North Carolina Department of Environment and Natural Resources
Division of Air Quality

Beverly Eaves Perdue
Governor

Sheila C. Holman
Director

Dee Freeman
Secretary

XXXXX, 2011 **DRAFT**

Mr. Russell A. Fink
Vice President, General Counsel, and Secretary
Titan America/Carolinas Cement Company LLC
1151 Azalea Garden Road
Norfolk, Va. 23502

Dear Mr. Fink:

Subject: Air Quality Permit No. 07300R08
Facility ID: 6500296
Carolinas Cement Company LLC
Castle Hayne, North Carolina
New Hanover County
Fee Class: Title V

In accordance with your Air Quality Permit Application for a modification of an existing permit, received February 26, 2008, we are forwarding herewith Air Quality Permit No. 07300R08 to Carolinas Cement Company LLC, located at 6411 Ideal Cement Road, Castle Hayne, North Carolina, authorizing the construction and operation, of the emission sources and associated air pollution control devices specified herein. While the company is legally allowed to begin construction of those sources and devices, the company will do so at its own risk. Any financial investment in construction will not constitute an obligation on the part of the State to issue any of the remaining necessary permits, and will have no bearing on future permit approvals. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant have been listed for informational purposes as an "ATTACHMENT."

The Permittee shall file a Title V Air Quality Permit Application pursuant to 15A NCAC 2Q .0504 for the new air emission sources on or before 12 months after commencing operation.

As the responsible official it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the conditions of the attached permit that are applicable to that particular emission source.

This Air Quality Permit shall be final and binding 30 days after issuance. If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal

adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings.

Please note that this permit will be stayed in its entirety upon receipt of your request for a hearing made pursuant to NCGS 150B-23. You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in writing to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission sources and associated air pollution control devices, or modifications to the emission sources and air pollution control devices described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of GS 143-215-108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of GS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in GS 143-215.114A and 143-215.114B. The issuance of this air quality permit does not relieve the Permittee from the obligation to comply with any other applicable local, state, or federal requirements, including but not limited to the obligation to obtain the permits and authorizations for the construction and operation of the proposed facility. Additionally, as noted above, the issuance of this Air Permit does not represent any commitment on the part of the State to issue any of the remaining permits. Each additional permit will need to be obtained on its respective merits.

For PSD increment tracking purposes, PM10 emissions from this modification are increased by 46 pounds per hour, sulfur dioxide emissions from this modification are increased by 173 pounds per hour, and nitrogen dioxide emissions from this modification are increased by 386 pounds per hour.

This Air Quality Permit shall be effective from XXX, XXXXX until XXXXXXX, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Mr. Booker T. Pullen at (919) 715-6248.

Sincerely yours,

D r a f t -

Donald R. van der Vaart, Ph.D., P.E., J.D., Chief

Attachment A
c: Wilmington Regional Office
Central Files
Connie Horne

Attachment A: Insignificant Activities

Emissions Source ID	Emission Source Description	Insignificant Regulation
IES-Maint	Maintenance activities	15A NCAC 2Q .0503(8)
IES-Lab	Laboratory activities	15A NCAC 2Q .0503(8)
IES-Dieseldisp	Diesel dispensing equipment and tanks	15A NCAC 2Q .0503(8)
IES-Kerodisp	Kerosene dispensing equipment and tanks	15A NCAC 2Q .0503(8)
IES-NH_3	Aqueous ammonia tank	15A NCAC 2Q .0503(8)
IES-MHS	Material handling and storage equipment not vented to the outdoor atmosphere	15A NCAC 2Q .0503(8)

State of North Carolina,
Department of Environment,
and Natural Resources
Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Issue Date	Effective Date	Expiration Date
07300R08	07300R07	Draft	Draft	XXXXXXXXXXX

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission sources and associated air pollution control devices specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 2D and 2Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 2Q, the Permittee shall not construct, operate, or modify any emission sources or air pollution control devices without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee:	Carolinas Cement Company LLC
Facility ID:	6500296
Facility Site Location:	6411 Ideal Cement Road
City, County, State, Zip:	Castle Hayne, New Hanover Co., North Carolina 28429
Mailing Address:	P. O. Box 37
City, State, Zip:	Castle Hayne, North Carolina 28429
Application Number:	6500296.08A
Complete Application Date:	XXXXXXXXXXXXX
Primary SIC Code:	3241
Division of Air Quality, Regional Office Address:	Wilmington Regional Office 127 Cardinal Drive Extension Wilmington, North Carolina 28405

Permit issued this the XXXX day of XXXXX, XXXXXX

_____

Donald R. van der Vaart, Ph.D., P.E., J.D., Chief, Air Permits Section
By Authority of the Environmental Management Commission

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SECTION 1- PERMITTED EMISSION SOURCES AND ASSOCIATED AIR POLLUTION CONTROL DEVICES AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated pollution control devices/appurtenances:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Mining/Quarrying Operations (MINE/FQ)			
ES-Mine1, PSD	Rock/limestone removal using heavy equipment, drilling, and blasting	None	None
ES-Mine2, PSD	Rock/limestone loading operations (front end loader rock pickup, loader to haul truck, haul truck to jaw crusher)	None	None
ES-FQSP1, PSD	Limestone/marl pile located in the quarry	None	None
ES-FQSP2, PSD	Spoils pile located in the quarry	None	None
ES-FQSP4, PSD	Overburden located in the quarry	None	None
ES-QURD, PSD	Quarry roads	None	None
ES-FQ6, PSD	Spoils stacker pile	None	None
Quarry Operation (FQ)			
ES-FQ1PC1 NSPS OOO, PSD	Primary crusher #1	None	None
ES-FQ3PC2 NSPS OOO, PSD	Primary crusher #2 (spoils)	None	None
ES-FQ8SC NSPS OOO, PSD	Secondary crusher (quarry blend)	None	None
ES-FQ8BC NSPS OOO, PSD	Belt conveyor transfer	None	None
ES-FQ2MC1 NSPS OOO, PSD	Conveyor #1 transfer (limestone/marl)	None	None
ES-FQ7SC NSPS OOO, PSD	Conveyor #1 transfer (spoils)	None	None
ES-FQ1MC2 NSPS OOO, PSD	Conveyor #2 transfer (limestone/marl)	None	None
ES-FQ3SC2 NSPS OOO, PSD	Conveyor #2 transfer (spoils)	None	None
ES-FQ4SC3 NSPS OOO, PSD	Conveyor #3 transfer (spoils)	None	None
ES-FQ8SCF NSPS OOO, PSD	Secondary crusher feeder (quarry blend)	None	None
ES-FQ1HF NSPS OOO, PSD	Hopper/feeder #1 (limestone/marl)	None	None
ES-FQ3HF2 NSPS OOO, PSD	Hopper/feeder #2 (spoils)	None	None
ES-FQ5RS	Radial stacker transfer (spoils)	None	None

NSPS OOO, PSD			

Coal/Coke System (COAL)			
ES-COALF1HF2 NSPS Y, PSD	Coal/coke hopper/feeder #2	None	None
ES-COALF1BCT NSPS Y, PSD	Coal/coke belt conveyor transfer	None	None
ES-COALF2EH NSPS Y, PSD	Coal/coke enclosed hopper w/dust suppression (water spray)	None	None
ES-COALF3B NSPS Y, PSD	Coal/coke belt to tripper belt	None	None
ES-COALF3TB NSPS Y, PSD	Coal/coke tripper belt to piles	None	None
ES-COALF3PR NSPS Y, PSD	Coal/coke pile reclaimer	None	None
ES-COALFERB NSPS Y, PSD	Coal/coke reclaimer to belt	None	None
ES-COALPILE NSPS Y	Coal pile (covered)	None	None
ES-COALE1 NSPS Y, PSD	Coal unloading by rail to hopper/transport system	CD1 (211.BF320)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-COALE2 NSPS Y, PSD	Coal unloading by truck to hopper/transport system	CD2 (231.BF310)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-COALE3 NSPS Y, PSD	Coal transport to storage	CD3 (231.BF330)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-COALE4 NSPS Y, PSD	Coal transport from storage	CD4 (241.BF120)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-COALE16 NSPS Y, PSD	Coal mill feed transport	CD16 (461.BF350)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-COALE17 NSPS Y MACT LLL, PSD	Fine coal bin	CD17 (461.BF650)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-COALE18 NSPS Y MACT LLL, PSD	Fine coal bin	CD18 (461.BF750)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-COALE14 NSPS Y, PSD	Coal mill feed bin	CD14 (461.BF130)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-COALE15 NSPS Y, PSD	Coal mill feed bin	CD15 (461.BF230)	One bagfilter with outlet grain loading of 0.005 grains/scf
ES-COAL NSPS Y, PSD MACT LLL, PSD	Coal mill (vents to main stack)	CD44B (461.BF500)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf

Plant Roadways			
ES-PLTRD, PSD	Vehicular traffic on paved plant roads	None	None
Storage Piles			
ES-SPCoal1, PSD	Coal/coke storage pile at the plant	None	None
ES-SPCoal2, PSD	Coal/coke storage pile at the plant	None	None
ES-SPBlend1 PSD	Blended stone pile at the plant	None	None
ES-SPBlend2, PSD	Blended stone pile at the plant	None	None
ES-SPMillscale PSD	Mill scale storage pile at the plant	None	None
Storage Piles - Continued			
ES-SPBauxite PSD	Bauxite storage pile at the plant	None	None
ES-SPAsh, PSD	Bottom ash storage pile at the plant	None	None
ES-SPLimestone PSD	Limestone storage pile at the plant	None	None
ES-SPGypsum, PSD	Gypsum storage pile at the plant	None	None
Emergency Generator			
ES-GEN NSPS IIII MACT ZZZZ, PSD	Diesel-fired emergency generator (800 kW, 1072.82 hp output, generator vents through main stack)	None	None
Plant additives unloading and handling			
ES-F1HF1 NSPS F MACT LLL, PSD	Additives hopper/feeder	None	None
ES-F1BCT NSPS F MACT LLL, PSD	Additives belt conveyor transfer	None	None
ES-F5 NSPS F MACT LLL, PSD	Additives belt conveyor transfer	None	None
ES-F7 NSPS F MACT LLL, PSD	Additives belt conveyor transfer	None	None
ES-F7C NSPS F MACT LLL, PSD	Bottom Ash conveyor to silo	None	None
ES-F7D NSPS F MACT LLL, PSD	Bottom ash silo to enclosed belt	None	None

Raw Material Unloading & Handing (RMH)			
ES-RMHF3B NSPS F MACT LLL, PSD	Quarry blend belt to tripper belt	None	None
ES-RMHF3TB, NSPS F MACT LLL, PSD	Quarry blend tripper belt to piles	None	None
ES-RMHF3PR NSPS F MACT LLL, PSD	Quarry blend pile reclaimer	None	None
ES-RMHF3R NSPS F, PSD	Quarry blend reclaimer to belt	None	None
ES-RMHF3ABT NSPS F MACT LLL, PSD	Additives belt to tripper belt	None	None
ES-RMHF3ATB NSPS F MACT LLL, PSD	Additives tripper belt to piles	None	None
Raw Material Unloading & Handing (RMH)			
ES-RMHF3APR NSPS F MACT LLL, PSD	Additives pile reclaimer	None	None
ES-RMHF3RB NSPS F MACT LLL, PSD	Additives reclaimer to belt	None	None
ES-RMHF6BCT NSPS F MACT LLL, PSD	Quarry blend belt conveyor transfer	None	None
ES-RMHF7A NSPS F MACT LLL, PSD	Quarry blend conveyor to silo	None	None
ES-RMHF7B NSPS F MACT LLL, PSD	Quarry blend silo to enclosed belt	None	None
Raw Mill Handling System (RMHS)			
ES-RMHSE5 NSPS F MACT LLL, PSD	Raw mill feed bin	CD5 (143.BF650)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-RMHSE6 NSPS F MACT LLL, PSD	Raw mill feed transport	CD6 (311.BF750)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf

ES-RMHSE7 NSPS F MACT LLL, PSD	Raw mill feed	CD7 (321.BF470)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-RMHSE8 NSPS F MACT LLL, PSD	Raw mill reject	CD8 (321.BF950)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-RMHSE9 NSPS F MACT LLL, PSD	Kiln dust bin	CD9 (331.BF400)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-RMHSE10 NSPS F MACT LLL, PSD	Raw mill transport to silo	CD10 (341.BF410)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-RMHSE11 NSPS F MACT LLL, PSD	Raw mill silo	CD11 (341.BF350)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-RMHSE12 NSPS F MACT LLL, PSD	Raw mill silo extraction	CD12 (351.BF440)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-RMHSE13 NSPS F MACT LLL, PSD	Kiln feed	CD13 (351.BF470)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
Clinker Handling and Storage (CHS)			
ES-CHSE19 NSPS F MACT LLL, PSD	Clinker discharge from cooler	CD19 (441.BF540)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-CHSE20 NSPS F MACT LLL, PSD	Clinker dome	CD20 (471.BF150)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-CHSE21 NSPS F MACT LLL, PSD	Off-spec bin	CD21 (471.BF240)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
Finish Mills (FM)			
ES-FME22 NSPS F MACT LLL, PSD	Cement mill #1 feed bin	CD22 (511.BF090)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FME23 NSPS F MACT LLL, PSD	Cement mill #2 feed bin	CD23 (512.BF050)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FME24 NSPS F MACT LLL, PSD	Cement mill #1 feed	CD24 (531.BF290)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf

ES-FME25 NSPS F MACT LLL, PSD	Cement mill #1 recirculation bin	CD25 (531.BF020)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FME26 NSPS F MACT LLL, PSD	Cement mill #1 reject	CD26 (531.BF215)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FME27 NSPS F MACT LLL, PSD	Cement mill #1 transport	CD27 (531.BF615)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FME28 NSPS F MACT LLL, PSD	Cement mill #2 feed	CD28 (532.BF290)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FME29 NSPS F MACT LLL, PSD	Cement mill #2 recirculation bin	CD29 (532.BF020)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FME30 NSPS F MACT LLL, PSD	Cement mill #2 reject	CD30 (532.BF215)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FME31 NSPS F MACT LLL, PSD	Cement mill #2 transport	CD31 (532.BF615)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FM45A NSPS F MACT LLL, PSD	Exhaust from finish mill #1	CD45A (531.BF500)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FM45B NSPS F MACT LLL, PSD	Exhaust from finish mill #2	CD45B (532.BF500)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FME46 NSPS F MACT LLL, PSD	Cement additive bin	CD46 (511.BF300)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FME47 NSPS F MACT LLL, PSD	Cement additive intake	CD47 (232.BF150)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-FMEF8TU, NSPS F MACT LLL, PSD	Gypsum/limestone unloading	None	None
ES-FMF8HF NSPS F MACT LLL, PSD	Gypsum/limestone hopper/feeder	None	None
ES-FMF8BCT NSPS F MACT LLL, PSD	Gypsum/limestone belt conveyor transfer	None	None

Cement Handling, Storage, and Loadout (CHSL)			
ES-CHSLE32 NSPS F MACT LLL, PSD	Cement dome	CD32 (611.BF600)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-CHSLE33 NSPS F MACT LLL, PSD	Cement dome extraction rail	CD33 (621.BF305)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-CHSLE34 NSPS F MACT LLL, PSD	Cement dome extraction truck	CD34 (621.BF315)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-CHSLE40 NSPS F MACT LLL, PSD	Cement silo	CD40 (612.BF600)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-CHSLE41 NSPS F MACT LLL, PSD	Cement silo extraction	CD41 (612.BF620)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-CHSLE42 NSPS F MACT LLL, PSD	Cement transport	CD42 (622.BF410)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-CHSLE43 NSPS F MACT LLL, PSD	Packaging plant	CD43 (641.BF150)	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-4 ** NSPS F MACT LLL, PSD	Cement silo (2,200 tons est. capacity)	CDP43	One bagfilter (540 square feet of filter surface area)
ES-R33 ** NSPS F MACT LLL, PSD	Screw conveyor and truck load-out spout	CDP30	One bagfilter with outlet grain loading not to exceed 0.005 grains/scf
ES-1 **	Railcar/truck unloading system (screw/ pneumatic) in partially enclosed building	CDP1	One bagfilter (339 square feet of filter surface area)

Kiln System			
ES-KS NSPS F MACT LLL, PSD	One coal/petroleum coke-fired, (distillate fuel used for startup only) multistage preheater-precalciner kiln @ 675 million Btu per hour heat input capacity with inline raw mill, coal mill, alkali bypass and inline clinker cooler	CD44N	Selective non-catalytic reduction (SNCR) system using ammonia containing solution
		CD44S	Wet scrubber system (46,000 gallons per min minimum injection rate of water/$CaCO_3$)
		CD44A (331.BF200)	Bagfilter for kiln, cooler, and raw mill with outlet grain loading not to exceed 0.0008 grains/scf (as measured at the main stack)
		CD44B (461.BF500)	Bagfilter for coal mill with outlet grain loading not to exceed 0.005 grains/scf (as measured at the main stack)
		CD44C (451.BF200)	Bagfilter for preheater bypass with outlet grain loading not to exceed 0.005 grains/scf (as measured at the main stack)
		CD44D (331.BF300)	Activated carbon injection system with bagfilter having an outlet grain loading not to exceed 0.005 grains/scf (as measured at the main stack)

The Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation.

