



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

Beverly Eaves Perdue
Governor

B. Keith Overcash, P.E.
Director

Dee Freeman
Secretary

XXXXXX, 2009

DRAFT Revision 4 (September 9, 2009)

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 source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant have been listed for informational purposes as an "ATTACHMENT."

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 condition(s) of the attached permit that are applicable to that particular emission source.

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.

Permitting Section
1641 Mail Service Center, Raleigh, North Carolina 27699-1641
2728 Capital Blvd., Raleigh, NC 27604
Phone: 919-715-6237 \ FAX: 919-733-5317 \ Internet: www.daq.state.nc.us



Mr. Fink
XXX, 2009

Draft

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 unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

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 source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) 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.

For PSD increment tracking purposes, PM10 from this modification are increased by 120.32 pounds per hour, sulfur dioxide emissions from this modification are increased by 332.42 pounds per hour, and nitrogen dioxide emissions from this modification are increased by 424.89 pounds per hour.

This Air Quality Permit shall be effective from **XXX, XXXXX** until **XXXXXXXX**, 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 Revision 4 (September 9, 2009)

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

Enclosure

c: Wilmington Regional Office
Central Files
Connie Horne

Attachment: 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)

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 Revision 4	Draft Revision 4	XXXXXXXXXXXXXXXX

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) 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 source(s) or air pollution control device(s) 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: **XXXXXXXXXXXXXXXX**

Primary SIC Code: **3241**
Division of Air Quality, **Wilmington Regional Office**
Regional Office Address: **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., Chief, Air Permits Section
 By Authority of the Environmental Management Commission

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Under Title 15A NCAC 2Q, the operation of emission source(s) and associated air pollution control device(s) and appurtenances listed in this permit is based on plans, specifications, operating parameters, and other information as submitted in the Air Quality Permit Application. This facility shall be constructed and operated in accordance with the completed application 6500296.08A received February 26, 2008 and the amendment to the application received through August 28, 2009, including any plans, specifications, previous applications, and other supporting data, all of which are filed with the Department of Environment and Natural Resources, Division of Air Quality (DAQ) and are incorporated as part of this permit. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air cleaning device(s) and appurtenances.

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	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/other 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/other 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/other)	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/other)	None	None
ES-FQ1MC2 NSPS OOO, PSD	Conveyor #2 transfer (limestone/marl)	None	None
ES-FQ3SC2 NSPS OOO, PSD	Conveyor #2 transfer (spoils/other)	None	None

-Table continued on the next page-

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

Emission Source ID	Emission Source Description	Control Device ID No.	Control Device Description
Quarry Operation (FQ) - Continued			
ES-FQ4SC3 NSPS OOO, PSD	Conveyor #3 transfer (spoils/other)	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/other)	None	None
ES-FQ5RS NSPS OOO, PSD	Radial stacker transfer (spoils/other)	None	None
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-COALE1 NSPS Y, PSD	Coal unloading by rail to hopper/transport system	CD1 (211.BF320)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-COALE2 NSPS Y, PSD	Coal unloading by truck to hopper/transport system	CD2 (231.BF310)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-COALE3 NSPS Y, PSD	Coal transport to storage	CD3 (231.BF330)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-COALE4 NSPS Y, PSD	Coal transport from storage	CD4 (241.BF120)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-COALE16 NSPS Y, PSD	Coal mill feed transport	CD16 (461.BF350)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-COALE17 MACT LLL, PSD	Fine coal bin	CD17 (461.BF650)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-COALE18 MACT LLL, PSD	Fine coal bin	CD18 (461.BF750)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-COALE14 NSPS Y, PSD	Coal mill feed bin	CD14 (461.BF130)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-COALE15 NSPS Y, PSD	Coal mill feed bin	CD15 (461.BF230)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-COAL NSPS Y, PSD	Coal mill	CD44B (461.BF500)	One bagfilter with outlet grain loading of 0.01 grains/scf
Plant Roadways			
ES-PLTRD, PSD	Vehicular traffic on paved plant roads	None	None

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

Emission Source ID	Emission Source Description	Control Device ID No.	Control Device Description
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
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 III MACT ZZZZ, PSD	Diesel-fired emergency generator (800 kW, 1072.82 hp output)	None	None
Plant additives unloading and handling			
ES-F1HF1 MACT LLL, PSD	Additives hopper/feeder	None	None
ES-F1BCT MACT LLL, PSD	Additives belt conveyor transfer	None	None
ES-F5 MACT LLL, PSD	Additives belt conveyor transfer	None	None
ES-F7 MACT LLL, PSD	Additives belt conveyor transfer	None	None
ES-F7C MACT LLL, PSD	Bottom Ash conveyor to silo	None	None
ES-F7D MACT LLL, PSD	Bottom ash silo to enclosed belt	None	None
Raw Material Unloading & Handling (RMH)			
ES-RMHF3B NSPS OOO, PSD	Quarry blend belt to tripper belt	None	None
ES-RMHF3TB, PSD	Quarry blend tripper belt to piles	None	None
ES-RMHF3PR MACT LLL, PSD	Quarry blend pile reclaimer	None	None
ES-RMHF3R MACT LLL, PSD	Quarry blend reclaimer to belt	None	None
ES-RMHF3ABT MACT LLL, PSD	Additives belt to tripper belt	None	None
ES-RMHF3ATB MACT LLL, PSD	Additives tripper belt to piles	None	None
ES-RMHF3APR MACT LLL, PSD	Additives pile reclaimer	None	None
ES-RMHF3RB MACT LLL, PSD	Additives reclaimer to belt	None	None
ES-RMHF6BCT MACT LLL, PSD	Quarry blend belt conveyor transfer	None	None
ES-RMHF7A MACT LLL, PSD	Quarry blend conveyor to silo	None	None
ES-RMHF7B MACT LLL, PSD	Quarry blend silo to enclosed belt	None	None

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

Emission Source ID	Emission Source Description	Control Device ID No.	Control Device Description
Raw Mill Handling System (RMHS)			
ES-RMHSE5 MACT LLL, PSD	Raw mill feed bin	CD5 (143.BF650)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-RMHSE6 MACT LLL, PSD	Raw mill feed transport	CD6 (311.BF750)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-RMHSE7 MACT LLL, PSD	Raw mill feed	CD7 (321.BF470)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-RMHSE8 MACT LLL, PSD	Raw mill reject	CD8 (321.BF950)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-RMHSE9 MACT LLL, PSD	Kiln dust bin	CD9 (331.BF400)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-RMHSE10 MACT LLL, PSD	Raw mill transport to silo	CD10 (341.BF410)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-RMHSE11 MACT LLL, PSD	Raw mill silo	CD11 (341.BF350)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-RMHSE12 MACT LLL, PSD	Raw mill silo extraction	CD12 (351.BF440)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-RMHSE13 MACT LLL, PSD	Kiln feed	CD13 (351.BF470)	One bagfilter with outlet grain loading of 0.01 grains/scf
Clinker Handling and Storage (CHS)			
ES-CHSE19 MACT LLL, PSD	Clinker discharge from cooler	CD19 (441.BF540)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-CHSE20 MACT LLL, PSD	Clinker dome	CD20 (471.BF150)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-CHSE21 MACT LLL, PSD	Off-spec bin	CD21 (471.BF240)	One bagfilter with outlet grain loading of 0.01 grains/scf
Finish Mills (FM)			
ES-FME22 MACT LLL, PSD	Cement mill #1 feed bin	CD22 (511.BF090)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FME23 MACT LLL, PSD	Cement mill #2 feed bin	CD23 (512.BF050)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FME24 MACT LLL, PSD	Cement mill #1 feed	CD24 (531.BF290)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FME25 MACT LLL, PSD	Cement mill #1 recirculation bin	CD25 (531.BF020)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FME26 MACT LLL, PSD	Cement mill #1 reject	CD26 (531.BF215)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FME27 MACT LLL, PSD	Cement mill #1 transport	CD27 (531.BF615)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FME28 MACT LLL, PSD	Cement mill #2 feed	CD28 (532.BF290)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FME29 MACT LLL, PSD	Cement mill #2 recirculation bin	CD29 (532.BF020)	One bagfilter with outlet grain loading of 0.01 grains/scf

