a continuous monitoring system shall maintain all records required by 40 CFR 63.10(c).
[40 CFR 63.1355]

6.2.13 *Daily Clinker Production Rates Records.* The Permittee must keep records of the daily clinker production rates according to the clinker production monitoring requirements in 40 CFR 63.1350(d).
[40 CFR 63.1355]

6.2.14 *Startup or Shutdown Records.* The Permittee must keep records of the date, time and duration of each startup or shutdown period for any affected source that is subject to a standard during startup or shutdown that differs from the standard applicable at other times, and the quantity of feed and fuel used during the startup or shutdown period.
[40 CFR 63.1355]

6.2.15 *Malfunction Records.* The Permittee must keep records of the date, time and duration of each malfunction that causes an affected source to fail to meet an applicable standard; if there was also a monitoring malfunction, the date, time and duration of the monitoring malfunction; the record must list the affected source or equipment, an estimate of the volume of each regulated pollutant emitted over the standard for which the source failed to meet a standard, and a description of the method used to estimate the emissions.
[40 CFR 63.1355]

6.2.16 *Corrective Action Records.* The Permittee must keep records of actions taken during periods of malfunction to minimize emissions in accordance with 40 CFR 63.1348(d) including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.
[40 CFR 63.1355]

6.2.17 *Exceedance Records.* For each exceedance from an emissions standard or established operating parameter limit, the Permittee must keep records of the date, duration and description of each exceedance and the specific actions taken for each exceedance including inspections, corrective actions and repeat performance tests and the results of those actions.
[40 CFR 63.1355]

6.2.18 The Permittee must submit notification of opacity and visible emission observations required by 40 CFR 63.1349 in accordance with 40 CFR 63.6(h)(5) and 63.9(f).
[40 CFR 63.1353(b)(3)]

6.2.19 Within 48 hours of an exceedance that triggers retesting to establish compliance and new operating limits, the Permittee shall notify the Division of the planned performance tests. The notification requirements of 40 CFR 63.7(b) and 63.9(e) do not apply to retesting required for exceedances.
[40 CFR 63.1353(b)(3) and (6)]

6.2.20 *Opacity Reports.* As required by 40 CFR 63.10(d)(3), the Permittee of an affected source shall report the opacity results from tests required by 40 CFR 63.1349.
[40 CFR 63.1354(b)(2)]

6.2.21 *COMS Reports.* As required by 40 CFR 63.10(e)(2), the Permittee of an affected source using a continuous opacity monitoring system to determine opacity compliance during any performance test required under 40 CFR 63.7 and described in 40 CFR 63.6(d)(6) shall report the results of the continuous opacity monitoring system performance evaluation conducted under 40 CFR 63.8(e).
[40 CFR 63.1354(b)(7)]

<u>40 CFR Part 60, Subpart CCCC Record Keeping and Reporting Requirements</u>

6.2.22 *Legitimacy Criteria Records.* For operating units that combust non-hazardous secondary materials that have been determined not to be solid waste pursuant to 40 CFR 241.3(b)(1) of this chapter, the Permittee must keep a record which documents how the secondary material meets each of the legitimacy criteria under 40 CFR 241.3(d)(1). If fuel is combusted that has been processed from a discarded non-hazardous secondary material pursuant to 40 CFR 241.3(b)(4) of this chapter, the Permittee must keep a record as to how the operations that produced the fuel satisfies the definition of processing in 40 CFR 241.2 and each of the legitimacy criteria of 40 CFR 241.3(d)(1) of this chapter. If the fuel received a non-waste determination pursuant to the petition process submitted under 40 CFR 241.3(c) of this chapter, the Permittee must keep a record that documents how the fuel satisfies the requirements of the petition process. For operating units that combust non-hazardous secondary materials as fuel per 40 CFR 241.4, the Permittee must keep records documenting that the material is a listed non-waste under 40 CFR 241.4(a).
[40 CFR 60.2175(v)]

6.2.23 The Permittee must maintain the items for a period of at least 5 years as required in 40 CFR 60.2175.
[40 CFR 60.2175]

6.2.24 All records must be available onsite in either paper copy or computer-readable format that can be printed upon request, unless an alternative format is approved by the Administrator.
[40 CFR 60.2180]

6.2.25 See Table 4 of Subpart CCCC for a summary of the reporting requirements.
[40 CFR 60.2180]

6.2.26 The Permittee must submit a notification prior to commencing construction that includes the five items listed in paragraphs (a) through (e):
[40 CFR 60.2190]

a. A statement of intent to construct;

b. The anticipated date of commencement of construction;

c. All documentation produced as a result of the siting requirements of 40 CFR 60.2050;

d. The waste management plan as specified in 40 CFR 60.2055 through 60.2065; and

e. Anticipated date of initial startup.