** Existing sources (all other sources are proposed); ES-1 to be removed from service prior to startup of cement plant

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Sources and Control Devices Specific Limitations and Conditions

The emission sources and associated air pollution control devices and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, recordkeeping, and reporting requirements as specified herein:

A. Mining/Quarry Operations (Mine/FQ):

- Rock/limestone removal using heavy equipment, drilling, and blasting (ES-Mine1)
- Rock/limestone loading operations (rock from front end loader to haul truck, unloading haul truck to jaw crusher, ES-Mine2)
- Limestone/marl pile located in quarry area (ES-FQSP1)
- Spoils pile located in quarry area (ES-FQSP2)
- Overburden pile located in quarry area (ES-FQSP4)
- Quarry roads (ES-QURD)
- Spoils stacker pile (ES-FQ6)

The following provides a summary of limits and/or standards for the emission sources described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate emissions (PM10/PM2.5)	Best management practices for drilling, blasting, stone removal, and truck loading operations	15A NCAC 2D .0530 PSD (BACT)
Fugitive dust emissions	Avoid fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. State Enforceable Only (See Multiple Emissions Section 2.2A)	15A NCAC 2D .0540
Toxic air pollutants	Modeled emission rates (State Enforceable Only, See Multiple Emissions Section 2.2B)	15A NCAC 2D .1100

1. 15A NCAC 2D .0530 “Prevention of Significant Deterioration” – (PM10/PM2.5)
   a. To comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration”:

      - Filterable particulate emissions (PM10/PM2.5) from the drilling, blasting, stone removal, and truck loading operations shall be controlled by best management practices.
      - When a bagfilter or wet suppression is used, monitoring, and recordkeeping shall be done in accordance with Section 2.1 B. 1. d. through e. of this Permit.

   b. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2602 and General Condition 18 of this Permit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Reporting [15A NCAC 2Q .0508(f)]

c. The Permittee shall submit a semi-annual summary report of operations, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
   i. The monthly summary log of Mining/Quarrying Operations for the previous 17 months.
   ii. Any deviations from best management practices for the drilling, blasting, stone removal, and truck loading operations.

B. Quarry Operations (FQ):
- Primary crusher #1 (limestone/marl, ES-FQ1PC1, NSPS Subpart OOO)
- Primary crusher #2 (spoils, ES-FQ3PC2, NSPS Subpart OOO)
- Secondary crusher (quarry blend, ES-FQ8SC, NSPS Subpart OOO)
- Belt conveyor transfer (ES-FQ8BC, NSPS Subpart OOO)
- Mining conveyor #1 transfer (limestone/marl, ES-FQ2MC1, NSPS Subpart OOO)
- Spoils conveyor #1 transfer (spoils, ES-FQ7SC, NSPS Subpart OOO)
- Mining conveyor #2 transfer (limestone/marl, ES-FQ1MC2, NSPS Subpart OOO)
- Spoils conveyor #2 transfer (spoils, ES-FQ3SC2, NSPS Subpart OOO)
- Spoils conveyor #3 transfer (spoils, ES-FQ4SC3, NSPS Subpart OOO)
- Secondary crusher feeder (quarry blend, ES-FQ8SCF, NSPS Subpart OOO)
- Hopper/feeder #1 (limestone/marl, No. ES-FQ1HF, NSPS Subpart OOO)
- Hopper/feeder #2 (spoils, No. ES-FQ3HF2, NSPS Subpart OOO)
- Radial stacker transfer (spoils, No. ES-FQ5RS, NSPS Subpart OOO)

The following table provides a summary of limits and/or standards for the emission sources described above

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate emissions (PM10/PM2.5)	• Crushers without a capture system Fugitive emissions that exhibit greater than 12 percent opacity shall not be discharged	15A NCAC 2D .0524 40 CFR Part 60, Subpart 000
	• Any transfer point on a belt conveyor that is not enclosed in a building Fugitive emissions that exhibit greater than 7 percent opacity shall not be discharged	
	• Any transfer point on belt conveyors or any other affected facility Fugitive emissions that exhibit greater than 7 percent opacity shall not be discharged	
	Avoid fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary	15A NCAC 2D .0540
	Best management practices	15A NCAC 2D .0530 PSD (BACT)
Toxic air pollutants	Modeled emission rates (State Enforceable Only) See Multiple Emissions Section 2.2B	15A NCAC 2D .1100

1. 15A NCAC 2D .0524, 40 CFR Part 60, Subpart OOO "Standards of Performance For Nonmetallic Nonmetal Mineral Processing Plants"

   a. 15A NCAC 2D .0524 "New Source Performance Standards" - The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60 Subpart OOO, including Subpart A "General Provisions" for affected facilities that commence construction, modification, or reconstruction after April 22, 2008.

   b. NSPS Test Methods and Procedures [40 CFR §60.675]
   On and after the sixtieth day after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup as required under 40 CFR §60.11 of Part 60, the Permittee shall perform an initial performance test.
      i. The Permittee shall use as reference methods and procedures the test methods in appendices A–1 through A–7 of 40 CFR Part 60 or other methods and procedures as specified in Subpart OOO except as provided in 40 CFR §60.8(b).
      ii. The Permittee shall determine compliance with the PM standards in 40 CFR §60.672(a) as follows:
         (A) Method 9 of Appendix A–4 of this part and the procedures in 40 CFR §60.11 shall be used to determine opacity.
         (B) In determining compliance with the particulate matter standards in §60.672(b), the Permittee shall use Method 9 of Appendix A–4 of Part 60 and the procedures in 40 CFR §60.11, with the following additions:
            (1) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).
            (2) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A–4 of Part 60, Section 2.1) shall be followed.
            (3) When determining compliance with the fugitive emissions standard for any affected facility described under §60.672(b) of Subpart OOO the duration of the Method 9 (40 CFR Part 60, Appendix A–4) observations shall be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of Subpart OOO shall be based on the average of the five 6-minute averages.

   c. Standards For Particulate Emissions [40 CFR §60.672]
      i. On and after the date on which the performance test required to be conducted by 40 CFR §60.8 is completed, no Permittee who is subject to the provisions of this subpart shall cause to be discharged into the atmosphere, any fugitive emissions (from the following affected facilities constructed after April 22, 2008) that exhibit greater than 7 percent opacity.

- Grinding mills
- Screening operation (wet screening operations are exempt)
- Bucket elevator
- Transfer points on belt conveyors
- Bagging operations
- Storage bins
- Enclosed truck or railcar loading stations

ii. On and after the date on which the performance test required to be conducted by 40 CFR §60.8 is completed, no Permittee subject to the provisions of this subpart shall cause to be discharged into the atmosphere, any fugitive emissions (from crushers without capture systems that are constructed after April 22, 2008) that exhibit greater than 12 percent opacity.
- Primary crusher #1 (ES-FQ1PC)
- Primary crusher #2 (ES-FQ3PC2)
- Secondary crusher (ES-FQ8SC)

iii. Truck dumping of nonmetallic minerals into any screening operation, grizzlies, feed hopper, or crusher is exempt from the requirements of section 40 CFR §60.672.

iv. Static non-agitating grizzlies are exempt from the requirements of section 40 CFR §60.672.

v. Dropping of nonmetallic minerals from a conveyor to a pile is not defined as a transfer point and is exempt from the requirements of section 40 CFR §60.672.

vi. Equipment that breaks up clumps but does not reduce the size of the materials is not a crusher and is exempt from the requirements of section 40 CFR §60.672.

vii. Wet material processing operations as defined in 40 CFR §60.671 are exempt from the requirements of 40 CFR Part 60, Subpart OOO.

Monitoring [15A NCAC 2Q .0508(f), 40 CFR §60.674]

d. The Permittee that uses wet suppression to control emissions from the affected facility shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression system. The Permittee shall initiate corrective action within 24 hours and complete corrective action as expediently as practical if they find that water is not flowing properly during an inspection of the water spray nozzles. The Permittee shall 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).

i. 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 Subpart OOO provided that the affected facility meets the following criteria:

(A) The Permittee shall conduct periodic inspections of the upstream water sprays that are responsible for controlling fugitive emissions from the affected facility. These inspections are conducted according to 40 CFR §60.674(b) of this section and 40 CFR §60.676(b), and

(B) The Permittee shall designate which upstream water sprays 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 Subpart OOO.

ii. 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) shall specify the control mechanism being used instead of the water sprays.

iii. Except as specified in 40 CFR §60.674(d) or (e), the Permittee that uses a baghouse to control particulate emissions from the affected facility shall conduct quarterly 30-minute visible emissions inspections using EPA Method 22 (40 CFR part 60, Appendix A–7). The Method 22 (40 CFR Part 60, Appendix A–7) test shall be conducted while the baghouse is operating. The test is successful if no visible emissions are observed. If any visible emissions are observed, the Permittee shall initiate corrective action within 24 hours to return the baghouse to normal operation. The Permittee shall record each Method 22 (40 CFR Part 60, Appendix A–7) test, including the date and any corrective actions taken, in the logbook required under 40 CFR §60.676(b). The Permittee may establish a different baghouse-specific success level for the visible emissions test (other than no visible emissions) by conducting a PM performance test according to 40 CFR §60.675(b) simultaneously with a Method 22 (40 CFR Part 60, Appendix A–7) to determine what constitutes normal visible emissions from that affected facility's baghouse when it is in compliance with the applicable PM concentration limit in Table 2 of this subpart. The revised visible emissions success level shall be incorporated into the permit for the affected facility.

e. Recordkeeping [40 CFR §60.674]

The Permittee shall record each periodic inspection required under 40 CFR §60.674(b) or (c), including dates and any corrective actions taken, in a logbook (in written or electronic format). The logbook shall be kept onsite or electronic copies (whichever is requested) of the logbook shall be made available to the Administrator upon request.

i. The Permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 CFR §60.672 of this subpart, including reports of opacity observations made using Method 9 (40 CFR Part 60, Appendix A–4) to demonstrate compliance with 40 CFR §60.672(b), (e) and (f).

ii. Any wet material processing operation that processes saturated and subsequently processes unsaturated materials, shall submit a report of this change within 30 days following such change. At the time of such change, this screening operation, bucket elevator, or belt conveyor becomes subject to the applicable opacity limit in 40 CFR §60.672(b) and the emission test requirements of 40 CFR §60.11.

iii. The Subpart A requirement under §60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.

iv. A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.

(A) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the Permittee to the Administrator. 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.

f. Reporting [40 CFR §60.674]
   i. The Permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 40 CFR §60.672 of Subpart OOO, including reports of opacity observations made using Method 9 (40 CFR Part 60, Appendix A–4) to demonstrate compliance with 40 CFR §60.672(b).
   ii. The Subpart A requirement under §60.7(a)(1) for notification of the date construction or reconstruction commenced is waived for affected facilities under this subpart.
   iii. A notification of the actual date of initial startup of each affected facility shall be submitted to the Administrator.
      (A) For a combination of affected facilities in a production line that begin actual initial startup on the same day, a single notification of startup may be submitted by the Permittee to the Administrator. 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.

2. 15A NCAC 2D .0530 "Prevention of Significant Deterioration" – PM10/PM2.5
   a. To comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration":

      - Filterable particulate emissions (PM10/PM2.5) from the crushing, loading, and unloading operations shall be controlled by best management practices
      - When a bagfilter or wet suppression is used, monitoring and recordkeeping shall be done in accordance with Section 2.1 B. 1. d. through e. of this Permit.

   b. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2602 and General Condition 18 of this Permit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

      Reporting [15A NCAC 2Q .0508(f)]
   c. The Permittee shall submit a semi-annual summary report of operations, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
      i. The monthly summary log of Quarry Operations for the previous 17 months.

C. Coal/Pet Coke Handling System (COAL) and associated control devices

- Coal/pet coke hopper/feeder #2 (ES-COALF1HF2, NSPS Subpart Y)
- Coal/pet coke belt conveyor transfer (ES-COALF1BCT, NSPS Subpart Y)
- Coal/pet coke enclosed hopper w/dust suppression (water spray) (ES-COALF2EH, NSPS Subpart Y)
- Coal/pet coke belt to tripper belt (ES-COALF3B, NSPS Subpart Y)
- Coal/pet coke tripper belt to piles (ES-COALF3TB, NSPS Subpart Y)
- Coal/pet coke pile reclaimer (ES-COALF3PR, NSPS Subpart Y)
- Coal/pet coke reclaimer to belt (ES-COALFERB, NSPS Subpart Y)
- Coal pile (covered, COALPILE, NSPS Subpart Y)
- Coal unloading by rail (ES-COALE1, NSPS Subpart Y) with associated bagfilter (CD1)
- Coal unloading by truck (ES-COALE2, NSPS Subpart Y) with associated bagfilter (CD2)
- Coal transport to storage (ES-COALFE3, NSPS Subpart Y) with associated bagfilter (CD3)
- Coal transport from storage (ES-COALE4, NSPS Subpart Y) with associated bagfilter (CD4)
- Coal mill feed bin (ES-COALE14, NSPS Subpart Y) with associated bagfilter (CD14)
- Coal mill feed bin (ES-COALE15, NSPS Subpart Y) with associated bagfilter (CD15)
- Coal mill feed transport (ES-COALE16, NSPS Subpart Y) with associated bagfilter (CD16)
- Fine coal bin (ES-COALE17, MACT Subpart LLL, NSPS Subpart Y) with associated bagfilter (CD17)
- Fine coal bin (ES-COALE18, MACT Subpart LLL, NSPS Subpart Y) with associated bagfilter (CD18)
- Coal mill (ES-COAL, NSPS Subpart Y) with associated bagfilter (CD44B) venting to main stack

The following provides a summary of limits and/or standards for the emission sources described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	10 percent opacity (For ES-COALE1, COALE2, COALFE3, COALE4, COALE14, COALE15, COALE16, ES-COAL)	15A NCAC 2D .0524 40 CFR Part 60, Subpart Y
	10 percent opacity (For ES-COALE17, COALE18, and ES-COAL)	15A NCAC 2D .0524 40 CFR Part 60, Subpart Y 15A NCAC 2D .1111 40 CFR Part 60, Subpart LLL
Fugitive emissions from building enclosures	10% opacity	15A NCAC 2D .0524 40 CFR Part 60, Subpart Y
Fugitive emissions from storage piles	Work practice standards	15A NCAC 2D .0524 40 CFR Part 60, Subpart Y
Particulate emissions (PM10/PM2.5)	Outlet grain loading not to exceed 0.01 gr/scf	15A NCAC 2D .0524 40 CFR Part 60, Subpart Y
	Outlet grain loading not to exceed 0.005 gr/scf	15A NCAC 2D .0530 PSD (BACT)
Toxic air pollutants	Modeled emission rates (State Enforceable Only) See Multiple Emissions Section 2.2B	15A NCAC 2D .1100

1. 15A NCAC 2D .0524, 40 CFR Part 60, Subpart Y “Standards of Performance For Coal Preparation Plants”

   The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards" (NSPS) as promulgated in 40 CFR Part 60 Subpart Y, including Subpart A "General Provisions."

   a. On and after the date on which the performance test required to be conducted 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 constructed after April 28, 2008 gases which exhibit 10 percent opacity or greater.

   b. The Permittee shall not cause to be discharged into the atmosphere from any mechanical vent on an affected facility gases that contain particulate matter in excess of 0.01 gr/dscf.

   c. Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the opacity limitations of 40 CFR §60.254(b)(1).

   d. Open storage piles including the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, shall prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions as specified in 40 CFR §60.254(c)(1) through (6).
      i. The fugitive coal dust emissions control plan shall identify and describe the control measures the Permittee will use to minimize fugitive coal dust emissions from each open storage pile.
      ii. For open coal storage piles, the fugitive coal dust emissions control plan shall require that one or more of the following control measures be used to minimize to the greatest extent practicable fugitive coal dust: Locating the source inside a partial enclosure, installing and operating a water spray or fogging system, applying appropriate chemical dust suppression agents on the source [when the provisions of 40 CFR §60.254 (c)(6) are met], use of a wind barrier, compaction, or use of a vegetative cover. The Permittee shall select, for inclusion in the fugitive coal dust emissions control plan, the control measure or measures that are most appropriate for site conditions. The plan shall also explain how the measure or measures selected are applicable and appropriate for site conditions. In addition, the plan shall be revised as needed to reflect any changing conditions at the source.
      iii. An affected facility that is required to have a fugitive coal dust emissions control plan may petition the Administrator to approve, for inclusion in the plan for the affected facility.