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

Emission Source ID	Emission Source Description	Control Device ID No.	Control Device Description
ES-FME30 MACT LLL, PSD	Cement mill #2 reject	CD30 (532.BF215)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FME31 MACT LLL, PSD	Cement mill #2 transport	CD31 (532.BF615)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FM45A MACT LLL, PSD	Exhaust from finish mill #1	CD45A (531.BF500)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FM45B MACT LLL, PSD	Exhaust from finish mill #2	CD45B (532.BF500)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FME46 MACT LLL, PSD	Cement additive bin	CD46 (511.BF300)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FME47 MACT LLL, PSD	Cement additive intake	CD47 (232.BF150)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-FMEF8TU, PSD	Gypsum/limestone unloading	None	None
ES-FMF8HF MACT LLL, PSD	Gypsum/limestone hopper/feeder	None	None
ES-FMF8BCT MACT LLL, PSD	Gypsum/limestone belt conveyor transfer	None	None
Cement Handling, Storage, and Loadout (CHSL)			
ES-CHSLE32 MACT LLL, PSD	Cement dome	CD32 (611.BF600)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-CHSLE33 MACT LLL, PSD	Cement dome extraction rail	CD33 (621.BF305)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-CHSLE34 MACT LLL, PSD	Cement dome extraction truck	CD34 (621.BF315)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-CHSLE40 MACT LLL, PSD	Cement silo	CD40 (612.BF600)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-CHSLE41 MACT LLL, PSD	Cement silo extraction	CD41 (612.BF620)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-CHSLE42 MACT LLL, PSD	Cement transport	CD42 (622.BF410)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-CHSLE43 MACT LLL, PSD	Packaging plant	CD43 (641.BF150)	One bagfilter with outlet grain loading of 0.01 grains/scf
ES-4 ** MACT LLL	Cement silo (2,200 tons est. capacity)	CDP43	One bagfilter (540 square feet of filter surface area)
ES-R33 ** MACT LLL	Screw conveyor and truck load-out spout	CDP30	One bagfilter with outlet grain loading of 0.01 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 (including preheater/precalciner kiln /in-line raw mill/coal mill/clinker cooler			
ES-KS MACT LLL, PSD	One preheater/precalciner kiln (coal, petroleum coke)/ in-line raw mill/coal mill with baghouse (CD-44B)/clinker cooler	CD44N CD44S CD44A (331.BF200)	Selective non-catalytic reduction (SNCR) system Lime injection system One bagfilter with outlet grain loading of 0.0126 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 Source(s) and Control Device(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) 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 (ID No. ES-Mine1)
- Rock/limestone loading operations (rock from front end loader to haul truck, unloading haul truck to jaw crusher, ID No. ES-Mine2)
- Limestone/marl pile located in quarry area (ID No. ES-FQSP1)
- Spoils/other pile located in quarry area (ID No. ES-FQSP2)
- Overburden pile located in quarry area (ID No. ES-FQSP4)
- Quarry roads (ID No. ES-QURD)
- Spoils/other stacker pile (ID No. ES-FQ6)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
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
Particulate emissions	BACT Best management practices for drilling, blasting, stone removal, and truck loading operations	15A NCAC 2D .0530 PSD

1. 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", particulate emissions from the Mining/Quarrying Operations shall be controlled by best management practices for the drilling, blasting, stone removal, and truck loading operations.

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

- b. The Permittee shall maintain operation data for the drilling, blasting, stone removal, and truck loading operations on a daily basis and record in a monthly log book.

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

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	Best management practices	15A NCAC 2D .0530 PSD (BACT)
	<ul style="list-style-type: none"> • Crushers without a capture system No owner/operator shall cause to be discharged into the atmosphere from any crusher, at which a capture system is not used, fugitive emissions which exhibit greater than 12 percent opacity.	15A NCAC 2D .0524 40 CFR Part 60, Subpart OOO
	<ul style="list-style-type: none"> • Any transfer point on belt conveyor not enclosed in a building No owner/operator shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions which exhibit greater than 7 percent opacity.	15A NCAC 2D .0524 40CFR Part 60, Subpart OOO
	<ul style="list-style-type: none"> • Any transfer point on belt conveyors or any other affected facility No owner/operator shall cause to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility, any emissions which exhibit greater than 7 percent opacity.	15A NCAC 2D .0524 40CFR Part 60, Subpart OOO
	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 .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 this Part 60, the owner or operator shall perform an initial performance test.

- i. The owner or operator 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 owner or operator 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 owner or operator 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) must 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 must be 30 minutes (five 6-minute averages). Compliance with the applicable fugitive emission limits in Table 3 of Subpart OOO must 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 owner or operator 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 owner or operator 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 (ID Nos. 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 section 40 CFR Part 60, Subpart OOO.

- d. **Reporting** [40 CFR §60.674]
- i. The owner or operator of any affected facility shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in 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 owner or operator 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”**

- a. To comply with the best available control technology determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration", particulate emissions from the Quarry Operations shall be controlled by best management practices for the crushing, loading, and unloading.

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

- b. The Permittee shall comply with the monitoring and recordkeeping requirements of NSPS Subpart OOO.

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 Quarrying Operations for the previous 17 months.

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

- Coal/coke hopper/feeder #2 (ID No. ES-COALF1HF2, NSPS Subpart Y)
- Coal/coke belt conveyor transfer (ID No. ES-COALF1BCT, NSPS Subpart Y)
- Coal/coke enclosed hopper w/dust suppression (water spray) (ID No. ES-COALF2EH, NSPS Subpart Y)
- Coal/coke belt to tripper belt (ID No. ES-COALF3B, NSPS Subpart Y)
- Coal/coke tripper belt to piles (ID No. ES-COALF3TB, NSPS Subpart Y)
- Coal/coke pile reclaiming (ID No. ES-COALF3PR, NSPS Subpart Y)
- Coal/coke reclaiming to belt (ID No. ES-COALFERB, NSPS Subpart Y)
- Coal unloading by rail to hopper transport system (ID No. ES-COALE1, NSPS Subpart Y) with associated bagfilter (CD1)
- Coal unloading by truck to hopper transport system (ID No. ES-COALE2, NSPS Subpart Y) with associated bagfilter (CD2)
- Coal transport to storage (ID No. ES-COALFE3, NSPS Subpart Y) with associated bagfilter (CD3)
- Coal transport from storage (ID No. ES-COALE4, NSPS Subpart Y) with associated bagfilter (CD4)
- Coal mill feed bin (ID No. ES-COALE14, NSPS Subpart Y) with associated bagfilter (CD14)
- Coal mill feed bin (ID No. ES-COALE15, NSPS Subpart Y) with associated bagfilter (CD15)
- Coal mill feed transport (ID No. ES-COALE16, NSPS Subpart Y) with associated bagfilter (CD16)
- Fine coal bin (ID No. ES-COALE17, MACT Subpart LLL) with associated bagfilter (CD17)
- Fine coal bin (ID No. ES-COALE18, MACT Subpart LLL) 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 source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate emissions	Bagfilter with grain outlet grain loading of 0.01 gr/scf <i>(Limit/Standard does not apply to ES-COAL which vents to the main stack)</i>	15A NCAC 2D .0530 PSD (BACT)
Visible emissions	20 percent opacity (For ES-COALE1, COALE2, COALFE3, COALE4, COALE14, COALE15, COALE16)	15A NCAC 2D .0524 40 CFR Part 60, Subpart Y
	10 percent opacity (For ES-COAL, ES-COALE17, & COALE18)	15A NCAC 2D .1111 40 CFR Part 60, Subpart LLL