6.2.27 The Permittee must submit the information specified in paragraphs (a) through (e) prior to initial startup:
[40 CFR 60.2195]

a. The type(s) of waste to be burned;

b. The maximum design waste burning capacity;

c. The anticipated maximum charge rate (i.e., clinker production rate);

d. If applicable, the petition for site-specific operating limits under 40 CFR 60.2115; and

e. The anticipated date of initial startup.

6.2.28 The Permittee must submit the information specified in paragraphs (a) through (c) no later than 60 days following the initial performance test. All reports must be signed by the facilities manager:
[40 CFR 60.2200]

a. The complete test report for the initial performance test results obtained under 40 CFR 60.2135, as applicable;

b. The values for the site-specific operating limits established in 40 CFR 60.2110 or 40 CFR 60.2115; and

c. If a fabric filter is used to comply with the emission limitations, documentation that a bag leak detection system has been installed and is being operated, calibrated, and maintained as required by 40 CFR 60.2165(b).

6.2.29 The Permittee must submit an annual report no later than 12 months following the submission of the information in 40 CFR 60.2200. Subsequent reports must be submitted no more than 12 months following the previous report.
[40 CFR 60.2205]

6.2.30 The annual report required under 40 CFR 60.2205 must include the items listed in 40 CFR 60.2210(a) through (o). If there is a deviation from the operating limits or the emission limitations, the Permittee must also submit deviation reports as specified in 40 CFR 60.2215, 60.2220, and 60.2225:
[40 CFR 60.2210]

6.2.31 *Deviation Report.* The Permittee must submit a deviation report if any recorded parameter level is above the maximum operating limit or below the minimum operating limit, if a performance test was conducted that deviated from any emission limitation, if a 30-day average measured using CEMS deviated from any emission limitation. The deviation report must be submitted by August 1 of that year for data collected during the first half of the calendar year (January 1 to June 30), and by February 1 of the following year for data collected during the second half of the calendar year (July 1 to December 31).

In each report for any pollutant or parameter that deviated from the emission limitations or operating limits, include the six items described in 40 CFR 60.2220(a) through (d).
[40 CFR 60.2215]

6.2.32 Other required Notifications.
[40 CFR 60.2230]

a. The Permittee must submit notifications (date on commencement construction, initial startup date, or change that increases emissions) as provided by 40 CFR 60.7.

b. If the Permittee cease combusting solid waste but continues to operate, a 30 days prior notice of the effective date of the waste-to-fuel switch must be provided, consistent with 60.2145(a). The notification must identify:

i. The name of the Permittee of the CISWI, the location of the source, the emissions unit(s) that will cease burning solid waste, and the date of the notice;

ii. The currently applicable subcategory under this subpart, and any 40 CFR part 63 subpart and subcategory that will be applicable after ceasing combustion of solid waste;

iii. The fuel(s), non-waste material(s) and solid waste(s) the CISWI is currently combusting and has combusted over the past 6 months, and the fuel(s) or non-waste materials the unit will commence combusting;

iv. The date on which the Permittee became subject to the currently applicable emission limits; and

v. The date upon which the Permittee will cease combusting solid waste, and the date (if different) that the Permittee intend for any new requirements to become applicable (*i.e.*, the effective date of the waste-to-fuel switch), consistent with paragraphs (b)(2) and (3) of this section.

6.2.33 The Permittee shall submit initial, annual and deviation reports electronically or in paper format, postmarked on or before the submittal due dates.

Beginning on April 16, 2021 or once the reporting form has been made available in CEDRI for 1 year, whichever is later, the Permittee must submit subsequent reports on or before the submittal dates to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). Use the appropriate electronic report in CEDRI for this subpart or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI website (*https://www3.epa.gov/ttn/chief/cedri/index.html*). The date forms become available in CEDRI will be listed on the CEDRI website. The reports must be submitted by the deadlines specified in this subpart, regardless of the method in which the report is submitted.

Submit results of each performance test and CEMS performance evaluation as follows:

a. Within 60 days after the date of completing each performance test (*see* 40 CFR 60.8) required by this subpart, the Permittee must submit the results of the performance test following the procedure specified in either 40 CFR 60.2235(b)(1)(i) or (b)(1)(ii).

b. Within 60 days after the date of completing each continuous emissions monitoring system performance evaluation the Permittee must submit the results of the performance evaluation following the procedure specified in either 40 CFR 60.2235(b)(2)(i) or (b)(2)(ii).