Testing [40 CFR §60.255]

e. The Permittee shall conduct an initial and periodic performance tests for the affected sources to demonstrate compliance with the standards in 40 CFR §60.254 within 60 days of achieving the maximum sustained production rate, but not later than 180 days after initial start-up.
   i. For each affected facility subject to a PM emissions standard, an initial performance test shall be performed. Thereafter, a new performance test shall be conducted according the following requirements, as applicable.
      (A) If the results of the most recent performance test demonstrate that emissions from the affected facility are greater than 50 percent of the applicable emissions standard, a new performance test shall be conducted within 12 calendar months of the date that the previous performance test was required to be completed.
      (B) If the results of the most recent performance test demonstrate that emissions from the affected facility are 50 percent or less of the applicable emissions standard, a new performance test shall be conducted within 24 calendar months of the date that the previous performance test was required to be completed.
      (C) A Permittee of an affected facility that has not operated for the 60 calendar days prior to the due date of a performance test is not required to perform the subsequent performance test until 30 calendar days after the next operating day.
   ii. For each affected facility subject to an opacity standard, an initial performance test shall be performed. Thereafter, a new performance test shall be conducted according the following requirements, as applicable.
      (A) If any 6-minute average opacity reading in the most recent performance test exceeds half the applicable opacity limit, a new performance test shall be conducted within 90 operating days of the date that the previous performance test was required to be completed.
      (B) If all 6-minute average opacity readings in the most recent performance test are equal to or less than half the applicable opacity limit, a new performance test shall be conducted within 12 calendar months of the date that the previous performance test was required to be completed.
      (C) The Permittee of an affected facility that is continuously monitoring scrubber parameters as specified in 40 CFR §60.256(b)(2) is exempt from the requirements in 40 CFR §60.255(b)(2)(i) and (ii) if opacity performance tests are conducted concurrently with (or within a 60-minute period of) PM performance tests.
   iii. If any affected coal processing and conveying equipment (e.g. breakers, crushers, screens, conveying systems), coal storage systems, or coal transfer and loading systems are enclosed in a building, and emissions from the building do not exceed any of the standards in 40 CFR §60.254 that apply to the affected facility, then the facility shall be deemed to be in compliance with such standards.

iv. Coal Mill Feed bins (ES-COALE14 and ES-COAL15) are exempted (each source has a controlled potential filterable PM emission rate of less than 1.1 tons per year) from the performance testing in 40 CFR §60.255(b)(1)(i) and (ii) of this section per 40 CFR 60.255(d) provided that the Permittee meets all of the conditions specified below:
   (A) PM emissions, as determined by the most recent performance test, are less than or equal to the applicable limit,
   (B) The control device manufacturer's recommended maintenance procedures are followed, and
   (C) All 6-minute average opacity readings from the most recent performance test are equal to or less than half the applicable opacity limit or the monitoring requirements in 40 CFR §60.255(e) and (f) are followed.

v. Coal Unloading System (ES-COALE2) shall meet the testing requirements of 40 CFR §60.255(h) as listed below and is exempt from 40 CFR §60.255(b)(1)(i) and (ii).
   (A) Conduct an initial performance test using Method 9 of Appendix A–4 of 40 CFR Part 60 according to the following requirements:
      (i) Opacity readings shall be taken during the duration of three separate truck dump events. Each truck dump event commences when the truck bed begins to elevate and concludes when the truck bed returns to a horizontal position.
      (ii) Compliance with the applicable opacity limit is determined by averaging all 15-second opacity readings made during the duration of three separate truck dump events.
   (B) Conduct monthly visual observations of all process and control equipment. If any deficiencies are observed, the necessary maintenance shall be performed as expeditiously as possible.
   (C) Conduct a performance test using Method 9 of Appendix A–4 of 40 CFR Part 60 at least once every 5 calendar years for each affected facility.

Recordkeeping/Monitoring/Reporting [40 CFR §60.258]

f. The Permittee shall maintain in a logbook (written or electronic) on-site and make it available upon request. The logbook shall record the following:
   i. 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.
   ii. 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.
   iii. The amount and type of coal processed each calendar month.
   iv. The amount of chemical stabilizer or water purchased for use in the coal preparation and processing plant.
   v. 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.

vi. Monthly certification that the fugitive coal dust emissions control plan was implemented as described. 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.

vii. For the purpose of reports required under 40 CFR §60.7(c), the Permittee that is subject to the provisions of this Subpart shall report semiannually all 6-minute average opacities that exceed the applicable standard.

g. The Permittee shall submit the results of initial performance tests to the Administrator or delegated authority, consistent with the provisions of section 60.8. The Permittee who elects to comply with the reduced performance testing provisions of 40 CFR 60.255(c) or (d) shall include in the performance test report identification of each affected facility that will be subject to the reduced testing. The Permittee electing to comply with 40 CFR §60.255(d) shall also include information that demonstrates that the control devices are identical.

h. After July 1, 2011, within 60 days after the date of completing each performance evaluation conducted to demonstrate compliance with this Subpart, the Permittee shall submit the test data to the EPA by successfully entering the data electronically into EPA's WebFIRE data base available at http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main. For performance tests that cannot be entered into WebFIRE (i.e., Method 9 of appendix A–4 of this part opacity performance tests) the Permittee of the affected facility shall mail a summary copy to United States Environmental Protection Agency; Energy Strategies Group; 109 TW Alexander DR; mail code: D243–01; RTP, NC 27711.

2. 15A NCAC 2D .1111, 40 CFR Part 63, Subpart LLL "National Emissions Standards For Hazardous Air Pollutants From the Portland Cement Manufacturing Industry" - Visible Emissions [40 CFR §63.1345]

- Fine coal bin (ES-COALE17, MACT Subpart LLL) with associated bagfilter (CD17)
- Fine coal bin (ES-COALE18, MACT Subpart LLL) with associated bagfilter (CD18)

a. Filterable particulate emissions (PM10/PM2.5) from the Fine Coal Bins shall be controlled by bagfilters (CD17, and CD18) with an outlet grain loading not to exceed 0.005 gr/scf.

b. <u>Monitoring/Recordkeeping/Reporting</u>:
The monitoring, recordkeeping, and reporting requirements for 15A NCAC 2D .1111, Subpart LLL shall be met by the monitoring, testing, recordkeeping, and reporting requirements listed in 15A NCAC 2D .0530. [See Section 2.1 C. 3. a. through e. of this Permit]

3. 15A NCAC 2D .0530 “Prevention of Significant Deterioration” – PM10/PM2.5
   a. To comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration”:

      - Filterable particulate emissions (PM10/PM2.5) from the Coal Handling System shall be controlled by bagfilters (CD1, 2, 3, 4, 14, 15, 16, 17, and 18) with an outlet grain loading not to exceed 0.005 gr/scf.

   b. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2602 and General Condition 18 of this Permit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

      Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

   c. Particulate emissions (PM10/PM2.5) from the Coal Handling System shall be controlled by bagfilters (ID Nos. CD1, 2, 3, 4, 14, 15, 16, 17, 18). To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there are no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
      i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
      ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

   d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record:
      i. the date and time of each recorded action;
      ii. the results of each inspection;
      iii. the results of any maintenance performed on the bagfilters; and
      iv. any variance from manufacturer’s recommendations, if any, and corrections made.

      Reporting [15A NCAC 02Q .0508(f)]

   e. The Permittee shall submit a semi-annual summary report of operations, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
      i. the monthly summary log of the Coal Handling System for the previous 17 months.
      ii. any deviations from monitoring requirements.

D. Paved Plant Roads (PLTRD), Storage piles (SP)
- Vehicular traffic on paved plant roads (ES-PLTRD)
- Coal/coke storage pile at the plant (ES-SPCoal1)
- Coal/coke storage pile at the plant (ES-SPCoal2)
- Blended stone pile at the plant (ES-SPBlend1)
- Blended stone pile at the plant (ES-SPBlend2)
- Mill scale storage pile at the plant (ES-SPMillscale)
- Bauxite storage pile at the plant (ES-SPBauxite)
- Bottom ash storage pile at the plant (ES-SPAsh)
- Limestone storage pile at the plant (ES-SPLimestone)
- Gypsum storage pile at the plant (ES-SPGypsum)

The following provides a summary of limits and/or standards for the emission sources described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate emissions (PM10/PM2.5)	Vacuum sweeping and/or water flushing of paved road surfaces	15A NCAC 2D .0530 PSD (BACT)
Fugitive dust emissions	Avoid fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. (State Enforceable Only) See Multiple Emissions Section 2.2A	15A NCAC 2D .0540

1. 15A NCAC 2D .0530 "Prevention of Significant Deterioration" – PM10/PM2.5

a. To comply with the best available control technology determination (BACT) pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration":

- Filterable particulate emissions (PM10/PM2.5) from the paved plant roads shall be controlled by vacuum sweeping and/or water flushing.

b. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2602 and General Condition 18 of this Permit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f)]

c. The Permittee shall maintain operation data from the vacuum sweeping and/or water flushing of paved roads on a daily basis and record in a monthly logbook.

Reporting [15A NCAC 2Q .0508(f)]

d. The Permittee shall submit a semi-annual summary report of operations, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the monthly summary log of vacuum sweeping and/or water flushing operations for the previous 17 months.

E. Emergency generator (Diesel-fired, 800 kW, 1072.8 hp, GEN-1)

The following provides a summary of limits and/or standards for the emission sources described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Sulfur dioxide	15 parts per million sulfur fuel content	15A NCAC 2D .0524 40 CFR Part 60, Subpart IIII
NMHC + NOx, HC, NOx, CO, PM	Purchase engine certified to meet the applicable engine design emission limits in accordance with NSPS Subpart IIII	15A NCAC 2D .0524 40 CFR Part 60, Subpart IIII
NOx PM10/PM2.5 SO_2 CO VOCs	Purchase engine certified to meet the applicable engine design emission limits in accordance with NSPS Subpart IIII	15A NCAC 2D .0530 PSD (BACT)
Hazardous air pollutants	Initial notification requirements and purchase engine certified to meet the applicable engine design emission limits in accordance with NSPS Subpart IIII	15A NCAC 2D .1111 40 CFR Part 63, Subpart ZZZZ
Toxic air pollutants	Modeled emission rates (State Enforceable Only) See Multiple Emissions Section 2.2B	15A NCAC 2D .1100

1. 15A NCAC 2D .0521"Control Of Visible Emissions"

Regulation Analysis:

a. Generator (GEN-1) will be installed after July 1, 1971, and is therefore subject to the State regulation 15A NCAC 2D .0521(d). Per this regulation visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period except that six-minute periods averaging more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.

Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

b. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of Diesel fuel in generator (GEN-1).

2. 15A NCAC 2D .0524, NSPS, 40 CFR Part 60, Subpart IIII, “Sulfur Dioxide Emissions”
The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart IIII “Standards of Performance for Stationary Compression Ignition Internal Combustion Engines”, including Subpart A "General Provisions." [15A NCAC 2D .0524]

   - GEN-1 (800 kW, 1072.8 brake horsepower, less than 10 liters per cylinder)

   Regulation Analysis:

   a. Diesel fuel sulfur content used in generator (GEN-1) shall not exceed 15 parts per million sulfur content.

   Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

   b. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of Diesel fuel in generator (GEN-1).
      i The Permittee that purchases an emergency generator that is less than 30 liters per cylinder shall purchase units that are certified by the manufacturer to meet the applicable engine design emission limits. {§60.4211(c)}.
      ii. The Permittee shall operate and maintain engines and control devices in accordance with the manufacturer’s written instructions or procedures developed by the Permittee that are approved by the engine manufacturer, over the life of the engine. {§60.4206 and §60.4211 (a)}.
      iv. No testing is required for units less than 30 liter per cylinder displacement that have been certified by the manufacturer to meet design limits.
      v. Install a nonresettable hour meter. [§60.4209(a)]

3. 15A NCAC 2D .0530 “Prevention of Significant Deterioration” – Particulate (PM10/PM2.5)/ SO_2/NOx emissions
   a. To comply with the best available control technology determination (BACT) pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration”:

      - Filterable particulate (PM10/PM2.5), SO_2, and NOx emissions shall be controlled by the purchase of an engine that is certified to meet the applicable engine design emission limits in accordance with NSPS Subpart IIII.

   b. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2602 and General Condition 18 of this Permit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530..

   Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]

   c. Monitoring, recordkeeping, and reporting requirements for 15A NCAC 2D .0530 shall be met by the 15A NCAC 2D .1111, Subpart IIII, monitoring, recordkeeping, and reporting requirements listed in Section 2.1 E. 2. a. through b. above.

4. 15A NCAC 2D .1111, 40 CFR Part 63, Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines

   - GEN-1 (800 kW, 1072.8 brake horsepower)

   a. General Provisions [40 CFR §63.6665]:
   The Permittee shall comply with the requirements of 40 CFR Part 63 Subpart A "General provisions," according to the applicability of Subpart A to such sources, as identified in Table No. 8 of Subpart ZZZZ, "Applicability of General Provisions to Subpart ZZZZ".

   b. Compliance/Notification Procedures [40 CFR §63.6645]
   Stationary RICE that are emergency generators are subject to limited requirements of Subpart ZZZZ and do not have to meet the requirements of Subpart ZZZZ and of Subpart A, except for the initial notification requirements.
   The Permittee of an affected source that has an initial startup before the effective date of a relevant standard under this part shall notify the Administrator in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after startup of the emergency generator and shall provide the following:

      i. The name and address of the Permittee;
      ii. The address (i.e., physical location) of the affected source;
      iii. An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date;
      iv. A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted;
      v. A statement of whether the affected source is a major source or an area source.
      vi. A statement that the generators have no additional requirements and explain the basis for the exclusion (for example, that the units operate exclusively as emergency stationary RICE).

   c. Recordkeeping Requirement For Applicability Determination [40 CFR §63.10(b)(3)]
   The applicability determination for exclusion of these generators from the requirements of 40 CFR Part 63, Subpart ZZZZ and Subpart A of this part, shall be maintained on site for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The analyses, or other information, that demonstrates the exemption from the requirements of Subpart ZZZZ and Part A of 40 CFR Part 63, shall be signed by the person making the determination.

F. Plant additives unloading and handling system and Raw Material Unloading & Handling

Plant additives unloading and handling system

- Additives hopper/feeder (ES-F1HF1MACT Subpart LLL, NSPS Subpart F)
- Additives belt conveyor transfer (ES-F1BCT, MACT Subpart LLL, NSPS Subpart F)
- Additives belt conveyor transfer (ES-F5, MACT Subpart LLL, NSPS Subpart F)
- Additives belt conveyor transfer (ES-F7, MACT Subpart LLL, NSPS Subpart F)
- Bottom Ash conveyor to silo (ES-F7C, MACT Subpart LLL, NSPS Subpart F)
- Bottom ash silo to enclosed belt (ES-F7D, MACT Subpart LLL, NSPS Subpart F)

Raw Material Unloading & Handling (RMH)

- Quarry blend belt to tripper belt (ES-RMHF3B, MACT Subpart LLL, NSPS Subpart F)
- Quarry blend tripper belt to piles (ES-RMHF3TB, MACT Subpart LLL, NSPS Subpart F)
- Quarry blend pile reclaimer (ES-RMHF3PR, MACT Subpart LLL, NSPS Subpart F)
- Quarry blend reclaimer to belt (ES-RMHF3R, MACT Subpart LLL, NSPS Subpart F)
- Additives belt to tripper belt (ES-RMHF3ABT, MACT Subpart LLL, NSPS Subpart F)
- Additives tripper belt to piles (ES-RMHF3ATB, MACT Subpart LLL, NSPS Subpart F)
- Additives pile reclaimer (ES-RMHF3APR, MACT Subpart LLL, NSPS Subpart F)
- Additives reclaimer to belt (ES-RMHF3RB, MACT Subpart LLL, NSPS Subpart F)
- Quarry blend belt conveyor transfer (ES-RMHF6BCT, MACT Subpart LLL, NSPS Subpart F)
- Quarry blend conveyor to silo (ES-RMHF7A, MACT Subpart LLL, NSPS Subpart F)
- Quarry blend silo to enclosed belt (ES-RMHF7B, MACT Subpart LLL, NSPS Subpart F)

The following provides a summary of limits and/or standards for the emission sources described above

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	10 percent opacity	15A NCAC 2D .0524 40 CFR Part 60, Subpart F 15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
Particulate emissions (PM10/PM2.5)	MACT Subpart LLL limits	15A NCAC 2D .0530 PSD (BACT)
Toxic air pollutants	Modeled emission rates (State Enforceable Only) See Multiple Emissions Section 2.2B	15A NCAC 2D .1100

1. 15A NCAC 2D .0524, 40 CFR Part 60, Subpart F “Standards of Performance for Portland Cement Plants” – Visible emissions
   The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart F “Standards of Performance for Portland Cement Plants”, including Subpart A "General Provisions." [40 CFR Part 60, Subpart F]

a. Emission Standard [40 CFR §60.62]:
10 percent opacity or less from each affected facility

b. Monitoring, Recordkeeping, and Reporting:
Monitoring, recordkeeping, and reporting requirements for 15A NCAC 2D .0524, Subpart F shall be met by the monitoring, recordkeeping, and reporting requirements listed in 15A NCAC 2D .1111, Subpart LLL, Section 2.1 F. 2. e. through h. below.