1. 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", particulate emissions from the Coal Handling System as described above in 2.1C, shall be controlled by bagfilters (CD1, 2, 3, 4, 14, 15, 16, 17, 18) with an outlet grain loading of 0.01 gr/scf.

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

- b. Particulate matter emissions 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 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.
- c. 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)]

- 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 following:
- i. The monthly summary log for bagfilter monitoring.
 - ii. Any deviations from the monitoring requirements for the bagfilters.

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

- Coal/coke hopper/feeder #2 (ID No. ES-COALF1HF2, NSPS Subpart Y)
- Coal/coke belt conveyor transfer (ID No. ES-COALF1BCT, NSPS Subpart Y)
- Coal/coke enclosed hopper w/dust screen (ID No. ES-COALF2EH, NSPS Subpart Y)
- Coal/coke belt to tripper belt (ID No. ES-COALF3B, NSPS Subpart Y)
- Coal/coke tripper belt to piles (ID No. ES-COALF3TB, NSPS Subpart Y)
- Coal/coke pile reclaimers (ID No. ES-COALF3PR, NSPS Subpart Y)

- Coal/coke reclaimers to belt (ID No. ES-COALFERB, NSPS Subpart Y)
- Coal unloading by rail (ID No. ES-COALE1, NSPS Subpart Y) with associated bagfilter (CD1)
- Coal unloading by truck (ID No. ES-COALE2, NSPS Subpart Y) with associated bagfilter (CD2)
- Coal transport to storage (ID No. ES-COALFE3, NSPS Subpart Y) with associated bagfilter (CD3)
- Coal transport from storage (ID No. ES-COALE4, NSPS Subpart Y) with associated bagfilter (CD4)
- Coal mill feed bin (ID No. ES-COALE14, NSPS Subpart Y) with associated bagfilter (CD14)
- Coal mill feed bin (ID No. ES-COALE15, NSPS Subpart Y) with associated bagfilter (CD15)
- Coal mill feed transport (ID No. ES-COALE16, NSPS Subpart Y) with associated bagfilter (CD16)
- Coal mill (ES-COAL, NSPS Subpart Y) with associated bagfilter (CD44B) is subject to the MACT LLL visible emission standard because it has the same emission point as other MACT LLL sources

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 an after the date on which the performance test required to be conducted by 40 CFR §60.8 is completed, an owner or operator subject to the provisions of this Subpart 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 constructed after October 24, 1974 processing coal, gases which exhibit 20 percent opacity or greater.

Testing

- b. The Permittee shall conduct an initial performance test of the affected sources to demonstrated compliance with the visible emission standards in accordance with 40 CFR §60.252, within 60 days of achieving the maximum sustained production rate, but not later than 180 days after initial start-up. Testing shall be conducted in accordance with 40 CFR §60.254, included but not limited to Method 9 and the procedures in 40 CFR §60.11.

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

- c. To assure compliance, once a month the Permittee shall observe the exhaust from the emissions points for visible emissions above normal. The monthly observation must be made for each month of the calendar year period to ensure compliance with this requirement. The Permittee shall establish normal opacity for the source in the first 180 days following startup. If visible emissions from this source are observed to be above normal, the Permittee shall either:
 - i. Take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. Demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .0501(c)(8), (Method 9) for 12 minutes, is below the limit given in Section 2.1 C. 3. a. above.

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

- d. The results of the monitoring 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 observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.

3. **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]**

- Fine coal bin (ID No. ES-COALE17, MACT Subpart LLL) with associated bagfilter (CD17)
 - Fine coal bin (ID No. ES-COALE18, MACT Subpart LLL) with associated bagfilter (CD18)
 - Coal mill (ES-COAL, NSPS Subpart Y) with associated bagfilter (CD44B) because it is vented to the main (common) stack with other MACT LLL sources
- 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 bagfilter emission point.
- c. **Performance Testing Requirement** [40 CFR §63.1349]
The owner or operator of an affected source subject 40 CFR Part 63, Subpart LLL shall demonstrate initial compliance with the emission limits of §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 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

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 owner or operator 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 owner or operator 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 owner or operator of each Portland Cement plant 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 §63.1348. Such procedures must include the following provisions:
 - (1) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to 40 CFR Part 60. The test must 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 owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.
 - (5) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - (6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the Portland Cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 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 paragraph §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 must also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.

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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 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 an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR §63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and
 - (E) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
 - (F) The owner or operator 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 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 owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 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.
 - i. The owner or operator 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 owner or operator 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.

D. Paved Plant Roads (PLTRD), Storage piles (SP)

- **ES-PLTRD (Vehicular traffic on paved plant roads)**
- **ES-SPCoal1 (Coal/coke storage pile at the plant)**
- **ES-SPCoal2 (Coal/coke storage pile at the plant)**
- **ES-SPBlend1 (Blended stone pile at the plant)**
- **ES-SPBlend2 (Blended stone pile at the plant)**
- **ES-SPMillscale (Mill scale storage pile at the plant)**
- **ES-SPBauxite (Bauxite storage pile at the plant)**
- **ES-SPAsh (Bottom ash storage pile at the plant)**
- **ES-SPLimestone (Limestone storage pile at the plant)**
- **ES-SPGypsum (Gypsum storage pile at the plant)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
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
Particulate emissions	Vacuum sweeping and/or water flushing of paved road surfaces	15A NCAC 2D .0530 PSD (BACT)

1. 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", particulate emissions from the paved plant roads shall be controlled by vacuum sweeping and/or water flushing.

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

- b. 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 log book.

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 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 source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	500 parts per million sulfur fuel content beginning 10/01/2007	15A NCAC 2D .0524 40 CFR Part 60, Subpart IIII
	15 parts per million sulfur fuel content beginning 10/01/ 2010	
Visible emissions	20 percent opacity	15A NCAC 2D .0521
Hazardous Air Pollutants	Initial notification requirements	15A NCAC 2D .1111 40 CFR Part 63, Subpart ZZZZ
NMHC + NO _x , HC, NO _x , CO, PM	Purchase engine certified to meet the applicable engine design emission limits	15A NCAC 2D .0524 40 CFR Part 60, Subpart IIII
Nitrogen dioxide emissions	NSPS Subpart IIII limits	15A NCAC 2D .0530 PSD (BACT)
Particulate emissions		
Sulfur dioxide emissions		

1. 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 (ID No. GEN-1) shall not exceed 500 parts per million sulfur content beginning 10/01/2007.