40 CFR Part 60, Subpart OOO Record Keeping and Reporting Requirements

6.2.34 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 began 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)]

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

6.2.36 Notifications and reports required to demonstrate compliance with OOO need only to be sent to the State of Georgia which has been delegated authority according to 40 CFR 60.4(b).

6.2.37 The Permittee shall maintain daily records of quarry water truck usage, if applicable, to demonstrate compliance with Condition 3.2.11. The records shall be kept and shall include a minimum of the following data:

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.)

40 CFR Part 60, Subpart Y Record Keeping and Reporting Requirements

6.2.38 The Permittee shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:
[40 CFR 60.258(a)]

a. The manufacturer's recommended maintenance procedures and the date and time of any maintenance and inspection activities and the results of those activities. Any variance from manufacturer recommendation, if any, shall be noted.

b. The date and time of periodic coal preparation and processing plant visual observations, noting those sources with visible emissions along with corrective actions taken to reduce visible emissions. Results from the actions shall be noted.

c. The amount and type of coal processed each calendar month.

d. The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.

e. Monthly certification that the dust suppressant systems were operational when any coal was processed and that manufacturer's recommendations were followed for all control systems. Any variance from the manufacturer's recommendations, if any, shall be noted.

f. Monthly certification that the fugitive coal dust emissions control plan was implemented as described as required. Any variance from the plan, if any, shall be noted. A copy of the applicable fugitive coal dust emissions control plan and any letters from the Administrator providing approval of any alternative control measures shall be maintained with the logbook. Any actions, e.g., objections, to the plan and any actions relative to the alternative control measures, e.g., approvals, shall be noted in the logbook as well.

g. A copy of any applicable monitoring plan for a digital opacity compliance system and monthly certification that the plan was implemented as described. Any variance from plan, if any, shall be noted.

6.2.39 For the purpose of reports required under 40 CFR 60.7(c), any Permittee subject to the provisions of Subpart Y shall report semiannually (or as a part of the quarterly report in Condition 6.1.4) periods of excess emissions as follow:

a. All 6-minute average opacities that exceed the applicable standard.

b. The Permittee of an affected facility shall submit the results of initial performance tests consistent with the provisions of 40 CFR 60.8.

Within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this subpart, the Permittee of the affected facility must submit the test data to EPA by successfully entering the data electronically into CEDRI. For performance tests that cannot be entered into CEDRI (*i.e.,* Method 9 of appendix A-4 of this part opacity performance tests) the Permittee of the affected facility must mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243-01; RTP, NC 27711.
[40 CFR 60.258]

<u>40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ Record Keeping and Reporting Requirements</u>

6.2.40 The Permittee shall submit an Initial Notification for the emergency stationary diesel engine 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)]

6.2.41 The Permittee shall maintain monthly operating records of the emergency stationary diesel generator/engine, including operating hours and reasons of the operation, i.e., emergency power generation and/or fire distinguishing, 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) & 391-3-1-.02(2)(m)4.(i)]

6.2.42 The Permittee shall use monthly operating time records required by Condition 6.2.41 to calculate monthly the 12 month rolling total of the maintenance check and readiness testing time for the stationary emergency engine for each 12-consecutive month period. All the calculations shall be kept as part of the records. 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 15th day of the following month and shall include an explanation of how the Permittee intends to attain future compliance with Condition 3.2.23.
[40 CFR 60.4211(e)]

6.2.43 The Permittee shall demonstrate compliance with the applicable emission limits in Condition 3.3.9 by purchasing a stationary diesel engine/generator 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)]

6.2.44 The Permittee shall keep records verifying that each shipment of diesel fuel received for firing the emergency stationary diesel generator/engine complies with the applicable requirements in Condition 3.3.10. 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 which 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)]

6.2.45 The Permittee shall comply with all the applicable requirements of the General Provisions of 40 CFR Part 63 as listed in Table 8 to 40 CFR Part 60, Subpart IIII.
[40 CFR 60.4218]

6.2.46 The Permittee shall furnish to the Division written notification of the date of the initial startup of the emergency stationary diesel engine within 15 days after such date.
[391-3-1-.03(2)(c)]

PART 7.0 OTHER SPECIFIC REQUIREMENTS

7.1 Specific Conditions

7.1.1 The Permittee shall construct and operate the source or modification as defined in Application No. 27266 that is subject to Georgia Rule 391-3-1-.02(7) in accordance with the application submitted pursuant to that rule. If the Permittee constructs or operates a 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)]

7.1.2 Approval to construct this Portland cement plant by this permit shall become invalid for any of the following reasons:

a. The construction is not commenced within 18 months after issuance of this permit;

b. The construction is discontinued for a period of 18 months or more; or

c. The construction is not completed within a reasonable time.