2. 15A NCAC 2D .1111, 40 CFR Part 63, Subpart LLL "National Emissions Standards For Hazardous Air Pollutants From the Portland Cement Manufacturing Industry" - Visible emissions
   a. The Permittee shall comply with all applicable provisions, including the reporting, record keeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart LLL "National Emission Standards For Hazardous Air Pollutants From the Portland Cement Manufacturing Industry", including Subpart A "General Provisions".

   b. Emission Standard [40 CFR §63.1345]:
   10 percent opacity or less from each transfer point

   c. Performance Testing Requirement [40 CFR §63.1349]
   Performance test results shall be documented in complete test reports that contain the information required below as well as all other relevant information. As described in 40 CFR §63.7(c)(2)(i), the site-specific plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.
      i. A brief description of the process and the air pollution control system;
      ii. Sampling location description(s);
      iii. A description of sampling and analytical procedures and any modifications to standard procedures;
      iv. Test results;
      v. Quality assurance procedures and results;
      vi. Records of operating conditions during the test, preparation of standards, and calibration procedures;
      vii. Raw data sheets for field sampling and field and laboratory analyses;
      viii. Documentation of calculations;
      ix. All data recorded and used to establish parameters for compliance monitoring; and
      x. Any other information required by the test method.

   d. The Permittee shall conduct opacity tests in accordance with Method 9 of Appendix A-4 to Part 60. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of (i) and (ii) below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.
      i. There are no individual readings greater than 10 percent opacity;
      ii. There are no more than three readings of 10 percent for the first 1-hour period.

e. Monitoring Requirements [40 CFR §63.1350]
The Permittee shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with 40 CFR §63.1347 for sources subject to 40 CFR §63.1345.

i. The plan shall be submitted to the Administrator for review and approval as part of the application for a Part 70 permit and shall include the following information:
   (A) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits of 40 CFR §§63.1343 through §63.1348;

ii. The Permittee shall conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 of 40 CFR Part 60. The performance test shall be conducted while the affected facility is in operation.
   (A) If no visible emissions are observed in six consecutive monthly tests for any affected source, the Permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
   (B) If no visible emissions are observed during the semi-annual test for any affected source, the Permittee may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
   (C) If visible emissions are observed during any Method 22 test, the Permittee shall conduct a 6-minute test of opacity in accordance with Method 9 of Appendix A-4 of 40 CFR Part 60. The Method 9 test shall begin within one hour of any observation of visible emissions.
   (D) The requirement to conduct Method 22 visible emissions monitoring shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. Totally enclosed conveying system transfer point shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
   (E) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the Permittee shall have the option to conduct a Method 22 performance test, of Appendix A-7 to 40 CFR Part 60 according to the requirements of 40 CFR §63.1350 (f)(1)(i) through (f)(1)(iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350 (f)(1)(vii)
   (F) If visible emissions from a building are monitored, the requirements of §63.1350 (f)(1)(i) through (f)(1)(iv) apply to the monitoring of the building, and the Permittee shall also test visible emissions from each side, roof and vent of the building for at least 10 minutes.

f. Notification Requirements [40 CFR §63.1353]
   i. The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to a Permittee of affected sources subject to 40 CFR Part 63, Subpart LLL are listed in Table 1 of this Subpart. If any State requires a notice that contains all of the information required in a notification listed in this section, the Permittee may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.
   ii. Each Permittee subject to the requirements of this subpart shall comply with the notification requirements in 40 CFR §63.9 as follows:
      (A) Initial notifications as required by 40 CFR §63.9(b) through (d). For the purposes of this subpart, a Title V or 40 CFR Part 70 permit application may be used in lieu of the initial notification required under 40 CFR §63.9(b), provided the same information is contained in the permit application as required by §63.9(b), and the State to which the permit application has been submitted has an approved operating permit program under part 70 of this chapter and has received delegation of authority from the EPA. Permit applications shall be submitted by the same due dates as those specified for the initial notification.
      (B) Notification of performance tests, as required by 40 CFR §§63.7 and 63.9(e).
      (C) Notification of opacity and visible emission observations required by 40 CFR §63.1349 in accordance with 40 CFR §§63.6(h)(5) and 63.9(f).
      (D) Notification of compliance status, as required by 40 CFR §63.9(h).

g. Recordkeeping Requirements [40 CFR §63.1355]
   i. The Permittee shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.
   ii. The Permittee shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3) of this Part; and
      (A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9;
      (B) All records of applicability determination, including supporting analyses; and
      (C) If the Permittee has been granted a waiver under 40 CFR §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

h. Reporting [40 CFR §63.1354]

i. The reporting provisions of Subpart A of 40 CFR Part 63, Subpart LLL that apply and those that do not apply to the Permittee of affected sources subject to this Subpart are listed in Table 1 of 40 CFR Part 63, Subpart LLL. If any State requires a report that contains all of the information required in a report listed in this section, the Permittee may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.

ii. The Permittee shall comply with the reporting requirements specified in 40 CFR §63.10 of the general provisions of this Part 63, Subpart A as follows:

(A) 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.

(B) 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.

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

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

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

(F) The Permittee shall submit a summary report semi-annually that contains the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include:

(1) All failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1350(a).

3. 15A NCAC 2D .0530 "Prevention of Significant Deterioration" – Particulate (PM10/PM2.5)
   a. To comply with the best available control technology determination (BACT) pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration":

      • Filterable particulate (PM10/PM2.5) emissions shall be controlled in accordance with MACT Subpart LLL limits

   b. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2602 and General Condition 18 of this Permit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

      Monitoring/Recordkeeping/Reporting [15A NCAC 2Q .0508(f)]
   c. Monitoring, testing, recordkeeping, and reporting requirements for 15A NCAC 2D .0530 shall be met by the 15A NCAC 2D .1111, Subpart LLL, monitoring, recordkeeping, and reporting requirements as listed in Section 2.1 F. 2. a. through h. of this Permit.

G. Raw Mill Handling System (RMHS), Clinker Handling System (CHS), and Finish Mills

Raw Mill Handling System (RMHS)
- Raw mill feed bin (ES-RMHSE5, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD5)
- Raw mill feed transport (ES-RMHSE6, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD6)
- Raw mill feed (ES-RMHSE7, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD7)
- Raw mill reject (ES-RMHSE8, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD8)
- Kiln dust bin (ES-RMHSE9, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD9)
- Raw mill transport to silo (ES-RMHSE10, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD10)
- Raw mill silo (ES-RMHSE11, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD11)
- Raw mill silo extraction (ES-RMHSE12, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD12)
- Kiln feed (ES-RMHSE13, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD13)

Clinker Handling System (CHS)
- Clinker discharge and cooler (ES-CHSE19, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD19)
- Clinker dome (ES-CHSE20, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD20)
- Off spec bin (ES-CHSE21, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD21)

Finish Mills (FM)

- Cement mill #1 feed bin (ES-FME22, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD22)
- Cement mill #2 feed bin (ES-FME23, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD23)
- Cement mill #1 feed (ES-FME24, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD24)
- Cement mill #1 recirculation bin (ES-FME25, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD25)
- Cement mill #1 reject (ES-FME26, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD26)
- Cement mill #1 transport (ES-FME27, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD27)
- Cement mill #2 feed (ES-FME28, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD28)
- Cement mill #2 recirculation bin (ES-FME29, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD29)
- Cement mill #2 reject (ES-FME30, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD30)
- Cement mill #2 transport (ES-FME31, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD31)
- Exhaust from finish mill #1 (ES-FME45A, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD45A)
- Exhaust from finish mill #2 (ES-FME45B, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD45B)
- Cement additive bin (ES-FME46, MACT Subpart LLL, NSPS Subpart F) with associate bagfilter (CD46)
- Cement additive intake (ES-FME47, MACT Subpart LLL, NSPS Subpart F) with associate bagfilter (CD47)
- Gypsum/limestone unloading (ESFMEF8TU, MACT Subpart LLL, NSPS Subpart F)
- Gypsum/limestone hopper/feeder (ES-FMF8HF, MACT Subpart LLL, NSPS Subpart F)
- Gypsum/limestone belt conveyor transfer (ES-FMF8BCT, MACT Subpart LLL, NSPS Subpart F)

The following table provides a summary of limits and/or standards for the emission sources described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible Emissions	10 percent opacity	15A NCAC 2D .0524 40 CFR Part 60, Subpart F 15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
Particulate emissions (PM10/PM2.5)	Bagfilter with outlet grain loading not to exceed 0.005 gr/scf	15A NCAC 2D .0530 PSD (BACT)
Toxic air pollutants	Modeled emission rates (State Enforceable Only) See Multiple Emissions Section 2.2B	15A NCAC 2D .1100

1. 15A NCAC 2D .0524, 40 CFR Part 60, Subpart F "Standards of Performance for Portland Cement Plants" – Visible emissions
   The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart F "Standards of Performance for Portland Cement Plants", including Subpart A "General Provisions."

   a. Emission Standard [40 CFR §60.62]:
      10 percent opacity or less from each affected facility

   b. Monitoring/Recordkeeping/Reporting:
      Monitoring, testing, recordkeeping, and reporting requirements for 15A NCAC 2D .0524, Subpart F shall be met by the monitoring, recordkeeping, and reporting requirements listed in 15A NCAC 2D .1111, Subpart LLL, Section 2.1 G. 2. a. through h. in this Permit.

2. 15A NCAC 2D .1111, 40 CFR Part 63, Subpart LLL "National Emissions Standards For Hazardous Air Pollutants From the Portland Cement Manufacturing Industry" - Visible Emissions [40 CFR §63.1348]
   a. The Permittee shall comply with all applicable provisions, including the reporting, record keeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart LLL "National Emission Standards For Hazardous Air Pollutants From the Portland Cement Manufacturing Industry", including Subpart A "General Provisions".

   b. Emission Standard [40 CFR §63.1345]:
      10 percent opacity or less from each transfer point

   c. Performance Testing Requirement [40 CFR §63.1349]
      Performance test results shall be documented in complete test reports that contain the information required below as well as all other relevant information. As described in 40 CFR §63.7(c)(2)(i), the site-specific plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.
      i. A brief description of the process and the air pollution control system;
      ii. Sampling location descriptions;
      iii. A description of sampling and analytical procedures and any modifications to standard procedures;
      iv. Test results;
      v. Quality assurance procedures and results;
      vi. Records of operating conditions during the test, preparation of standards, and calibration procedures;
      vii. Raw data sheets for field sampling and field and laboratory analyses;
      viii. Documentation of calculations;
      ix. All data recorded and used to establish parameters for compliance monitoring; and
      x. Any other information required by the test method.

d. The Permittee shall conduct opacity tests in accordance with Method 9 of Appendix A-4 to Part 60. The duration of the Method 9 performance test shall be 3 hours (30 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the conditions of (i) and (ii) below apply. For batch processes that are not run for 3-hour periods or longer, compile observations totaling 3 hours when the unit is operating.

   i. There are no individual readings greater than 10 percent opacity;
   ii. There are no more than three readings of 10 percent for the first 1-hour period.

e. Monitoring Requirements [40 CFR §63.1350]
   The Permittee shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with §63.1347 for sources subject to 40 CFR §63. 1345.
   i. The plan shall be submitted to the Administrator for review and approval as part of the application for a Part 70 permit and shall include the following information:
      (A) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits of 40 CFR §§63.1343 through §63.1348;
   ii. The Permittee shall conduct a monthly 10-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A-7 to Part 60. The performance test shall be conducted while the affected facility is in operation.
      (A) If no visible emissions are observed in six consecutive monthly tests for any affected source, the Permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
      (B) If no visible emissions are observed during the semi-annual test for any affected source, the Permittee may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
      (C) If visible emissions are observed during any Method 22 test, the Permittee shall conduct a 6-minute test of opacity in accordance with Method 9 of Appendix A-4 of 40 CFR Part 60. The Method 9 test shall begin within one hour of any observation of visible emissions.
      (D) The requirement to conduct Method 22 visible emissions monitoring shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. “Totally enclosed conveying system transfer point” shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.

(E) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the Permittee shall have the option to conduct a Method 22 performance test, of appendix A-7 to Part 60 according to the requirements of 40 CFR §63.1350 (f)(1)(i) through (f)(1)(iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350 (f)(1)(vii)

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

f Notification Requirements [40 CFR §63.1353]

i. The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to Permittee of affected sources subject to 40 CFR Part 63, Subpart LLL are listed in Table 1 of this Subpart. If any State requires a notice that contains all of the information required in a notification listed in this section, the Permittee may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

ii. Each Permittee subject to the requirements of this Subpart shall comply with the notification requirements in 40 CFR §63.9 as follows:

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

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

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

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

g. Recordkeeping Requirements [40 CFR §63.1355]

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

ii. The Permittee shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3) of this part; and
   (A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9;
   (B) All records of applicability determination, including supporting analyses; and
   (C) If the Permittee has been granted a waiver under 40 CFR §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

h. Reporting [40 CFR §63.1354]
   i. The reporting provisions of Subpart A of 40 CFR Part 63, Subpart LLL that apply and those that do not apply to a Permittee of affected sources subject to this Subpart are listed in Table 1 of 40 CFR Part 63, Subpart LLL. If any State requires a report that contains all of the information required in a report listed in this section, the Permittee may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.
   ii. The Permittee shall comply with the reporting requirements specified in 40 CFR §63.10 of the general provisions of this Part 63, Subpart A as follows:
      (A) 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.
      (B) 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.
      (C) As required by 40 CFR §63.10(d)(4), the Permittee of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 CFR §63.6(i) shall submit such reports by the dates specified in the written extension of compliance.
      (D) As required by 40 CFR §63.10(d)(5), if actions taken by a Permittee during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR §63.6(e)(3), the Permittee shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and
      (E) Any time an action taken by a Permittee during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the Permittee shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the Permittee or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

(F) The Permittee shall submit a summary report semi-annually which contains the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include:
(1) All failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1350(a).

3. 15A NCAC 2D .0530 "Prevention of Significant Deterioration" – PM10/PM2.5
   a. To comply with the best available control technology determination (BACT) pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration":

      • Filterable particulate emissions (PM10/PM2.5) from the Raw Mill Handling System (RMHS), Clinker Handling System (CHS), and the Finish Mills shall be controlled by bagfilters with an outlet grain loading not to exceed 0.005 grains/scf

   b. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2602 and General Condition 18 of this Permit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

      Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]
   c. Particulate emissions (PM10/PM2.5) from the Raw Mill Handling System (RMHS), Clinker Handling System (CHS), and the Finish Mills shall be controlled by bagfilters. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
      i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
      ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

   d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
      i. the date and time of each recorded action;
      ii. the results of each inspection;
      iii. the results of any maintenance performed on the bagfilters; and
      iv. any variance from manufacturer's recommendations, if any, and corrections made.

      Reporting [15A NCAC 02Q .0508(f)]
   e. The Permittee shall submit a semi-annual summary report of operations, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
      i. the monthly summary log of the Raw Mill Handling System (RMHS), Clinker Handling System (CHS), and Finish Mills System for the previous 17 months.

ii. any deviations from monitoring requirements.