Diesel fuel sulfur content used in generator (ID No. GEN-1) shall not exceed 15 parts per million sulfur content beginning 10/01/2010.

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. Owner/operators who purchase an emergency generator that is less than 30 liters per cylinder must purchase units that are certified by the manufacturer to meet the applicable engine design emission limits. {§60.4211 (c)}.
 - ii. Owners/operators must operate and maintain engines and control devices in accordance with the manufacturer’s written instructions or procedures developed by the owner or operator 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)}.

2. **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).

3. **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 in 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 of this part, except for the initial notification requirements.

The owner or operator 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 owner or operator;
- 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 sources 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 this subpart, shall be signed by the person making the determination.

F. Plant additives unloading and handling system

- ES-F1HF1 (Additives hopper/feeder, 40 CFR Part 63, Subpart LLL)
- ES-F1BCT (Additives belt conveyor transfer, 40 CFR Part 63, Subpart LLL)
- ES-F5 (Additives belt conveyor transfer, 40 CFR Part 63, Subpart LLL)
- ES-F7 (Additives belt conveyor transfer, 40 CFR Part 63, Subpart LLL)
- ES-F7C (Bottom Ash conveyor to silo, 40 CFR Part 63, Subpart LLL)
- ES-F7D (Bottom ash silo to enclosed belt, 40 CFR Part 63, Subpart LLL)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible Emissions	10 percent opacity	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL

1. 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 §63.1348]:**
10 percent opacity or less from each transfer point
- c. **Performance Testing Requirement [40 CFR §63.1349]**
The owner or operator of an affected source subject 40 CFR Part 63, Subpart LLL shall demonstrate initial compliance with the emission limits of §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 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

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 owner or operator 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 owner or operator 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 owner or operator of each Portland Cement plant 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 §63.1348. Such procedures must include the following provisions:
 - (1) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to 40 CFR Part 60. The test must 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 owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of Appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.
 - (5) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - (6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the Portland Cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 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 paragraph §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 must also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.

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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 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 an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR §63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and
 - (E) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
 - (F) The owner or operator 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 owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 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 owner or operator 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 owner or operator 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.

G. Raw Material Unloading & Handling (RMH)

- ES-RMHF3B (Quarry blend belt to tripper belt, 40 CFR 63, Subpart LLL)
- ES-RMHF3TB (Quarry blend tripper belt to piles, 40 CFR Part 63, Subpart LLL)
- ES-RMHF3PR (Quarry blend pile reclaimer, 40 CFR Part 63, Subpart LLL)
- ES-RMHF3R (Quarry blend reclaimer to belt, 40 CFR Part 63, Subpart LLL)
- ES-RMHF3ABT (Additives belt to tripper belt, 40 CFR Part 63, Subpart LLL)
- ES-RMHF3ATB (Additives tripper belt to piles, 40 CFR Part 63, Subpart LLL)
- ES-RMHF3APR (Additives pile reclaimer, 40 CFR Part 63, Subpart LLL)
- ES-RMHF3RB (Additives reclaimer to belt, 40 CFR Part 63, Subpart LLL)
- ES-RMHF6BCT (Quarry blend belt conveyor transfer, 40 CFR Part 63, Subpart LLL)
- ES-RMHF7A (Quarry blend conveyor to silo, 40 CFR Part 63, Subpart LLL)
- ES-RMHF7B (Quarry blend silo to enclosed belt, 40 CFR Part 63, Subpart LLL)

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	MACT Subpart LLL limits	15A NCAC 2D .0530 PSD (BACT)
Visible Emissions	10 percent opacity	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL

1. 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 transfer point.

c. **Performance Testing Requirement** [40 CFR §63.1349]

The owner or operator of an affected source subject 40 CFR Part 63, Subpart LLL shall demonstrate initial compliance with the emission limits of §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 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

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 owner or operator 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 owner or operator 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 owner or operator of each Portland Cement plant 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 §63.1348. Such procedures must include the following provisions:
 - (1) The owner or operator must conduct a monthly 1-minute visible emissions test of each

affected source in accordance with Method 22 of Appendix A to 40 CFR Part 60. The test must 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 owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.
 - (5) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - (6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the Portland Cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 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 paragraph §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 must also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.
- 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 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 an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR §63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and
 - (E) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
 - (F) The owner or operator 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 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 owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 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 owner or operator 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 owner or operator 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. Raw Mill Handling System (RMHS)

- ES-RMHSE5 (Raw mill feed bin, 40 CFR 63, Subpart LLL) with associated bagfilter (CD5)
- ES-RMHSE6 (Raw mill feed transport, 40 CFR 63, Subpart LLL) with associated bagfilter (CD6)
- ES-RMHSE7 (Raw mill feed, 40 CFR 63, Subpart LLL) with associated bagfilter (CD7)
- ES-RMHSE8 (Raw mill reject, 40 CFR 63, Subpart LLL) with associated bagfilter (CD8)
- ES-RMHSE9 (Kiln dust bin, 40 CFR 63, Subpart LLL) with associated bagfilter (CD9)
- ES-RMHSE10 (Raw mill transport to silo, 40 CFR 63, Subpart LLL) with associated bagfilter (CD10)
- ES-RMHSE11 (Raw mill silo, 40 CFR 63, Subpart LLL) with associated bagfilter (CD11)
- ES-RMHSE12 (Raw mill silo extraction, 40 CFR 63, Subpart LLL) with associated bagfilter (CD12)
- ES-RMHSE13 (Kiln feed, 40 CFR 63, Subpart LLL) with associated bagfilter (CD13)

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	Bagfilter with outlet grain loading of 0.01 gr/scf	15A NCAC 2D .0530 PSD (BACT)
Visible Emissions	10 percent opacity	15A NCAC 2D .1111 40 CFR Part 60, Subpart LLL

1. 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", particulate emissions from the Raw Mill Handling System shall be controlled by bagfilters (ID Nos. CD5 through CD13) with an outlet grain loading of 0.01 gr/scf.

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

- b. Particulate matter emissions from the Raw Mill Handling 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.
- c. 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)]

- 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 following:

- i. The monthly summary log of the Raw Mill Handling System for the previous 17 months.
- ii. Any deviations from monitoring requirements.

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 for each bagfilter emission point.
- c. **Performance Testing Requirement** [40 CFR §63.1349]
The owner or operator of an affected source subject 40 CFR Part 63, Subpart LLL shall demonstrate initial compliance with the emission limits of §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 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

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 owner or operator 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 owner or operator 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 owner or operator of each Portland Cement plant 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 §63.1348. Such procedures must include the following provisions:
 - (1) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to 40 CFR Part 60. The test must 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 owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.
 - (5) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - (6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the Portland Cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 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 paragraph §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 must also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.

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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 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 an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR §63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted

simultaneously with the excess emissions and continuous monitoring system performance reports; and

- (E) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
- (F) The owner or operator 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 owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 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 owner or operator 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 owner or operator 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.

I. Clinker Handling System (CHS)

- Clinker discharge and cooler with associated bagfilter (CD19)
- Clinker dome with associated bagfilter (CD20)
- Off spec bin with associated bagfilter (CD21)

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	BACT Bagfilter with outlet grain loading of 0.01 gr/scf	15A NCAC 2D .0530 PSD
Visible Emissions	10 percent opacity	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL

1 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", particulate emissions from the Clinker Handling System shall be controlled by bagfilters with an outlet grain loading of 0.01 gr/scf.