The Division may extend the 18-month period upon a satisfactory showing that an extension is justified. In conjunction with an extension of the 18-month period to commence or continue construction (or to construct the project in phases), the Division may require the Permittee to demonstrate the adequacy of any previous determination of Best Available Control Technology (BACT) for emissions units regulated by the project. For good cause, the Permittee may request that this permit be extended in writing at least 60 days prior to the expiration of the 18 month period. For purposes of this permit, the definition of "commence" is given in 40 CFR 52.21(b)(9).
[40 CFR 52.21(r)]

7.1.3 The Permittee shall notify the Division in writing within 15 days of commencing construction. The notification should document what activities constituting "commencing construct" have been performed and the date on which they occurred

7.1.4 The Permittee shall submit written notification of startup to the Division within 15 days after such date. The notification shall be submitted to:
Mr. Sean Taylor
Stationary Source Compliance Program
4244 International Parkway, Suite 120
Atlanta GA 30354

7.1.5 This permit authorizes construction and operation of the Portland cement plant. The Permittee shall apply for a Part 70/Title V operation permit within 12 calendar months after commencing the operation of this facility. To apply for a Title V operation permit, the applicant shall demonstrate compliance with the emission limits in this permit, and submit to the Division electronically using GEOS, a complete Part 70 operating permit application including additional information as the Division may by law require.
[40 CFR 60.1340(d) and 40 CFR 70.5(a)(1)(ii)]

PART 8.0 GENERAL PROVISIONS

8.1 Modifications

8.1.1 Prior to any source commencing a modification as defined in 391-3-1-.01(pp) that may result in air pollution and not exempted by 391-3-1-.03(6), the Permittee shall submit a Permit application to the Division. The application shall be submitted sufficiently in advance of any critical date involved to allow adequate time for review, discussion, or revision of plans, if necessary. Such application shall include, but not be limited to, information describing the precise nature of the change, modifications to any emission control system, production capacity of the plant before and after the change, and the anticipated completion date of the change. The application shall be in the form of a Georgia air quality Permit application to construct or modify (otherwise known as a SIP application) and shall be submitted on forms supplied by the Division, unless otherwise notified by the Division.
[391-3-1-.03(1) through (8)]

8.2 Circumvention

State Only Enforceable Condition.

8.2.1 The Permittee shall not build, erect, install, or use any article, machine, equipment or process the use of which conceals an emission which would otherwise constitute a violation of an applicable emission standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of the pollutants in the gases discharged into the atmosphere.
[391-3-1-.03(2)(c)]

8.3 Other General Provisions

8.3.1 At all times, including periods of startup, shutdown, and malfunction, the Permittee shall maintain and operate the source, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on any information available to the Division that may include, but is not limited to, monitoring results, observations of the opacity or other characteristics of emissions, review of operating and maintenance procedures or records, and inspection or surveillance of the source.
[391-3-1-.02(2)(a)10]

State Only Enforceable Condition.

8.3.2 No person owning, leasing, or controlling, the operation of any air contaminant sources shall willfully, negligently or through failure to provide necessary equipment or facilities or to take necessary precautions, cause, permit, or allow the emission from said air contamination source or sources, of such quantities of air contaminants as will cause, or tend to cause, by themselves, or in conjunction with other air contaminants, a condition of air pollution in quantities or characteristics or of a duration which is injurious or which unreasonably interferes with the enjoyment of life or use of property in such area of the State as is affected thereby. Complying with Georgia's Rules for Air Quality Control Chapter 391-3-1 and conditions in this Permit, shall in no way exempt a person from this provision. [391-3-1-.02(2)(a)1]

8.3.3 In cases where conditions of this Permit conflict with each other for any particular source or operation, the most stringent condition shall prevail.

8.3.4 The Permittee shall calculate and pay an annual Permit fee to the Division. The amount of the fee shall be determined each year in accordance with the "Procedures for Calculating Air Permit Fees."

8.3.5 At any time that the Division determines that additional control of emissions from the facility may reasonably be needed to provide for the continued protection of public health, safety and welfare, the Division reserves the right to amend the provisions of this Permit pursuant to the Division's authority as established in the Georgia Air Quality Act and the rules adopted pursuant to that Act.

8.3.6 This permit is not transferable. Future owners and operators shall obtain a new permit from the Division. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new Permittee has been submitted to the Division at least thirty (30) days in advance of the transfer. [391-3-1-.03(4)]