H. Cement Handling, Storage, and Loadout (CHSL)

- Cement dome, MACT Subpart LLL (ES-CHSLE32, NSPS Subpart F) with associate bagfilter (CD32)
- Cement dome extraction rail (ES-CHSLE33, MACT Subpart LLL, NSPS Subpart F) with associate bagfilter (CD33)
- Cement dome extraction truck (ES-CHSLE34, MACT Subpart LLL, NSPS Subpart F) with associate bagfilter (CD34)
- Cement silo (ES-CHSLE40, MACT Subpart LLL, NSPS Subpart F) with associate bagfilter (CD40)
- Cement silo extraction (ES-CHSLE41, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CD41)
- Cement transport (ES-CHSLE42, MACT Subpart LLL, NSPS Subpart F) with associate bagfilter (CD42)
- Packaging plant (ES-CHSLE43, MACT Subpart LLL, NSPS Subpart F) with associate bagfilter (CD43)
- Cement silo (ES-4, MACT Subpart LLL, NSPS Subpart F) with associate bagfilter (CDP43)
- Screw conveyor and truck load-out spout (ESR33, MACT Subpart LLL, NSPS Subpart F) with associated bagfilter (CDP30)
- Railcar/truck unloading system (ES-1, screw/pneumatic) in partially enclosed building with associated bagfilter (CDP1)

The following provides a summary of limits and/or standards for the emission sources described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	10 percent opacity	15A NCAC 2D .0524 40 CFR Part 60, Subpart F 15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
Particulate emissions (PM10/PM2.5)	Bagfilter with outlet grain loading not to exceed 0.005 gr/scf (for CD32, 33, 34, 40, 41, 42, 43, P43, and P30 only)	15A NCAC 2D .0530 PSD (BACT)
Toxic air pollutants	Modeled emission rates (State Enforceable Only) See Multiple Emissions Section 2.2B	15A NCAC 2D .1100

1. 15A NCAC 2D .0524, 40 CFR Part 60, Subpart F “Standards of Performance for Portland Cement Plants” – Visible emissions
   The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart F “Standards of Performance for Portland Cement Plants”, including Subpart A "General Provisions."

   a. Emission Standard [40 CFR §60.62]:
      10 percent opacity or less from each affected facility

b. Monitoring/Recordkeeping/Reporting:
Monitoring, testing, recordkeeping, and reporting requirements for 15A NCAC 2D .0524, Subpart F shall be met by the monitoring, recordkeeping, and reporting requirements listed in 15A NCAC 2D .1111, Subpart LLL, Section 2.1 H. 2. a. through h. below.

2. 15A NCAC 2D .1111, 40 CFR Part 63, Subpart LLL "National Emissions Standards For Hazardous Air Pollutants From the Portland Cement Manufacturing Industry" - Visible Emissions [40 CFR §63.1348]
   a. The Permittee shall comply with all applicable provisions, including the reporting, record keeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart LLL "National Emission Standards For Hazardous Air Pollutants From the Portland Cement Manufacturing Industry", including Subpart A "General Provisions.

   b. Visible Emission Standard [40 CFR §63.1348]:
   10 percent opacity or less from each affected facility

   c. Performance Testing Requirement [40 CFR §63.1349]
   The Permittee of an affected source subject 40 CFR Part 63, Subpart LLL shall demonstrate initial compliance with the emission limits of 40 CFR §63.1343 and §§63.1345 through 63.1348 using the test methods and procedures listed below and in section 40 CFR §63.7. Performance test results shall be documented in complete test reports that contain the information required below as well as all other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.
      i. A brief description of the process and the air pollution control system;
      ii. Sampling location descriptions;
      iii. A description of sampling and analytical procedures and any modifications to standard procedures;
      iv. Test results;
      v. Quality assurance procedures and results;
      vi. Records of operating conditions during the test, preparation of standards, and calibration procedures;
      vii. Raw data sheets for field sampling and field and laboratory analyses;
      viii. Documentation of calculations;
      ix. All data recorded and used to establish parameters for compliance monitoring; and
      x. Any other information required by the test method

      Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR §63.1349(a), shall be a violation of the standard.

d. The Permittee of any affected source subject to limitations on opacity under 40 CFR Part 63, Subpart LLL, that is not subject to 40 CFR §63.1349(b)(1) of this section, shall demonstrate initial compliance with the affected source opacity limit by conducting a test in accordance with Method 9 of appendix A to Part 60 of this chapter. The performance test shall be conducted under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with §63.7(e). The maximum 6-minute average opacity exhibited during the test period shall be used to determine whether the affected source is in initial compliance with the standard.

The duration of the Method 9 performance test shall be 3 hours (thirty 6-minute averages), except that the duration of the Method 9 performance test may be reduced to 1 hour if the following conditions apply:

i. There are no individual readings greater than 10 percent opacity;
ii. There are no more than three readings of 10 percent for the first 1-hour period.

e. Monitoring Requirements [40 CFR §63.1350]
The Permittee of an affected source subject to a limitation on opacity under 40 CFR §63.1348 shall monitor opacity in accordance with the operation and maintenance plan developed in accordance with the following:

i. The Permittee shall prepare for each affected source subject to the provisions of 40 CFR Part 63, Subpart LLL, a written operations and maintenance plan. The plan shall be submitted to the Administrator for review and approval as part of the application for a Part 70 permit and shall include the following information:
   (A) Procedures for proper operation and maintenance of the affected source and air pollution control devices in order to meet the emission limits and operating limits of 40 CFR §63.1348;
   (B) Procedures to be used to periodically monitor affected sources subject to opacity standards under 40 CFR §63.1348. Such procedures shall include the following provisions:
      (1) The Permittee shall conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to 40 CFR Part 60. The test shall be conducted while the affected source is in operation.
      (2) If no visible emissions are observed in six consecutive monthly tests for any affected source, the Permittee may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.
      (3) If no visible emissions are observed during the semi-annual test for any affected source, the Permittee may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the Permittee shall resume testing of that affected source on a monthly basis and maintain that schedule until no visible emissions are observed in six consecutive monthly tests.

(4) If visible emissions are observed during any Method 22 test, the Permittee shall conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to Part 60 of this chapter. The Method 9 test shall begin within one hour of any observation of visible emissions.

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

(6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the Permittee shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of 40 CFR §63.1350 (a)(4)(i) through (iv) for each such conveying system transfer point located within the building, or for the building itself, according to 40 CFR §63.1350 (a)(4)(vii).

(7) If visible emissions from a building are monitored, the requirements of §63.1350 (a)(4)(i) through (iv) of this section apply to the monitoring of the building, and the Permittee shall also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test shall be conducted under normal operating conditions.

f. Notification Requirements [40 CFR §63.1353]

i. The notification provisions of 40 CFR Part 63, Subpart A that apply and those that do not apply to owners and operators of affected sources subject to 40 CFR Part 63, Subpart LLL are listed in Table 1 of this Subpart. If any State requires a notice that contains all of the information required in a notification listed in this section, the Permittee may send the Administrator a copy of the notice sent to the State to satisfy the requirements of this section for that notification.

ii. Each Permittee that is subject to the requirements of this subpart shall comply with the notification requirements in §63.9 as follows:

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

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

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

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

g. Reporting [40 CFR §63.1354]

i. The reporting provisions of Subpart A of 40 CFR Part 63, Subpart LLL that apply and those that do not apply to owners or operators of affected sources subject to this Subpart are listed in Table 1 of 40 CFR Part 63, Subpart LLL. If any State requires a report that contains all of the information required in a report listed in this section, the Permittee may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.

ii. The Permittee of an affected source shall comply with the reporting requirements specified in 40 CFR §63.10 of the general provisions of this Part 63, Subpart A as follows:

(A) 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.

(B) 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.

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

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

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

(F) The Permittee shall submit a summary report semi-annually which contains the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include:

(1) All failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1350(a).

h. Recordkeeping Requirements [40 CFR §63.1355]
   i. The Permittee shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 CFR §63.10(b)(1). The files shall be retained for at least five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. At a minimum, the most recent two years of data shall be retained on site. The remaining three years of data may be retained off site. The files may be maintained on microfilm, on a computer, on floppy disks, on magnetic tape, or on microfiche.
   ii. The Permittee shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3) of this part; and
      (A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9;
      (B) All records of applicability determination, including supporting analyses; and
      (C) If the Permittee has been granted a waiver under 40 CFR §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

3. 15A NCAC 2D .0530 "Prevention of Significant Deterioration"
   a. To comply with the best available control technology determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration"

      • Filterable particulate emissions (PM10/PM2.5) from the Cement Handling and Loadout System shall be controlled by bagfilters (for CD32, 33, 34, 40, 41, 42, 43, and P30 only) with an outlet grain loading not to exceed 0.005 gr/scf.

   b. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2602 and General Condition 18 of this Permit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

      Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]
   c. Particulate matter emissions from the Cement Handling, Storage, and Loadout (CHSL) System shall be controlled by bagfilters. To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
      i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
      ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   i. the date and time of each recorded action;
   ii. the results of each inspection;
   iii. the results of any maintenance performed on the bagfilters; and
   iv. any variance from manufacturer's recommendations, if any, and corrections made.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a semi-annual summary report of operations, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. The report shall contain the following:
   i. The monthly summary log of the Cement Handling, Storage, and Loadout (CHSL) System for the previous 17 months.
   ii. Any deviations from monitoring requirements.

I. Kiln System: One coal/petroleum coke-fired, (distillate fuel used for startup only) multi-stage preheater-precalciner kiln @ 675 million Btu per hour heat input capacity with inline raw mill, coal mill, alkali bypass and inline clinker cooler with associated selective non-catalytic reduction (SNCR, CD44N), one bagfilter (CD44A), one carbon injection system/bagfilter (CD44D), one coal mill bagfilter (CD44B), one preheater bypass bagfilter (CD44C), and one wet scrubber (CD44S)

The following provides a summary of limits and/or standards for the emission source s described above

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate emissions (PM10/PM2.5)	Combined filterable particulate emissions from the kiln/inline raw mill/ inline clinker cooler main stack shall not exceed PM10/PM2.5 emissions as calculated by the following equation: $PM_{alt} = \frac{0.0008 \times 1.65 \times (Q_k + Q_c)}{7000}$	15A NCAC 2D .0524 40 CFR Part 60, Subpart F
		15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
		15A NCAC 2D .0530 PSD (BACT)
Particulate emissions (Condensible PM10/PM2.5)	50 percent removal across the wet scrubber using test Method 202	15A NCAC 2D .0530 PSD (BACT)

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The following provides a summary of limits and/or standards for the emission source s described above. – continued-

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate emissions (PM10/PM2.5) (startup/shutdown)	Filterable particulate emissions shall not exceed 0.0008 gr/dscf, 7-day rolling average, as determined by a PM CEMS	15A NCAC 2D .0530 PSD (BACT)
		15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
Visible emissions	20 percent or Continuous Emissions Monitor	15A NCAC 2D .0524 40 CFR Part 60, Subpart F
Sulfur dioxide	Combined emissions from the kiln/inline raw mill/inline clinker cooler/ coal mill system shall not exceed 0.4 lbs per ton of clinker, 30 day rolling average as measured by a Continuous Emissions Monitor or the Permittee shall demonstrate a 90 percent emissions reduction across the SO_2 control device	15A NCAC 2D .0524 40 CFR Part 60, Subpart F
		15A NCAC 2D .0530 PSD (BACT)
	Combined emissions from the kiln/inline raw mill/inline clinker cooler/coal mill system shall not exceed 173 lbs/hr	40 CFR 51.166(k) National Ambient Air Quality Standards
Nitrogen oxides	Combined emissions from the kiln/inline raw mill/inline clinker cooler/coal mill system shall not exceed 1.50 pounds per ton clinker, 30 day rolling average as measured by a Continuous Emissions Monitor	15A NCAC 2D .0524 40 CFR Part 60, Subpart F
	Combined emissions from the kiln/inline raw mill/inline clinker cooler/coal mill system shall not exceed 1.40 pounds per ton clinker, 30 day rolling average as measured by a Continuous Emissions Monitor	15A NCAC 2D .0530 PSD (BACT)
	Combined emissions from the kiln/inline raw mill/inline clinker cooler/coal mill system shall not exceed 700 lbs/hr	40 CFR 51.166(k) National Ambient Air Quality Standards
Carbon monoxide	Combined emissions from the kiln/inline raw mill/inline clinker cooler/coal mill shall not exceed 2.80 lbs per ton of clinker, 30 day rolling average as measured by a Continuous Emissions Monitor	15A NCAC 2D .0530 PSD (BACT)
Volatile organic compounds (VOCs)	Combined emissions from the kiln/inline raw mill/inline clinker cooler/coal mill shall not exceed 0.16 lbs per ton of clinker, 30 day rolling average as measured by a Continuous Emissions Monitor	15A NCAC 2D .0530 PSD (BACT)
GHGs	Combined emissions from the kiln/inline raw mill/inline clinker cooler/coal mill/emergency generator shall not exceed 0.91 lbs CO_{2e} per ton of clinker, 12-month calendar average, in accordance with 40 CFR Part 98	15A NCAC 2D .0530 PSD (BACT)
Dioxins and Furans	Combined emissions from the kiln/inline raw mill/clinker cooler/coal mill shall not exceed 0.2 ng/dscm (TEQ) on a dry basis, corrected to 7 percent oxygen. If the average temperature at the inlet to the particulate matter control device is 400 degrees F or less, the limit is changed to 0.4 ng/dscm (TEQ).	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL

-Table continued on the next page-

The following provides a summary of limits and/or standards for the emission source s described above. – continued-

Regulated Pollutant	Limits/Standards	Applicable Regulation
Total hydrocarbons (THC)	24 ppmvd, 30 day rolling average, during normal operation, corrected to 7 percent oxygen, measured as propane using a CEMs 24 ppmvd, 7 day rolling average, during startup and shutdown, uncorrected oxygen, measured as propane using a CEMs Alternative limit of 9 ppmvd for total HAPs	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
Hydrogen chloride (HCl)	3 ppmvd, 30 day rolling average, during normal operation 3 ppmvd, 7-day rolling average, during startup and shutdown	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
Mercury	Combined emissions from the kiln/inline raw mill/clinker cooler/coal mill shall not exceed 21 lbs per million tons of clinker, 30 day rolling average, during normal operation Combined emissions from the kiln/inline raw mill/clinker cooler/coal mill shall not exceed 4 ug/dscm, 7-day rolling average, during startup and shutdown Both limits measured by CEMs	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
Toxic air emissions	Modeled emission rates (State Enforceable Only, See Multiple Emissions Section 2.2B)	15A NCAC 2D .1100

1. 15A NCAC 2D .0524, 40 CFR Part 60, Subpart F “Standards of Performance for Portland Cement Plants”
   The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart F “Standards of Performance for Portland Cement Plants”, including Subpart A "General Provisions." [40 CFR Part 60, Subpart F]

   If the Permittee demonstrates compliance with any applicable emission limit through performance stack testing or other emissions monitoring, they shall develop a site-specific monitoring plan according to the requirements in 40 CFR §60.63(i)(1) through (4). This requirement also applies to the Permittee who petitions the EPA Administrator for alternative monitoring parameters under 40 CFR §60.63 and 40 CFR §63.8(f).

a. PM10/PM2.5 Emission Standard [40 CFR §60.61]:
The filterable particulate (PM10/PM2.5) emission standard for 15A NCAC 2D .0524, NSPS Subpart F shall be met by compliance with the particulate (PM10/PM2.5) standard for 15A NCAC 2D .1111, MACT Subpart LLL. [See Section 2.1 I. 3. a. i. of this Permit]

Monitoring, recordkeeping, and reporting requirements for 15A NCAC 2D .0524, NSPS Subpart F shall be met by the monitoring, recordkeeping, and reporting requirements listed in 15A NCAC 1111, MACT Subpart LLL, [See Section 2.1 I. 3. d through g of this Permit].

b. Visible Emissions Standard [40 CFR §60.62(a)(2)]:
The visible emissions standard for 15A NCAC 2D .0524, NSPS Subpart F shall be met by operating a PM Continuous Emission Monitor (CEM) in accordance with 15A NCAC 2D .1111, MACT Subpart LLL.

Monitoring, recordkeeping, and reporting requirements for 15A NCAC 2D .0524, NSPS Subpart F shall be met by the monitoring, recordkeeping, and reporting requirements listed in 15A NCAC 1111, MACT Subpart LLL. [See Section 2.1 I. 3. d. through g. of this Permit]

c. NOx Emission Standard [40 CFR §60.62(a)(3)]:
Emissions shall not exceed 1.5 lbs/ton of clinker except this limit does not apply to any alkali bypass installed on the kiln. An operating day includes all valid data obtained in any daily 24-hour period during which the kiln operates and excludes any measurements made during the daily 24-hour period when the kiln was not operating.