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

- b. Particulate matter emissions from the Clinker Handling 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.
- c. 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)]

- 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 following:
- i. The monthly summary log of Clinker Handling System for the previous 17 months.
 - ii. Any deviations from the monitoring requirements.

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 mission Standard** [40 CFR §63.1348]:
10 percent opacity or less from each bagfilter emissions point.
- c. **Performance Testing Requirement** [40 CFR §63.1349]
The owner or operator of an affected source subject 40 CFR Part 63, Subpart LLL shall demonstrate initial compliance with the emission limits of §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 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

Failure to comply with any provision of the operations and maintenance plan developed in accordance with 40 CFR 9(a), shall be a violation of the standard.

- d. The owner or operator 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 owner or operator 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 owner or operator of each Portland Cement plant 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 §63.1348. Such procedures must include the following provisions:
 - (1) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to 40 CFR Part 60. The test must 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 owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.

- (5) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - (6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the Portland Cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 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 paragraph §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 must also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.
- 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 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 an owner or operator during a startup,

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

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

- (F) The owner or operator 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 owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 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 owner or operator 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 owner or operator 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.

J. Finish Mills (FM)

- Cement mill #1 feed bin with associate bagfilter CD22
- Cement mill #2 feed bin with associate bagfilter CD23
- Cement mill #1 feed with associate bagfilter CD24
- Cement mill #1 recirculation bin associate bagfilter CD25
- Cement mill #1 reject with associate bagfilter CD26
- Cement mill #1 transport with associate bagfilter CD27
- Cement mill #2 feed with associate bagfilter CD28
- Cement mill #2 recirculation bin associate bagfilter CD29
- Cement mill #2 reject with associate bagfilter CD30
- Cement mill #2 transport with associate bagfilter CD31
- Exhaust from finish mill #1 with associate bagfilter CD45A
- Exhaust from finish mill #2 with associate bagfilter CD45B

- Cement additive bin with associate bagfilter CD446
- Cement additive intake from finis mill #1 with associate bagfilter CD47
- Gypsum/limestone unloading (truck unloading not subject to Subpart LLL)
- Gypsum/limestone hopper/feeder
- Gypsum/limestone belt conveyor transfer

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	BACT Bagfilter with outlet grain loading of 0.01 gr/scf	15A NCAC 2D .0530 PSD
Visible Emissions	10 percent opacity	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL

1. 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", particulate emissions from the Finish Mill System shall be controlled by bagfilters with an outlet grain loading of 0.01 gr/scf.

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

- b. Particulate matter emissions from the Finish Mill 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.
- c. 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)]

- 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 following:
- i. The monthly summary log of the Finish Mill System for the previous 17 months.
 - ii. Any deviations from monitoring requirements.

3. 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 bagfilter emission point.
- c. **Performance Testing Requirement** [40 CFR §63.1349]
The owner or operator of an affected source subject 40 CFR Part 63, Subpart LLL shall demonstrate initial compliance with the emission limits of §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 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

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 owner or operator 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 owner or operator 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 owner or operator of each Portland Cement plant 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 §63.1348. Such procedures must include the following provisions:
 - (1) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to 40 CFR Part 60. The test must 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 owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.
 - (5) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - (6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the Portland Cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 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 paragraph §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 must also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.
- ii. The owner or operator of a raw mill or finish mill shall monitor opacity by conducting daily visual emissions observations of the mill sweep and air separator PMCD of these affected sources in accordance with the procedures of Method 22 of appendix A to part 60 of this chapter. The Method 22 test shall be conducted while the affected source is operating at the representative performance conditions. The duration of the Method 22 test shall be 6 minutes. If visible emissions are observed during any Method 22 visible emissions test, the owner or operator must:(1) Initiate, within one-hour, the corrective actions specified in the site specific operating and maintenance plan developed in accordance with paragraphs (a)(1) and (a)(2) of section 40 CFR §60.1350; and
 - iii. Within 24 hours of the end of the Method 22 test in which visible emissions were observed, conduct a follow up Method 22 test of each stack from which visible emissions were observed during the previous Method 22 test. If visible emissions are observed during the followup Method 22 test from any stack from which visible emissions were observed during the previous Method 22 test, conduct a visual opacity test of each stack from which emissions were observed during the follow up Method 22 test in accordance with Method 9 of Appendix A to Part 60 of this chapter. The duration of the Method 9 shall be 30 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 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 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 an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR §63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and
 - (E) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
 - (F) The owner or operator 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 owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 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 owner or operator 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 owner or operator 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.

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

- Cement dome with associated bagfilter (CD32)
- Cement dome extraction rail with associated bagfilter (CD33)
- Cement dome extraction truck with associated bagfilter (CD34)
- Cement silo with associated bagfilter (CD40)
- Cement silo extraction with associated bagfilter (CD41)
- Cement transport with associated bagfilter (CD42)
- Packaging plant with associated bagfilter (CD43)
- Cement silo with associated bagfilter (CDP43)
- Screw conveyor and truck load-out spout with associated bagfilter (CDP30)

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	BACT Bagfilter with outlet grain loading of 0.01 gr/scf (for CD32, 33, 34, 40, 41, 42, 43, P30 only)	15A NCAC 2D .0530 PSD
Visible Emissions	10 percent opacity	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL

1. 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", particulate emissions from the Cement Handling and Loadout System shall be controlled by bagfilters (for CD32, 33, 34, 40, 41, 42, 43, P30 only) with an outlet grain loading of 0.01 gr/scf.

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

- b. Particulate matter emissions from the Cement Handling and Loadout 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.
- c. 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)]

- 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 following:
 - i. The monthly summary log of the Cement Handling and Loadout System for the previous 17 months.
 - ii. Any deviations from monitoring requirements.

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 bagfilter emission point.
 - c. **Performance Testing Requirement** [40 CFR §63.1349]
The owner or operator of an affected source subject 40 CFR Part 63, Subpart LLL shall demonstrate initial compliance with the emission limits of §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 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

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 owner or operator 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 owner or operator 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 owner or operator of each Portland Cement plant 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 §63.1348. Such procedures must include the following provisions:
 - (1) The owner or operator must conduct a monthly 1-minute visible emissions test of each affected source in accordance with Method 22 of Appendix A to 40 CFR Part 60. The test must 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 owner or operator may decrease the frequency of testing from monthly to semi-annually for that affected source. If visible emissions are observed during any semi-annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator may decrease the frequency of testing from semi-annually to annually for that affected source. If visible emissions are observed during any annual test, the owner or operator must resume testing of that affected source on a monthly basis and 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 owner or operator must conduct a 6-minute test of opacity in accordance with Method 9 of appendix A to part 60 of this chapter. The Method 9 test must begin within one hour of any observation of visible emissions.
 - (5) The requirement to conduct Method 22 visible emissions monitoring under this paragraph shall not apply to any totally enclosed conveying system transfer point, regardless of the location of the transfer point. "Totally enclosed conveying system transfer point" shall mean a conveying system transfer point that is enclosed on all sides, top, and bottom. The enclosures for these transfer points shall be operated and maintained as total enclosures on a continuing basis in accordance with the facility operations and maintenance plan.
 - (6) If any partially enclosed or unenclosed conveying system transfer point is located in a building, the owner or operator of the Portland Cement plant shall have the option to conduct a Method 22 visible emissions monitoring test according to the requirements of paragraphs 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 paragraph §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 must also test visible emissions from each side, roof and vent of the building for at least 1 minute. The test must be conducted under normal operating conditions.