Monitoring Requirements [40 CFR 60.63] – NOx

i. Clinker Production Requirements
   (A) Clinker production requirements for NOx emissions shall be met in accordance with the clinker production requirements of 15A NCAC 2D .1111 MACT Subpart LLL. [See Section 2.1 I. 3. d. ii. of this Permit]
   (B) The Permittee shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration by volume of NO_X emissions into the atmosphere for any kiln subject to the NO_X emissions limit in §60.62(a)(3). If the kiln has an alkali bypass, NO_X emissions from the alkali bypass do not need to be monitored, and NO_X emission monitoring of the kiln exhaust may be done upstream of any co-mingled alkali bypass gases.
   (C) The Permittee shall install, operate, and maintain according to Performance Specification 2 (40 CFR Part 60, Appendix B) and the requirements in 40 CFR §60.63(f)(1) through (5) each CEMS required under 40 CFR §60.63(d) as follows:
      (1) The span value of each NO_X monitor shall be set at 125 percent of the maximum estimated hourly potential NO_X emission concentration that translates to the applicable emission limit at full clinker production capacity.

(2) The Permittee shall conduct performance evaluations of each NO_X monitor according to the requirements in §60.13(c) and Performance Specification 2 of Appendix B to Part 60. The Permittee shall use Methods 7, 7A, 7C, 7D, or 7E of Appendix A–4 of 40 CFR Part 60 for conducting the relative accuracy evaluations. The method ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 40 CFR §60.17) is an acceptable alternative to EPA Method 7 or 7C of Appendix A–4 of 40 CFR Part 60.

(3) The Permittee shall comply with the quality assurance requirements in Procedure 1 of Appendix F to Part 60 for each monitor, including quarterly accuracy determinations for monitors, and daily calibration drift tests.

(D) For each CEMS required under 40 CFR §60.63(d):

(1) The Permittee shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments).

(2) The Permittee shall not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. 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. A Permittee shall use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(3) The Permittee shall meet the requirements of 40 CFR §60.13(h) when determining the 1-hour averages of emissions data.

(E) The Permittee shall install, operate, calibrate, and maintain instruments for continuously measuring and recording the pollutant per mass flow rate to the atmosphere for each kiln subject to the NO_X emissions limit in 40 CFR §60.62(a)(3) according to the following requirements:

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

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

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

(4) The flow rate monitoring system shall be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in 40 CFR §60.63(h)(2).

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

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

(7) The flow rate sensor shall have provisions to determine the daily zero and upscale calibration drift (CD). [see sections 3.1 and 8.3 of Performance Specification 2 in Appendix B to Part 60]
   (a) Conduct the CD tests at two reference signal levels, zero (e.g., 0 to 20 percent of span) and upscale (e.g., 50 to 70 percent of span).
   (b) The absolute value of the difference between the flow monitor response and the reference signal shall be equal to or less than 3 percent of the flow monitor span.

(8) The Permittee shall perform an initial relative accuracy test of the flow rate monitoring system according to section 8.2 of Performance Specification 6 of Appendix B to Part 60 of the chapter, with the exceptions noted in 40 CFR §60.63(h)(8)(i) and (ii).
   (a) The relative accuracy test is to evaluate the flow rate monitoring system alone rather than a continuous emission rate monitoring system.
   (b) The relative accuracy of the flow rate monitoring system shall be no greater than 10 percent of the mean value of the reference method data.

(9) The Permittee shall verify the accuracy of the flow rate monitoring system at least once per year by repeating the relative accuracy test specified in 40 CFR §60.63(h)(8).

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

d. Sulfur Dioxide Emission Standard [40 CFR §60.62(a)(4)]:
Emissions shall not exceed 0.4 pounds of sulfur dioxide (SO_2) per ton of clinker on a 30-operating day rolling average unless the Permittee is demonstrating a 90 percent SO_2 emissions reduction measured across the SO_2 control device. An operating day includes all valid data obtained in any daily 24-hour period during which the kiln operates, and excludes any measurements made during the daily 24-hour period when the kiln was not operating.

Monitoring Requirements [40 CFR 60.63] – Sulfur dioxide

i. Clinker Production Requirements

(A) Clinker production requirements for sulfur dioxide emissions shall be met in accordance with the clinker production requirements of 15A NCAC 2D .1111 MACT Subpart LLL. [See Section 2.1 I. 3. d. ii of this Permit]

(B) The Permittee shall install, operate, calibrate, and maintain an instrument for continuously monitoring and recording the concentration by volume of SO_2 emissions into the atmosphere for any kiln subject to the SO_2 emissions limit in 40 CFR §60.62(a)(4). If the Permittee is complying with the alternative 90 percent SO_2 emissions reduction emission limit, then they shall also continuously monitor and record the concentration by volume of SO_2 present at the wet scrubber inlet.

(C) The Permittee shall install, operate, and maintain according to Performance Specification 2 (40 CFR Part 60, Appendix B) and the requirements in 40 CFR §60.63(f)(1) through (5) each CEMS required under 40 CFR §60.63(e) as follows:

(1) The span value for the SO_2 monitor shall be set at 125 percent of the maximum estimated hourly potential SO_2 emission concentration that translates to the applicable emission limit at full clinker production capacity.

(2) The Permittee shall conduct performance evaluations of each SO_2 monitor according to the requirements in §60.13(c) and Performance Specification 2 of Appendix B to 40 CFR Part 60. The Permittee shall use Methods 6, 6A, or 6C of Appendix A–4 to Part 60 for conducting the relative accuracy evaluations. The method ASME PTC 19.10–1981, "Flue and Exhaust Gas Analyses," (incorporated by reference—see 40 CFR §60.17) is an acceptable alternative to EPA Method 6 or 6A of Appendix A–4 of 40 CFR Part 60.

(3) The Permittee shall comply with the quality assurance requirements in Procedure 1 of Appendix F to Part 60 for each monitor, including quarterly accuracy determinations for monitors, and daily calibration drift tests.

(D) For each CEMS required under 40 CFR §60.63(e):

(1) The Permittee shall operate the monitoring system and collect data at all required intervals at all times the affected source is operating, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments).

(2) The Permittee shall not use data recorded during the monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. 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 shall use all the data collected during all other periods in assessing the operation of the control device and associated control system.

(2) The Permittee shall meet the requirements of 40 CFR §60.13(h) when determining the 1-hour averages of emissions data.

(E) The Permittee shall install, operate, calibrate, and maintain instruments for continuously measuring and recording the pollutant per mass flow rate to the atmosphere for each kiln subject to the SO_2 emissions limit in §60.62(a)(4) according to the following requirements:

(1) The Permittee shall install each sensor of the flow rate monitoring system in a location that provides representative measurement of the exhaust gas flow rate at the sampling location of the SO_2 CEMS, taking into account the manufacturer's recommendations. The flow rate sensor is that portion of the system that senses the volumetric flow rate and generates an output proportional to that flow rate.

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

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

(4) The flow rate monitoring system shall be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in 40 CFR §60.63(h)(2) of this section.

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

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

(7) The flow rate sensor shall have provisions to determine the daily zero and upscale calibration drift (CD) (see sections 3.1 and 8.3 of Performance Specification 2 in Appendix B to Part 60 of this chapter for a discussion of CD).

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

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

(8) The Permittee shall perform an initial relative accuracy test of the flow rate monitoring system according to section 8.2 of Performance Specification 6 of Appendix B to 40 CFR Part 60, with the exceptions noted in 40 CFR §60.63(h)(8)(i) and (ii).

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

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

(9) The Permittee shall verify the accuracy of the flow rate monitoring system at least once per year by repeating the relative accuracy test specified in 40 CFR §60.63(h)(8).

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

2. 15A NCAC 2D .0530 "Prevention of Significant Deterioration (PSD)"
   a. In order to comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration" – Particulate PM10/PM2.5:
      - Filterable particulate (PM10/PM2.5) shall be controlled from the Kiln System (Coal/petroleum coke-fired preheater/precalciner kiln with inline raw mill and inline clinker cooler) such that emissions shall not exceed 104 tons per consecutive 12-month period
      - Clinker production shall not exceed 2,190,000 tons per consecutive 12-month period
      - Filterable particulate (PM10/PM2.5) shall be controlled by a bagfilter with an outlet grain loading not to exceed 0.0008 gr/dscf during startup/shutdown, 7 day rolling average
      - Filterable particulate (PM10/PM2.5) emissions shall be limited according to the following equation:

$$PM_{alt} = \frac{0.0008 \times 1.65 \times (Q_k + Q_c)}{7000}$$

Where: P_{alt} = Calculated particulate emission (lbs/ton clinker) limit when kiln exhaust and clinker cooler exhaust are combined
0.0008 = PM exhaust concentration (gr/dscf) where kiln exhaust and clinker cooler exhaust are not combined
1.65 = Conversion factor of lb feed per lb clinker
Q_k = The exhaust flow of the kiln (dscf/ton raw feed)
Q_c = The exhaust flow of the clinker cooler (dscf/ton raw feed)
7000 = grains per pound

   b. In order to comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration" – Condensible particulate (PM10/PM2.5):
      - Clinker production shall not exceed 2,190,000 tons per consecutive 12-month period
      - Condensible particulate (PM10/PM2.5) shall be controlled with a wet scrubber having a minimum 50 percent removal efficiency in accordance with the General Emissions Testing and Reporting Requirements as listed in Section 3.0, Condition 18 of this Permit.

c. In order to comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration"- SO_2:
- SO_2 emissions shall be controlled from the Kiln System (Coal/petroleum coke-fired preheater/precalciner kiln with inline raw mill and inline clinker cooler) such that emissions shall not exceed 438 tons per consecutive 12-month period,
- Wet scrubber (aqueous alkaline solution)
- Clinker production shall not exceed 2,190,000 tons per consecutive 12-month period,
- SO_2 emissions shall not exceed 0.4 lbs/ton clinker, 30 day rolling average, as measured using a Continuous Emission Rate Monitoring System meeting Performance Standards - PS 2 or the Permittee shall demonstrate a 90 percent SO_2 emissions reduction across the SO_2 control device.

d. In order to comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration"- NOx:
- NOx emissions shall be controlled from the Kiln System (Coal/petroleum coke-fired preheater/precalciner kiln with inline raw mill and inline clinker cooler) such that emissions shall not exceed 1,643 tons per consecutive 12-month period,
- NOx emissions shall be controlled by the use of indirect firing, low NOx burners, staged combustion, and selective non catalytic reduction (ammonia)
- Clinker production shall not exceed 2,190,000 tons per consecutive 12-month period,
- NOx emissions shall not exceed 1.5 lbs/ton clinker, 30 day rolling average, as measured using a Continuous Emission Rate Monitoring System meeting Performance Specification - PS 2.

e. In order to comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration"- VOCs:
- VOC emissions shall be controlled from the Kiln System (Coal/petroleum coke-fired preheater/precalciner kiln with inline raw mill and inline clinker cooler) such that emissions shall not exceed 175 tons per consecutive 12-month period.
- Clinker production shall not exceed 2,190,000 tons per consecutive 12-month period
- VOC emissions shall be controlled by good combustion practices
- VOC emissions shall not exceed 0.16 lbs/ton clinker, 30 day rolling average, as measured using a Continuous Emission Rate Monitoring System meeting Performance Specification - PS 2

f. In order to comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration"- GHGs:
- GHG emissions shall be controlled from the Kiln System {Coal/petroleum coke-fired preheater/precalciner kiln with inline raw mill and inline clinker cooler} such that emissions shall not exceed 1,895,900 tons CO_{2e} per consecutive 12-month period.
- Clinker production shall not exceed 2,190,000 tons per consecutive 12-month period.
- GHG emissions shall not exceed 0.91 lbs/ton clinker, 12-month calendar average, determined with procedures used for reporting GHG emissions pursuant to 40 CFR Part 98.

g. In order to comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration"- CO:
   - CO emissions shall be controlled from the Kiln System {Coal/petroleum coke-fired preheater/precalciner kiln with inline raw mill and inline clinker cooler} such that emissions shall not exceed 3,066 tons per consecutive 12-month period.
   - Clinker production shall not exceed 2,190,000 tons per consecutive 12-month period
   - CO emissions shall be controlled by good combustion practices
   - CO emissions shall not exceed 2.80 lbs/ton clinker, 30 day rolling average, as measured using a Continuous Emission Rate Monitoring System meeting Performance Specification – PS4B

h. If emission testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2602 and General Condition 18 of this Permit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

i. The maximum sulfur content of any coal or pet coke burned in the preheater-precalciner/kiln system shall not exceed 5.0 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if the sulfur content of the coal or pet coke exceeds this limit.
   i. To assure compliance, the Permittee shall monitor the sulfur content of the coal and/or pet coke by using coal supplier certification per total shipment received. The coal supplier certification shall be recorded in a logbook (written or electronic format) per total shipment and include the following information:
      (A) the name of the coal and/or pet coke supplier;
      (B) the maximum sulfur content of the coal and/or pet coke received per total shipment; a statement verifying that the methods used to determine the maximum sulfur content of the coal and/or pet coke was in accordance with the following:
         (1) sampling -- ASTM Method D 2234;
         (2) preparation -- ASTM Method D 2013;
         (3) gross calorific value (Btu) -- ASTM Method D-5865
         (4) moisture content --ASTM Method D 3173; and
         (5) sulfur content -- ASTM Method D 3177 or ASTM Method D 4239

   ii. The Permittee has stated that the inline precalciner/kiln/inline raw mill/inline clinker cooler system has inherent scrubbing capability of sulfur dioxide (SO_2) emissions from fuel.

      Prior to utilizing a fuel source with a sulfur content greater than 2%, the Permittee shall conduct a demonstration to show the variability (if any) of SO_2 emissions from the firing of coal and/or pet coke with sulfur contents between 2.0% by weight and 5.0% by weight in the precalciner/kiln/inline raw mill/inline clinker cooler system. The Permittee shall monitor and record the following:
      (A) the sulfur content of the coal/and or pet coke being burned, and
      (B) the sulfur dioxide emissions from the stack on an hourly basis.

The Permittee shall submit a test protocol to the director prior to the demonstration. If this demonstration indicates that sulfur dioxide emissions have a statistically significant increase or decrease as defined in the protocol with the increase or decrease in fuel sulfur content, the permit will be administratively revised and the allowable fuel sulfur content shall be limited to 2.0% or less.

iii. Particulate (PM10/PM2.5) emissions from the preheater/precalciner/kiln/inline raw mill/clinker cooler/coal mill system shall be controlled by bagfilters (CD44A and CD44B). To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
   (A) a monthly visual inspection of the system ductwork and material collection unit for leaks; and
   (B) an internal inspection of the bagfilter's structural integrity during scheduled kiln system shutdowns.

iv. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
   (A) the date and time of each recorded action;
   (B) the results of each inspection;
   (C) the results of any maintenance performed on the bagfilters; and
   (D) any variance from manufacturer's recommendations, if any, and corrections made.

Reporting Requirements [15A NCAC 2Q .0508(f)]

v. The Permittee shall maintain a monthly summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping listed above and shall submit the results within 30 days of a written request by the DAQ.