- 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 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 an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR §63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and
 - (E) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.

- (F) The owner or operator 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 owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 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 owner or operator 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
 - (D) If the owner or operator 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.

L. **Kiln System (ID No. ES-KS) {Preheater/precalciner kiln (Coal-fired, petroleum coke, 675 million Btu per hour heat input)/in-line raw mill/clinker cooler with associated selective non-catalytic reduction (SNCR, CD44N), lime injection system (CD44S)} routed to bagfilter (CD44A), and the Coal Mill system (ID No. ES-COAL) routed to bagfilter (CD44B),**

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	Emissions from the kiln/inline raw mill shall not exceed 0.30 pounds of PM per ton of feed (on dry basis) to the kiln	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
	Emissions from the clinker cooler shall not exceed 0.10 pounds of PM per ton of feed (on dry basis) to kiln	
PM10 emissions	Combined filterable emissions from the kiln/inline raw mill/clinker cooler bagfilter (CD44A) shall not exceed 0.012 grains/scf outlet grain loading	15A NCAC 2D .0530 PSD (BACT)
	Filterable emissions from the coal mill bagfilter (CD44B) shall not exceed 0.01 grains/scf outlet grain loading	
Visible emissions	Combined emissions from the kiln/inline raw mill/clinker cooler/coal mill shall not exceed 10 percent opacity as measured by a Continuous Opacity Monitor on the main stack	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
Sulfur dioxide emissions	Combined emissions from the kiln/inline raw mill/clinker cooler/coal mill 1.33 lbs per ton of 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/clinker cooler/coal mill shall not exceed 1.80 lbs per ton of clinker, maximum 24-hour rolling average as measured by a Continuous Emissions Monitor	

-Table continued on the next page-

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Dioxins and Furans	Combined emissions from the kiln/inline raw mill/clinker cooler/coal mill shall not exceed 8.7×10^{-11} grains per dscf (TEQ) on a dry basis, corrected to 7 percent oxygen, or 1.7×10^{-10} grains per dscf (TEQ) on a dry basis, corrected to 7 percent oxygen, when the average of the performance test run average temperature at the inlet to the particulate matter control device is 400 degrees F or less	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 0.720 lbs per day	15A NCAC 2D .1100
	41 µg per dscm on a dry basis, corrected to 7 percent oxygen	15A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
Nitrogen oxides	Combined emissions from the kiln/inline raw mill/clinker cooler/coal mill shall not exceed 1.70 pounds per ton clinker, 30 day rolling average as measured by a Continuous Emissions Monitor.	15A NCAC 2D .0530 PSD (BACT)
	For the first twelve months of operation, the emissions shall not exceed 1.95 pounds per ton of clinker, 30 day rolling average	
Total hydrocarbon, (THC)	20 ppmv with hourly block averaging or demonstrate a 98 percent reduction of THC emissions from the exit of the kiln to discharge to the atmosphere, 30 day rolling average as measured by a Continuous Emissions Monitor	5A NCAC 2D .1111 40 CFR Part 63, Subpart LLL
Volatile organic compounds (VOCs)	Good combustion practices and 0.16 pounds per ton of clinker, 30 day rolling average as measured by a Continuous Emissions Monitor	15A NCAC 2D .0530 PSD (BACT)
Carbon monoxide	Good combustion practices and 2.80 pounds per ton of clinker, 30 day rolling average as measured by a Continuous Emissions Monitor	15A NCAC 2D .0530 PSD (BACT)
Ammonia	<i>Modeled emission rates</i> (State Enforceable Only, See Multiple Emissions Section 2.2B)	15A NCAC 2D .1100
Benzene		
Fluorides		
HCL		
Formaldehyde		
Arsenic		
Beryllium		
Cadmium		
Chromium VI *		
Manganese		

* modeled against the AAL for bioavailable chromate pigments

1. **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 {Preheater/precalciner kiln (Coal/pet coke-fired, 675 million Btu per hour heat input) with in-line raw mill/coal mill/clinker cooler with associated selective non-catalytic reduction (SNCR, CD44N), lime injection system (CD44S); ID No. ES-KS} all routed to bagfilters (CD44A & B):**

Amendments to Maximum Achievable Control Technology (MACT) standards, Subpart LLL were proposed in the Federal Register on May 6, 2009 for all affected facilities that are constructed after May 6, 2009. The Permittee shall comply with all applicable provisions contained in the final rule promulgated pursuant to the May 6, 2009 proposal {includes pollutants Mercury (Hg), total hydrocarbons (THC), particulate matter (PM), dioxins/furans (DF), and hydrochloric acid (HCl)}.

- 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. **PM Emission Standards:**

- Emissions from the kiln/inline raw mill shall not exceed 0.30 lbs per ton of feed (on dry basis) to the kiln
- Emissions from the clinker cooler shall not exceed 0.10 lbs per ton of feed (on dry basis) to the kiln

If the Permittee does not test the clinker cooler emissions separately, the emissions from the combined kiln/inline raw mill/clinker cooler shall be less than 0.10 lbs per ton of feed (on dry basis) to the kiln.

c. **Visible Emission Standard (kiln/in-line raw mill)** [40 CFR §63.1343(c)(2)]:

- Opacity – No more than 10 percent opacity from the main exhaust of the kiln/inline raw mill as measured by a continuous opacity monitor (COMs).

d. **Dioxins and Furans Emission Standard (kiln/in-line raw mill)** [40 CFR §63.1343(c)(3)]:

- No more than 8.7×10^{-11} gr per dscf (TEQ) on a dry basis, corrected to 7 percent oxygen, or 1.7×10^{-10} gr per dscf (TEQ) on a dry basis, corrected to 7 percent oxygen, when the average of the performance test run average temperature at the inlet to the particulate matter control device is 400 degrees F or less.

e. **Mercury Emission Standard (kiln/in-line raw mill)** [40 CFR §63.1343(c)(5)]:

- No more than 41 µg/dscm from the exhaust of the kiln/inline raw mill.

f. **Total Hydrocarbon Emission Standard (kiln/in-line raw mill)** [40 CFR §63.1343(c)(4)]:

- No more than 20 ppmv total hydrocarbon emission from the exhaust of the kiln/inline raw mill. As an alternative to meeting the 20 ppmv standard, the facility may demonstrate a 98 percent reduction of THC emission from the exit of the kiln to discharge to the atmosphere.

g. **Performance Testing Requirement** [40 CFR §63.1349]

- i. The owner or operator of an affected source subject to this subpart shall demonstrate initial compliance with the emission limits of §63.1343 and §§63.1345 through 63.1348 using the test methods and procedures in paragraph (b) of this section and §63.7. Performance test results shall be documented in complete test reports that contain the information required by paragraphs (a)(1) through (a)(10) of this section, 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. Performance tests to demonstrate initial compliance with Subpart LLL shall be conducted.
- (A) The owner or operator of an in-line kiln/raw mill subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting separate performance tests as specified in §63.1349(b)(1)(i) through (b)(1)(iv) while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating.