3. 15A NCAC 2D .1111, 40 CFR Part 63, Subpart LLL "National Emissions Standards For Hazardous Air Pollutants from the Portland Cement Manufacturing Industry"

- Kiln System: One coal/petroleum coke-fired multi-stage preheater-precalciner kiln @ 675 million Btu per hour heat input with inline raw mill, coal mill, alkali bypass and inline clinker cooler with associated selective non-catalytic reduction (SNCR, CD44N), one bagfilter (CD44A), one carbon injection system/bagfilter (CD44D), one coal mill bagfilter (CD44B), one preheater bypass bagfilter (CD44C), and one wet scrubber (CD44S)

a. The Permittee shall comply with all applicable provisions, including the reporting, record keeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 2D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart LLL "National Emission Standards For Hazardous Air Pollutants From the Portland Cement Manufacturing Industry", including Subpart A "General Provisions.

i. PM/PM10 Emission Standards (Main stack) [40 CFR §63.1343(b)(2)]:

(A) PM/PM10 emissions from new kilns that combine kiln exhaust and clinker cooler gas shall be calculated using the following equation during normal operation:

$$PM_{alt} = \frac{0.0008 \times 1.65 \times (Q_k + Q_C)}{7000}$$

Where: P_{alt} = Calculated particulate emission (lbs/ton clinker) limit when kiln exhaust and clinker cooler exhaust are combined

0.0008 = PM exhaust concentration (gr/dscf) where kiln exhaust and clinker cooler exhaust are not combined

1.65 = Conversion factor of lb feed per lb clinker

Q_k = The exhaust flow of the kiln (dscf/ton raw feed)

Q_c = The exhaust flow of the clinker cooler (dscf/ton raw feed)

7000 = grains per pound

(B) PM/PM10 emissions from new kilns that combine kiln exhaust and clinker cooler gas shall be limited to 0.0008 gr/dscf for startup and shutdown. [40 CFR §63.1343(b)(1)]

ii. Dioxins and Furans Emission Standard (Main stack) [40 CFR §63.1343(b)(1)]:

(A) Dioxins and Furan emissions shall be limited to 0.2 ng/dscm (TEQ) on a dry basis, corrected to 7 percent oxygen. If the average temperature of the inlet to the first particulate matter control device during the D/F performance test is 400 degrees F or less, the limit is 0.4 ng/dscm (TEQ)

(B) Dioxins and Furan emissions shall be limited to 0.2 ng/dscm (TEQ) on a dry basis, uncorrected for oxygen content. If the average temperature of the inlet to the first particulate matter control device during the D/F performance test is 400 degrees F or less, the limit is 0.4 ng/dscm (TEQ)

iii. Mercury Emission Standard (kiln/in-line raw mill) [40 CFR §63.1343(b)(1)]:

(A) Mercury emissions shall be limited to 21 lbs/million tons clinker, 30-day rolling average (normal operation)

(B) Mercury emissions shall be limited to 4 µg/dscm, 7-day rolling average (startup and shutdown)

iv. Total Hydrocarbon Emission Standard (kiln/in-line raw mill) [40 CFR §63.1343 (b)(1)]:

(A) Total hydrocarbon emissions shall be limited to 24 ppmvd, 30-day rolling average (normal operation), corrected to 7 % oxygen

(B) Total hydrocarbon emissions shall be limited to 24 ppmvd, 7-day rolling average (startup and shutdown), uncorrected for oxygen content

The Permittee may elect to meet an alternative limit of 9 ppmvd for total organic HAP. If the source demonstrates compliance with the total organic HAP under the requirements of 40 CFR §63.1349 then the source's THC limit will be adjusted to equal the average THC emissions measured during the organic HAP compliance test.

v. Hydrogen Chloride [40 CFR §63.1343(b)(1)]
(A) Hydrogen chloride emissions shall be limited to 3 ppmvd, corrected to 7 percent oxygen, 30-day rolling average, during normal operation.
(B) Hydrogen chloride emissions shall be limited to 3 ppmvd, uncorrected for oxygen content, 7-day rolling average, for startup and shutdown.

b. Operating Limits For Kilns [40 CFR §63.1346]:
i. The Permittee shall operate the kiln such that the temperature of the gas at the inlet to the kiln particulate matter control device (PMCD) and alkali bypass PMCD, if applicable, does not exceed the applicable temperature limit specified in 40 CFR §63.1346(b). The Permittee shall operate the in-line kiln/raw mill, such that:
(A) When the raw mill of the in-line kiln/raw mill is operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in 40 CFR §63.1346(b) and established during the performance test when the raw mill was operating is not exceeded, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent.
(B) When the raw mill of the in-line kiln/raw mill is not operating, the applicable temperature limit for the main in-line kiln/raw mill exhaust, specified in 40 CFR §63.1346(b) and established during the performance test when the raw mill was not operating, is not exceeded, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent.
(C) If the in-line kiln/raw mill is equipped with an alkali bypass, the applicable temperature limit for the alkali bypass specified in 40 CFR §63.1346(b) and established during the performance test, with or without the raw mill operating, is not exceeded, except during periods of startup/shutdown when the temperature limit may be exceeded by no more than 10 percent.
ii. The temperature limit for affected sources meeting the limits of 40 CFR §63.1346(a) or 40 CFR §63.1346(a)(1) through (a)(3) is determined in accordance with 40 CFR §63.1349(b)(3)(iv).

c. Performance Testing Requirement [40 CFR §63.1349]:
i. Performance test results shall be documented in complete test reports that contain the following information, as well as all other relevant information. The plan to be followed during testing shall be made available to the Administrator prior to testing, if requested.
(A) A brief description of the process and the air pollution control system;
(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.

ii. PM Emissions Tests [40 CFR §63.1349(b)]:
(A) The Permittee shall install, operate, calibrate, and maintain a PM CEMS in accordance with the requirements in 40 CFR §63.1350(b) as listed below.
(B) The Permittee shall determine, record, and maintain a record of the accuracy of the volumetric flow rate monitoring system according to the procedures in 40 CFR §63.1350(m)(5). [See Section 2.1 3. d. ix. (B) of this Permit]
(C) The initial compliance test shall be based on the first 30 operating days in which the affected source operates using a CEMS. Hourly PM concentration and stack gas volumetric flow rate data shall be obtained.
(D) The Permittee shall determine the clinker production rate using the methods in §63.1350(d).
[See Section 2.1 3. d. ii. of this Permit]
(E) The emission rate, E of PM (lb/ton of clinker) shall be computed for each run using the following equation:

$$E = (C_s Q_s)/(PK)$$

Where:
E = emission rate of particulate matter, lb/ton of clinker production
C_s = concentration of particulate matter, gr/scf
Q_s = volumetric flow rate of effluent gas, where C_s and Q_s are on the same basis (either wet or dry), scf/hr
P = total kiln clinker production rate, tons/hr
K = conversion factor, 7000 gr/lb.

iii. D/F Emissions Tests [40 CFR §63.1349(b)(3)]
(A) The Permittee shall conduct a performance test using Method 23 of appendix A–7 to Part 60. The Permittee demonstrate initial compliance by conducting separate performance tests while the raw mill of the inline kiln/raw mill is under normal operating conditions and while the raw mill of the inline kiln/raw mill is not operating.
(1) Each performance test shall consist of three separate runs conducted under representative conditions. The duration of each run shall be at least 3 hours, and the sample volume for each run shall be at least 2.5 dscm (90 dscf).
(2) The temperature at the inlet to the kiln or in-line kiln/raw mill PMCD, and, where applicable, the temperature at the inlet to the alkali bypass PMCD shall be continuously recorded during the period of the Method 23 test, and the continuous temperature records shall be included in the performance test report.

(3) Hourly average temperatures shall be calculated for each run of the performance test.

(4) The run average temperature shall be calculated for each run, and the average of the run average temperatures shall be determined and included in the performance test report and will determine the applicable temperature limit in accordance with §63.1344(b).

iv. THC CEMS, Relative Accuracy Test [40 CFR §1349(b)(4)]:
The Permittee shall operate a continuous emissions monitoring system (CEMS) in accordance with the requirements in 40 CFR §63.1350(1). For the purposes of conducting the accuracy and quality assurance evaluations for CEMS, the THC span value (as propane) is 50 ppmvd. The Permittee shall demonstrate compliance with a Relative Accuracy Test Audit (RATA) when the accuracy between the CEMS and the test audit is within 20 percent or when the test audit results are within 10 percent of the standard.

(A) The initial compliance test shall be based on the first 30 operating days of operation in which the affected source operates using a CEMS.

(B) Total organic HAP emissions tests. Instead of conducting the performance test specified in 40 CFR §63.1349(b)(4)(i), the Permittee may conduct a performance test to determine emissions of total organic HAP by following the procedures in 40 CFR §63.1349(b)(4)(iii) through (b)(4)(iv).

(C) Method 320 of Appendix A to 40 CFR Part 60 or ASTM D6348–03 (incorporated by reference— See §63.14) shall be used to determine emissions of total organic HAP. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with 40 CFR §63.7(e). Each run shall be conducted for at least 1 hour.

(D) At the same time that the Permittee is conducting the performance test for total organic HAP, they shall also determine THC emissions by operating a CEMS in accordance with the requirements of 40 CFR §63.1350(j). The duration of the performance test shall be 3 hours and the average THC concentration (as calculated from the 1-minute averages) during the 3-hour test shall be calculated.

v. Mercury Emissions Tests [40 CFR §1349(b)(5)]:
The Permittee shall operate a mercury CEMS in accordance 40 CFR §63.1350(k). The initial compliance test shall be based on the first 30 operating days in which the affected source operates using a CEMS. Hourly mercury concentration and stack gas volumetric flow rate data shall be obtained. If the Permittee uses a sorbent trap monitoring system, daily data shall be obtained with each day assumed to equal the daily average of the sorbent trap collection period covering that day.

(A) The Permittee shall install, operate, calibrate, and maintain an instrument for continuously measuring and recording the exhaust gas flow rate to the atmosphere in accordance with 40 CFR §63.1350(k)(4).

(B) The emission rate shall be computed by dividing the average mercury emission rate by the clinker production rate during the same 30-day rolling period using the equation 5 of this section:

$E = (C_sQ_s)/(PK)$

Where:
E = emission rate of mercury, lb/million tons of clinker production;
C_s= concentration of mercury, g/scm;
Q_s= volumetric flow rate of effluent gas, where $C_s$and $Q_s$are on the same basis (wet or dry),
scm/hr;
P = total kiln clinker production rate, million ton/hr; and
K = conversion factor, 1000 g/kg (454 g/lb).

vi. HCl Emissions Tests [40 CFR §63.1349(b)(6)]:
The Permittee shall conduct performance testing by one of the following methods:
(A) Sources equipped with a wet scrubber, or tray tower, shall conduct performance testing using Method 321 of Appendix A to 40 CFR Part 60 unless the Permittee has installed a CEMS that meets the requirements 40 CFR §63.1350(l)(1).
(B) The Permittee shall establish site-specific parameter limits by using the continuous parameter monitoring system (CPMS) required in 40 CFR §63.1350(l)(1). Measure and record the pressure drop across the scrubber and/or liquid flow rate and pH in intervals of no more than 15 minutes during the HCl test. Compute and record the 24-hour average pressure drop, pH, and average scrubber water flow rate for each sampling run in which the applicable emissions limit is met.

vii. Performance Test Frequency [40 CFR §63.1349(c)]:
Except as provided in 40 CFR §63.1348(b), performance tests are required for affected sources that are subject to a dioxin, total organic HAP, or HCl emissions limit and shall be repeated every 30 months except for pollutants where that specific pollutant is monitored using CEMS.

viii.Performance Test Reporting Requirements [40 CFR §63.1349(d)]:
The Permittee shall submit the information specified in 40 CFR §63.1349(d)(1)(i) and (d)(2) listed below no later than 60 days following the initial performance test. All reports shall be signed by the facility's manager.
(A) The initial performance test data.
(B) The values for the site-specific operating limits or parameters established pursuant to 40 CFR §63.1349(b)(3), (b)(4)(iii), (b)(5)(ii), and (b)(6)(i), as applicable, and a description, including sample calculations, of how the operating parameters were established during the initial performance test.
(C) As of December 31, 2011 and within 60 days after the date of completing each performance evaluation or test, as defined in 40 CFR §63.2, conducted to demonstrate compliance with this Subpart, the Permittee shall submit the relative accuracy test audit data and performance test data, except opacity data, to EPA by successfully submitting the data electronically to EPA's Central Data Exchange (CDX) by using the Electronic Reporting Tool (ERT) (see http://www.epa.gov /ttn/chief/ert/ert_tool.html/).

(D) Performance tests shall be conducted under such conditions as the Administrator specifies to the Permittee based on representative performance of the affected source for the period being tested. Upon request, the Permittee shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

d. Monitoring Requirements [40 CFR §63.1350]:
All continuous monitoring data for periods of startup and shutdown shall be compiled and averaged separately from data gathered during periods of normal operation.

i. PM monitoring requirements for sources using PM CEMS.

(A) For a kiln or clinker cooler subject to emissions limitation on particulate matter emissions in 40 CFR §63.1343(b) and using a PM CEMS, the Permittee shall install and operate a continuous emissions monitor in accordance with Performance Specification 11 of Appendix B and Procedure 2 of Appendix F to Part 60. The performance test method and the correlation test method for Performance Specification 11 shall be Method 5 or Method 5i of Appendix A to Part 60.

(B) The Permittee shall perform Relative Response Audits annually and Response Correlation Audits every 3 years.

(C) If the Permittee is using a PM CEMS, they shall 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 (n)(1) through (n)(10).

(D) In order to calculate the 30-day or 7-day rolling average, collect readings at least every 15 minutes. Sum the hourly data to daily data and then into a 30-day rolling average. The Permittee shall use all data, except those recorded during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities, in calculations.

ii. Clinker Production Monitoring Requirements [40 CFR §63.1350(d)]:

(A) Determine hourly clinker production by one of two methods.

(1) 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 shall be maintained within ±5 percent accuracy.

(2) 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 shall 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. This ratio shall be updated monthly. Note that if this ratio changes at clinker reconciliation, the Permittee shall use the new ratio going forward, but do not have to retroactively change clinker production rates previously estimated.

(3) 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 within 30 days of the effective date of this rule (for existing sources). During each quarter of source operation, the Permittee shall determine, record, and maintain a record of the ongoing accuracy of the system of measuring hourly clinker production (or feed mass flow).
(4) Record the daily clinker production rates and kiln feed rates; and
(5) Develop an emissions monitoring plan in accordance with 40 CFR §63.1350(o)(1) through (o)(4).

iii. D/F Monitoring Requirements [40 CFR §63.1350(g)]:
The Permittee shall comply with the following monitoring requirements to demonstrate continuous compliance with the D/F emissions standard.
(A) The Permittee shall develop an emissions monitoring plan in accordance 40 CFR §63.1350(p)(1) through (p)(4).
(B) The Permittee shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill, and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill and/or alkali bypass PMCDs.
(1) The temperature recorder response range shall include zero and 1.5 times the average temperature established according to the requirements in §63.1349 (b)(3)(iv).
(2) The calibration reference for the temperature measurement shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.
(3) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.
(C) The Permittee shall monitor and continuously record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill, and alkali bypass, if applicable, at the inlet to the kiln, in-line kiln/raw mill and/or alkali bypass PMCD.
(D) The required minimum data collection frequency shall be one minute.
(E) Each hour, calculate the three-hour average temperature for the previous 3 hours of process operation using all of the one-minute data available (i.e., the continuous monitoring system is not out-of-control.)
(F) 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 shall begin anew, without considering previous recordings.

iv. THC Monitoring Requirements [40 CFR §63.1350 (i)]:
The Permittee shall also develop an emissions monitoring plan in accordance with 40 CFR §63.1350(p)(1) through (p)(4).
(A) The Permittee shall install, operate, and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8 of Appendix B to Part 60 and comply with all of the requirements for continuous monitoring systems found in the general provisions, Subpart A. The Permittee shall operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of Appendix F in Part 60.
(B) For sources equipped with an alkali bypass stack, instead of installing a CEMS, the Permittee may use the results of the initial or subsequent performance test to demonstrate compliance with the THC emission limit.

v. Total Organic HAP Monitoring Requirements. [40 CFR §63.1350(j)]:
If the Permittee is complying with the total organic HAP emissions limits, they shall continuously monitor THC according to 40 CFR §63.1350(i)(1) and (2) or in accordance with Performance Specification 15 of Appendix B to Part 60 and comply with all of the requirements for continuous monitoring systems found in the general provisions, Subpart A. The Permittee shall operate and maintain each CEMS according to the quality assurance requirements in Procedure 1 of Appendix F in Part 60. In addition, the Permittee shall follow the monitoring requirements in 40 CFR §63.1350(m)(1) through (m)(4). The Permittee shall also develop an emissions monitoring plan in accordance with 40 CFR §63.1350 (p)(1) through (p)(4).

vi. Mercury Monitoring Requirements [40 CFR §63.1350(k)]:
The Permittee shall install and operate a mercury continuous emissions monitoring system (Hg CEMS) in accordance with Performance Specification 12A of Appendix B to Part 60 or a sorbent trap-based integrated monitoring system in accordance with Performance Specification 12B of Appendix B to part 60. The Permittee shall continuously monitor mercury according 40 CFR §63.1350 (k)(1) through (k)(3) and (m)(1) through (m)(4). The Permittee shall also develop an emissions monitoring plan in accordance with 40 CFR §63.1350 (p)(1) through (p)(4).
(A) The span value for any Hg CEMS shall include the intended upper limit of the mercury concentration measurement range during normal “mill on” operation which may be exceeded during “mill off” operation or other short term conditions lasting less than 24 consecutive kiln operating hours. However, the span should be at least equivalent to approximately two times the emissions standard and it may be rounded to the nearest multiple of 10 $\mu g/m^3$ of total mercury.
(B) The Permittee shall operate and maintain each Hg CEMS or sorbent trap-based integrated monitoring system according to the quality assurance requirements in Procedure 5 of Appendix F to Part 60.

(C) Relative accuracy testing of mercury monitoring systems under Performance Specification 12A, Performance Specification 12B, or Procedure 5 shall be at normal operating conditions with the raw mill on.

(D) The Permittee shall 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(n)(1) through (n)(10). [See Section 2.1 I. 3. d. x. of this Permit]

vii. HCl Monitoring Requirements [40 CFR §63.1350(l)]:
The Permittee shall continuously monitor HCl according to 40 CFR §63.1350(l)(1) and (2) and 40 CFR §63.1350(m)(1) through (m)(4) of this section. The Permittee shall also develop an emissions monitoring plan in accordance with 40 CFR §63.1350(p)(1) through (p)(4).

(A) The Permittee shall install, operate, and maintain a continuous monitoring system to monitor wet scrubber parameters as specified in 40 CFR §63.1350(m)(5) and (m)(7) as follows:

(1) Locate the flow sensor and other necessary equipment in a position that provides a representative flow.

(2) Use a flow sensor with a measurement sensitivity of 2 percent of the flow rate.

(3) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(4) Conduct a flow sensor calibration check at least semiannually.

(5) Locate the pH sensor in a position that provides a representative measurement of scrubber effluent pH.

(6) Ensure the sample is properly mixed and representative of the fluid to be measured.

(7) Check the pH meter's calibration on at least two points every 8 hours of process operation.

viii. Parameter Monitoring Requirements [40 CFR §63.1350(m)]:
For continuous monitoring systems, the Permittee shall install, operate, and maintain each continuous parameter monitoring system (CPMS) according to the procedures in 40 CFR §63.1350 (n)(1) through (4) by the compliance date specified in 40 CFR §63.1351.

(A) The Permittee shall also meet the specific parameter monitoring requirements in 40 CFR §63.1350(m) as applicable.

(1) The continuous monitoring system shall complete a minimum of one cycle of operation for each successive 15-minute period. The Permittee shall have a minimum of four successive cycles of operation to have a valid hour of data.

(2) The Permittee shall conduct all monitoring in continuous operation at all times that the unit is operating.

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

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

(B) Liquid flow rate monitoring requirements.
(1) Locate the flow sensor and other necessary equipment in a position that provides a representative flow.
(2) Use a flow sensor with a measurement sensitivity of 2 percent of the flow rate.
(3) Reduce swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.
(4) Conduct a flow sensor calibration check at least semiannually.

(C) Specific pressure monitoring requirements. If an applicable limit that requires the use of a pressure measurement device, the Permittee shall meet the following requirements.
(1) Locate the pressure sensor(s) in a position that provides a representative measurement of the pressure.
(2) Minimize or eliminate pulsating pressure, vibration, and internal and external corrosion.
(3) Use a gauge with a minimum tolerance of 1.27 centimeters of water or a transducer with a minimum tolerance of 1 percent of the pressure range.
(4) Check pressure tap pluggage daily.
(5) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.
(6) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range or install a new pressure sensor.

(D) Specific pH monitoring requirements. If an applicable limit requires the use of a pH measurement device, the Permittee shall meet the following requirements.
(1) Locate the pH sensor in a position that provides a representative measurement of scrubber effluent pH.
(2) Ensure the sample is properly mixed and representative of the fluid to be measured.
(3) Check the pH meter's calibration on at least two points every 8 hours of process operation.

(E) Mass flow rate (for sorbent injection) monitoring requirements. If an applicable limit requires the use of equipment to monitor sorbent injection rate (e.g., weigh belt, weigh hopper, or hopper flow measurement device), the Permittee shall meet the following requirements.
(1) Locate the device in a position(s) that provides a representative measurement of the total sorbent injection rate.
(2) Install and calibrate the device in accordance with manufacturer's procedures and specifications.
(3) At least annually, calibrate the device in accordance with the manufacturer's procedures and specifications.

ix. Continuous Emissions Rate Monitoring System [40 CFR §63.1350(n)(1) through (n)(10)]:
The Permit shall install, operate, calibrate, and maintain instruments for continuously measuring and recording the pollutant per mass flow rate to the atmosphere from sources subject to an emissions limitation that has a pounds per ton of clinker unit.

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

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

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

(D) The flow rate monitoring system shall be equipped with a data acquisition and recording system that is capable of recording values over the entire range specified in 40 CFR §63.1350(n)(1).

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

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

(G) The flow rate sensor shall have provisions to determine the daily zero and upscale calibration drift (CD) (see sections 3.1 and 8.3 of Performance Specification 2 in appendix B to Part 60 of this chapter for a discussion of CD).

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

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

(H) The Permittee shall perform an initial relative accuracy test of the flow rate monitoring system according to Section 8.2 of Performance Specification 6 of Appendix B to Part 60 with the exceptions in 40 CFR §63.1350(n)(8)(i) and (n)(8)(ii).

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

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

(I) The Permittee shall verify the accuracy of the flow rate monitoring system at least once per year by repeating the relative accuracy test specified in 40 CFR §63.1350(n)(8).

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

e. Notification Requirements [40 CFR§63.1353]:

i. The Permittee shall comply with the notification requirements in §63.9 as follows:

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

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

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

(D) Notification, as required by §63.9(g), of the date that the continuous emission monitor performance evaluation required by 40 CFR §63.8(e) is scheduled to begin.

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

f. Reporting Requirements [40 CFR §63.1354]:

i. The reporting provisions of Subpart A that apply are listed in Table 1 of 40 CFR § 63.1354. If any State requires a report that contains all of the information required in a report listed in this section, the Permittee may send the Administrator a copy of the report sent to the State to satisfy the requirements of this section for that report.

ii. The Permittee of an affected source shall comply with the reporting requirements specified in 40 CFR §63.10 of the general provisions of Part 63, Subpart A as follows:

(A) 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.

(B) As required by 40 CFR §63.10(d)(3), the Permittee of an affected source shall report the opacity results from tests required by §63.1349.

(C) As required by 40 CFR §63.10(d)(4), the Permittee of an affected source who is required to submit progress reports as a condition of receiving an extension

of compliance under §63.6(i) shall submit such reports by the dates specified in the written extension of compliance.

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

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

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

(G) 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).

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

(I) The Permittee shall submit a summary report semiannually which contains the information specified in 40 CFR §63.10(e)(3)(vi). In addition, the summary report shall include:

(1) All exceedences of maximum control device inlet gas temperature limits specified in 40 CFR §63.1344(a) and (b);

(2) All failures to calibrate thermocouples and other temperature sensors as required under 40 §63.1350(f)(7) of this subpart; and

(3) All failures to maintain the activated carbon injection rate, and the activated carbon injection carrier gas flow rate or pressure drop, as applicable, as required under 40 CFR §63.1344(c).

(4) The results of any combustion system component inspections conducted within the reporting period as required under §63.1350(i).
(5) All failures to comply with any provision of the operation and maintenance plan developed in accordance with §63.1350(a).
(6) Monthly rolling average mercury, THC, PM, and HCl (if applicable) emissions levels in the units of the applicable emissions limit for each kiln, clinker cooler, and raw material dryer.

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

iii. The semiannual report required by 40 CFR §63.1354 (b)(9) of this section shall include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report shall also include a description of actions taken by a 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.

g. Recordkeeping Requirements [40 CFR §63.1355]

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

ii. The Permittee shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3); and
(A) All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9;
(B) All records of applicability determination, including supporting analyses; and
(C) If the Permittee has been granted a waiver under 40 CFR §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.

iii. In addition to the recordkeeping requirements in 40 CFR §63.1355(b), the Permittee of an affected source equipped with a continuous monitoring system shall maintain all records required by 40 CFR §63.10(c).

iv. The Permittee shall keep annual records of the amount of cement kiln dust that is removed from the kiln system and either disposed of as solid waste or otherwise recycled for a beneficial use outside of the kiln system.

v. The Permittee shall keep records of the daily clinker production rates and kiln feed rates.
vi. The Permittee shall keep records of the occurrence and duration of each startup or shutdown.
vii. The Permittee shall keep records of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment.
(A) The Permittee shall 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.

4. The following emission limits apply in order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 2D .0530 and 40 CFR 51.166(k):

Affected Sources	Pollutant	Hourly Emission Limit
Kiln/inline raw mill/inline clinker cooler/coal mill	Nitrogen Dioxide	700 lbs per hour
	Sulfur Dioxide	173 lbs per hour

a. The Kiln System (Coal/petroleum coke-fired preheater/ precalciner kiln) with inline raw mill and inline clinker cooler shall be operated such that Nitrogen Dioxide emissions shall not exceed 700 pounds per hour and Sulfur Dioxide emissions shall not exceed 173 pounds per hour.
b. Compliance shall be determined using a Continuous Emissions Monitor as required in 40 CFR §60.63 “Monitoring of Operations”.

2.2 - Multiple Emission Sources Specific Limitations and Conditions

A. 15A NCAC 2D .0540, “Fugitive Dust Emissions”
1. Mining/Quarry Operations (Mine/FQ)
- Rock/limestone removal using heavy equipment, drilling, and blasting (ES-Mine1)
- Rock/limestone loading operations (rock from front end loader to haul truck, unloading haul truck to jaw crusher, ES-Mine2)
- Limestone/marl pile located in quarry area (ES-FQSP1)
- Spoils pile located in quarry area (ES-FQSP2)
- Overburden pile located in quarry area (ES-FQSP4)
- Quarry roads (ES-QURD)
- Spoils stacker pile (ES-FQ6)

2. Paved Plant Roads (PLTRD), Storage piles (SP)
   - Vehicular traffic on paved plant roads (ES-PLTRD)
   - Coal/coke storage pile at the plant (ES-SPCoal1)
   - Coal/coke storage pile at the plant (ES-SPCoal2)
   - Blended stone pile at the plant (ES-SPBlend1)
   - Blended stone pile at the plant (ES-SPBlend2)
   - Mill scale storage pile at the plant (ES-SPMillscale)
   - (Bauxite storage pile at the plant (ES-SPBauxite)
   - Bottom ash storage pile at the plant (ES-SPAsh)
   - Limestone storage pile at the plant (ES-SPLimestone)
   - Gypsum storage pile at the plant (ES-SPGypsum)

   a. Fugitive Dust Control Requirement [15A NCAC 2D .0540] - STATE ENFORCEABLE ONLY
   In accordance with 15A NCAC 2D .0540(e)(1) which provides that, if dispersion modeling shows the potential to violate an ambient air quality standard, the facility may be required to develop and submit a Fugitive Dust Control Plan.

   The plan shall be developed within 60 days of normal operation and submitted to the Division of Air Quality Raleigh Central Office for approval. Fugitive emissions are generated in the pit during the loading of the raw materials into trucks or onto conveyors.

   PLAN MAINTENANCE
   A copy of a Fugitive Dust Control Plan will be retained on-site, and it will be made available to an authorized NC DAQ representative upon request. Any revisions to the Plan shall be submitted to the NC DAQ Regional Supervisor for approval. NC DAQ shall notify the Permittee if the revisions are NOT approved within 30 days or receipt. If no such notification is provided, the Permittee may assume the revised plan is approved as submitted.

   STAFF TRAINING
   All facility staff that are responsible or fugitive dust suppression activities shall be made aware of this plan and its contents, including control methods and associated recordkeeping requirements. Staff should immediately be made aware of any revisions to the plan. A copy of the plan shall be maintained in a location that is accessible to facility staff.

   B. 15A NCAC 2D .1100 “Control Of Toxic Air Pollutants” (State Enforceable Only)
   Pursuant to 15A NCAC 2D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

Emission Sources	Toxic Air Pollutants	Emission Limits lbs/year	Emission Limits lbs/day	Emission Limits lbs/hr
Kiln system	Ammonia	----------	----------	2.5 lbs/hr
	Fluorides	----------	5.4 lbs/day	0.225 lbs/hr
	Hydrogen Chloride	----------	----------	4.18 lbs/hr
Kiln system & emergency generator	Benzene	6792.04 lbs/yr	----------	----------
	Formaldehyde	----------	----------	0.1156 lbs/hr
Kiln system Raw mill Feed system Solid fuel Clinker transfer Clinker storage Finish mills Cement transfer Cement storage Existing terminal Quarry equipment Process fugitives Storage piles Mining operations	Arsenic	28.10 lbs/yr	----------	----------
	Beryllium & comp.	1.71 lbs/yr	----------	----------
	Cadmium	5.05 lbs/yr	----------	---------- -
	Chromium VI	0.76 lbs/yr	----------	----------
	Manganese	----------	5.261 lbs/day	----------
	Mercury	----------	0.45 lbs/day	----------

SECTION 3.0 GENERAL CONDITIONS AND LIMITATIONS

1. REPORTS, TEST DATA, MONITORING DATA, NOTIFICATIONS, AND REQUESTS FOR RENEWAL shall be submitted to the:
   Regional Supervisor
   North Carolina Division of Air Quality
   Wilmington Regional Office

Physical, Courier Service & Certified Mail Address	Regular Mail Address
127 Cardinal Drive, Extension Wilmington, NC 28405-3845	1628 Mail Service Center Raleigh, NC 27699-1628

2. PERMIT RENEWAL REQUIREMENT - The Permittee, at least 90 days prior to the expiration date of this permit, shall request permit renewal by letter in accordance with 15A NCAC 2Q .0304 (d) and (f). Pursuant to 15A NCAC 2Q .0203 (i), no permit application fee is required for renewal of an existing air permit. The renewal request should be submitted to the Regional Supervisor, DAQ.

3. ANNUAL FEE PAYMENT - Pursuant to 15A NCAC 2Q .0203 (a), the Permittee shall pay the annual permit fee within 30 days of being billed by the DAQ. Failure to pay the fee in a timely manner will cause the DAQ to initiate action to revoke the permit.

4. ANNUAL EMISSION INVENTORY REQUIREMENTS – The Permittee shall report by June 30 of each year the actual emissions of each air pollutant listed in 15A NCAC 2Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by the responsible official of the facility.

5. EQUIPMENT RELOCATION - A new air permit shall be obtained by the Permittee prior to establishing, building, erecting, using, or operating the emission sources or air cleaning equipment at a site or location not specified in this permit.

6. REPORTING REQUIREMENT - Any of the following that would result in previously unpermitted, new, or increased emissions shall be reported to the Regional Supervisor, DAQ:
   a. changes in the information submitted in the application regarding facility emissions;
   b. changes that modify equipment or processes of existing permitted facilities; or
   c. changes in the quantity or quality of materials processed.

   If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

7. This permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred. The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air cleaning devices and appurtenances.

8. This permit is nontransferable by the Permittee. Future owners and operators shall obtain a new air permit from the DAQ.

9. This issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of State law which have occurred prior to the effective date of this permit.

10. This permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or Local authority.

11. Reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Regional Supervisor, DAQ at such intervals and in such form and detail as may be required by the DAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.

12. A violation of any term or condition of this permit shall subject the Permittee to enforcement pursuant to G.S. 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.

13. Pursuant to North Carolina General Statute 143-215.3 (a) (2), no person shall refuse entry or access to any authorized representative of the DAQ who requests entry or access for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

14. The Permittee must comply with any applicable Federal, State, or Local requirements governing the handling, disposal, or incineration of hazardous, solid, or medical wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the Division of Waste Management.

15. PERMIT RETENTION REQUIREMENT - The Permittee shall retain a current copy of the air permit at the site. The Permittee must make available to personnel of the DAQ, upon request, the current copy of the air permit for the site.

16. CLEAN AIR ACT SECTION 112(r) REQUIREMENTS - Pursuant to 40 CFR Part 68 "Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)," if the Permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the Federal Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

17. PREVENTION OF ACCIDENTAL RELEASES - GENERAL DUTY - Pursuant to Title I Part A Section 112(r)(1) of the Clean Air Act "Hazardous Air Pollutants - Prevention of Accidental Releases - Purpose and General Duty," although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release. This condition is federally-enforceable only.

18. General Emissions Testing and Reporting Requirements [15A NCAC 2Q .0508(i)(16)]
    Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 2D.
    If emission testing is required by this permit or the DAQ, or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow the procedures outlined below:
    a. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least 45 days before conducting the test.
    b. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least 15 days before beginning the test so that the Director may at his option observe the test.

c. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
d. Two copies of the final air emission test report shall be submitted to the Director not later than 30 days after sample collection. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
    i. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
        (A) Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
        (B) Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
        (C) Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
    ii. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 2D .2600 has precedence over all other tests.

Permit issued this the XXth day of XXXX, XXXXXXXX.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

DRAFT -

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Donald R. van der Vaart, Ph.D., P.E., J.D., Chief, Air Permits Section
Division of Air Quality
By Authority of the Environmental Management Commission

Air Permit No. 097300R08