The owner or operator of a clinker cooler subject to limitations on particulate matter emissions shall demonstrate initial compliance by conducting a performance test as specified in paragraphs §63.1349 (b)(1)(i) through (b)(1)(iii).

If the Permittee does not test the clinker cooler emissions separately, the emissions from the combined kiln/inline raw mill/clinker cooler shall be less than 0.10 lbs per ton of feed (on dry basis) to the kiln.

The opacity exhibited during the period of the Method 5 of Appendix A to Part 60 of this chapter performance tests required by paragraph §63.1349 (b)(1)(i) shall be determined as required in paragraphs §63.1349 (b)(1)(v) through (vi).

- (1) Method 5 of appendix A to Part 60 of Subpart LLL shall be used to determine PM emissions. Each performance test shall consist of three separate runs under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with §63.7(e). Each run shall be conducted for at least 1 hour, and the minimum sample volume shall be 0.85 dscm (30 dscf). The average of the three runs shall be used to determine compliance. A determination of the PM collected in the impingers (“back half”) of the Method 5 particulate sampling train is not required to demonstrate initial compliance with the PM standards of this subpart. However, this shall not preclude the permitting authority from requiring a determination of the “back half” for other purposes.
- (2) Suitable methods shall be used to determine the kiln or inline kiln/raw mill feed rate, except for fuels, for each run.
- (3) The emission rate, E, of PM shall be computed for each run using equation 1:

$$E = \left(\frac{C_s Q_{sd}}{P} \right) \quad (Eq. 1)$$

Where:

- E = emission rate of particulate matter, kg/Mg of kiln feed.
- c_s = concentration of PM, kg/dscm.
- Q_{sd} = volumetric flow rate of effluent gas, dscm/hr.
- P = total kiln feed (dry basis), Mg/hr.

- (4) Except as provided in §63.1349(b)(1)(vi), the opacity exhibited during the period of the Method 5 performance tests required by §63.1349 (b)(1)(i) shall be determined through the use of a continuous opacity monitor (COM). The maximum six-minute average opacity during the three Method 5 test runs shall be determined during each Method 5 test run, and used to demonstrate initial compliance with the applicable opacity limits of §63.1343(b)(2), §63.1343(c)(2), or §63.1345(a)(2).
- (B) The owner or operator of an affected source subject to limitations on D/F emissions under this subpart shall demonstrate initial compliance with the D/F emission limit by conducting a performance test using Method 23 of appendix A to part 60 of this chapter. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating.
- (1) Each performance test shall consist of three separate runs; each run shall be conducted under the conditions that exist when the affected source is operating at the representative performance conditions in accordance with §63.7(e). The duration of each run shall be at least 3 hours, and the sample volume for each run shall be at least 2.5 dscm (90 dscf). The concentration shall be determined for each run, and the arithmetic average of the concentrations measured for the three runs shall be calculated and used to determine compliance.
 - (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, must be continuously recorded during the period of the Method 23 test, and the continuous temperature record(s) must be included in the performance test report.
 - (3) One-minute average temperatures must be calculated for each minute of each run of the test.
 - (4) The run average temperature must be calculated for each run, and the average of the run average temperatures must be determined and included in the performance test report and will determine the applicable temperature limit in accordance with §63.1344(b).
 - (5) If activated carbon injection is used for D/F control, the rate of activated carbon injection to the kiln or in-line kiln/raw mill exhaust, and where applicable, the rate of activated carbon injection to the alkali bypass exhaust, must be continuously recorded during the period of the Method 23 test, and the continuous injection rate record(s) must be included in the performance test report. In addition, the performance test report must include the brand and type of activated carbon used during the performance test and a continuous record of either the carrier gas flow rate or the carrier gas pressure drop for the duration of the test. Activated carbon injection rate parameters must be determined in accordance with paragraphs (b)(3)(vi) of this section.
 - (6) The run average injection rate must be calculated for each run, and the average of the run average injection rates must be determined and included in the performance test report and will determine the applicable injection rate limit in accordance with §63.1344(c)(1).
- (C) (1) The owner or operator of an affected source subject to limitations on emissions of THC shall demonstrate initial compliance with the THC limit by operating a continuous emission monitor in accordance with Performance Specification 8A of appendix B to part 60 of this chapter. The duration of the performance test shall be three hours, and the average THC concentration (as calculated from the one-minute averages) during the three-hour performance test shall be calculated. The owner or operator of an in-line kiln/raw mill shall demonstrate initial compliance by conducting separate performance tests while the raw mill of the in-line kiln/raw mill

is under normal operating conditions and while the raw mill of the in-line kiln/raw mill is not operating.

- (2) The owner or operator of an affected source subject to limitations on emissions of THC who elects to demonstrate compliance with the alternative THC emission limit of 98 percent weight reduction must demonstrate compliance by also operating a continuous emission monitor in accordance with Performance Specification 8A of appendix B to part 60 at the inlet to the THC control device of the kiln, inline kiln raw mill, or raw materials dryer in the same manner as prescribed in paragraph (i) above. Alternately, you may elect to demonstrate a 98 weight percent reduction in THC across the control device using the performance test requirements in 40 CFR Part 63, Subpart SS.
- (D) The owner or operator of a kiln or in-line kiln/raw mill subject to the 41 µg/dscm mercury standard shall demonstrate compliance using EPA Method 29 of 40 CFR Part 60. ASTM D6784-02, Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method), is an acceptable alternative to EPA Method 29 (portion for mercury only). If the kiln has an in-line raw mill, the Permittee must demonstrate compliance with both raw mill off and raw mill on. The Permittee must record the hourly recycle rate of CKD during both test conditions and calculate an average hourly rate for the three test runs for each test condition.
- iii. Except as provided in 40 CFR §63.1349(e), performance tests required under §63.1349(b)(1) and (b)(2) of this section shall be repeated every two years, except that the owner or operator of a kiln, in-line kiln/raw mill or clinker cooler is not required to repeat the initial performance test of opacity for the kiln, in-line kiln/raw mill or clinker cooler.
- iv. Performance tests required under 40 CFR §63.1349(b)(3) of this section shall be repeated every 30 months.
- v. (A) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable D/F standard under this Subpart, the source must conduct a performance test and establish new temperature limit(s) as specified in paragraph §63.1349 (b)(3).
- (B) If a source plans to undertake a change in operations that may adversely affect compliance with an applicable PM standard under §63.1343, the source must conduct a performance test as specified in paragraph §63.1349(b)(1).
- (C) In preparation for and while conducting a performance test required in paragraph §63.1349 (e)(1), a source may operate under the planned operational change conditions for a period not to exceed 360 hours, provided that the conditions in paragraphs §63.1349(e)(3)(i) through (iv) of 40 CFR §63.1349 are met. The source shall submit temperature and other monitoring data that are recorded during the pretest operations.
 - (1) The source must provide the Director written notice at least 60 days prior to undertaking an operational change that may adversely affect compliance with an applicable standard under this subpart, or as soon as practicable where 60 days advance notice is not feasible. Notice provided under this paragraph shall include a description of the planned change, the emissions standards that may be affected by the change, and a schedule for completion of the performance test required under paragraph §63.1349 (e)(1), including when the planned operational change period would begin.
 - (2) The performance test results must be documented in a test report according to §63.1349(a).
 - (3) A test plan must be made available to the Administrator prior to testing, if requested.
 - (4) The performance test must be conducted, and it must be completed within 360 hours after the planned operational change period begins.

- h. **Monitoring Requirements** [40 CFR §1350]
 - i. The owner or operator of each Portland Cement plant shall prepare for each affected source subject to the provisions of this subpart, 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 §§63.1343 through 63.1348;
 - (B) Corrective actions to be taken when required by paragraph (e) of this section;
 - (C) Procedures to be used during an inspection of the components of the combustion system of each kiln and each in-line kiln raw mill located at the facility at least once per year; and
 - ii. Failure to comply with any provision of the operations and maintenance plan developed in accordance with paragraph (a) of this section shall be a violation of the standard.
 - iii. The owner or operator of a kiln or in-line kiln/raw mill shall monitor opacity at each point where emissions are vented from these affected sources including alkali bypasses in accordance with §63.1350 (c)(1) through (c)(3).
 - (A) Except as provided in §63.1350 (c)(2), the owner or operator shall install, calibrate, maintain, and continuously operate a continuous opacity monitor (COM) located at the outlet of the PM control device to continuously monitor the opacity. The COM shall be installed, maintained, calibrated, and operated as required by subpart A, general provisions of this part, and according to PS-1 of appendix B to Part 60.
 - (B) To remain in compliance, the opacity must be maintained such that the 6-minute average opacity for any 6-minute block period does not exceed 10 percent. If the average opacity for any 6-minute block period exceeds 10 percent, this shall constitute a violation of the standard.
 - iv. The owner or operator of an affected source subject to a limitation on D/F emissions shall monitor D/F emissions in accordance with paragraphs §63.1350 (f)(1) through (f)(6).
 - (A) The owner or operator shall install, calibrate, maintain, and continuously operate a continuous monitor to record the temperature of the exhaust gases from the kiln, in-line kiln/raw mill and alkali bypass, if applicable, at the inlet to, or upstream of, the kiln, in-line kiln/raw mill and/or alkali bypass PM control devices.
 - (1) The recorder response range must include zero and 1.5 times either of the average temperatures established according to the requirements in §63.1349(b)(3)(iv).
 - (2) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.
 - (B) The owner or operator 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.
 - (C) The three-hour rolling average temperature shall be calculated as the average of 180 successive one-minute average temperatures.
 - (D) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.
 - (E) When the operating status of the raw mill of the in-line kiln/raw mill is changed from off to on, or from on to off the calculation of the three-hour rolling average temperature must begin anew, without considering previous recordings.
 - (F) The calibration of all thermocouples and other temperature sensors shall be verified at least once every three months.

- v. The owner or operator of an affected source subject to an emissions limitation on D/F, THC or mercury emissions that employs carbon injection as an emission control technique shall comply with the monitoring requirements of §§63.1350 (f)(1) through (f)(6) and (g)(1) through (g)(6) to demonstrate continuous compliance with the D/F, THC or mercury emissions standard.
 - (A) Install, operate, calibrate and maintain a continuous monitor to record the rate of activated carbon injection. The accuracy of the rate measurement device must be ± 1 percent of the rate being measured.
 - (B) Verify the calibration of the device at least once every three months.
 - (C) The three-hour rolling average activated carbon injection rate shall be calculated as the average of 180 successive one-minute average activated carbon injection rates.
 - (D) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average is added to the previous 179 values to calculate the three-hour rolling average.
 - (E) 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 activated carbon injection rate must begin anew, without considering previous recordings.
 - (F) The owner or operator must install, operate, calibrate and maintain a continuous monitor to record the activated carbon injection system carrier gas parameter (either the carrier gas flow rate or the carrier gas pressure drop) established during the mercury, THC or D/F performance test in accordance with §§63.1350 (g)(6)(i) through (g)(6)(iii).
 - (1) The owner or operator shall install, calibrate, operate and maintain a device to continuously monitor and record the parameter value.
 - (2) The owner or operator must calculate and record three-hour rolling averages of the parameter value.
 - (3) Periods of time when one-minute averages are not available shall be ignored when calculating three-hour rolling averages. When one-minute averages become available, the first one-minute average shall be added to the previous 179 values to calculate the three-hour rolling average.
- vi. The owner or operator of an affected source subject to a limitation on THC emissions under this subpart shall comply with the monitoring requirements of §§63.1350 (h)(1) through (h)(3) to demonstrate continuous compliance with the THC emission standard:
 - (A) The owner or operator shall install, operate and maintain a THC continuous emission monitoring system in accordance with Performance Specification 8A, of appendix B to part 60 of this chapter and comply with all of the requirements for continuous monitoring systems found in the general provisions, subpart A of this part.
 - (B) For new facilities complying with the 20 ppmv THC emissions limit, any hourly average THC concentration in any gas discharged from a raw material dryer, the main exhaust of a greenfield kiln, or the main exhaust of a kiln or in-line kiln/raw mill, exceeding 20 ppmvd, reported as propane, corrected to seven percent oxygen, is a violation of the standard.
- vii. The owner or operator of any kiln or in-line kiln/raw mill subject to a D/F emission limit under this subpart shall conduct an inspection of the components of the combustion system of each kiln or in-line kiln raw mill at least once per year.
- viii. The owner or operator of an affected source subject to a particulate matter standard under §63.1343 shall install, calibrate, maintain, and operate a particulate matter continuous emission monitoring system (PM CEMS) to measure the particulate matter discharged to the atmosphere. All requirements relating to installation, calibration, maintenance, operation or performance of the PM CEMS and implementation of the PM CEMS requirement are deferred pending further rulemaking.

- ix. An owner or operator may submit an application to the Administrator for approval of alternate monitoring requirements to demonstrate compliance with the emission standards of this Subpart, except for emission standards for THC, subject to the provisions of §63.1350(l)(1) through (l)(6).
 - (A) The Administrator will not approve averaging periods other than those specified in this section, unless the owner or operator documents, using data or information, that the longer averaging period will ensure that emissions do not exceed levels achieved during the performance test over any increment of time equivalent to the time required to conduct three runs of the performance test.
 - (B) If the application to use an alternate monitoring requirement is approved, the owner or operator must continue to use the original monitoring requirement until approval is received to use another monitoring requirement.
 - (C) The owner or operator shall submit the application for approval of alternate monitoring requirements no later than the notification of performance test. The application must contain the information specified in §§63.1350 (l)(3)(i) through (l)(3)(iii)
 - (1) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach;
 - (2) A description of the proposed alternative monitoring requirement, including the operating parameter to be monitored, the monitoring approach and technique, the averaging period for the limit, and how the limit is to be calculated; and
 - (3) Data or information documenting that the alternative monitoring requirement would provide equivalent or better assurance of compliance with the relevant emission standard.
 - (D) The Administrator will notify the owner or operator of the approval or denial of the application within 90 calendar days after receipt of the original request, or within 60 calendar days of the receipt of any supplementary information, whichever is later. The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard. Before disapproving any alternate monitoring application, the Administrator will provide:
 - (1) Notice of the information and findings upon which the intended disapproval is based; and
 - (2) Notice of opportunity for the owner or operator to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the owner or operator to provide additional supporting information.
 - (E) The owner or operator is responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application, nor the Administrator's failure to approve or disapprove the application relieves the owner or operator of the responsibility to comply with any provision of this subpart.
 - (F) The Administrator may decide at any time, on a case-by-case basis that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subpart.
- x. Any kiln or kiln/in-line raw mill using a control device (other than ACI) to comply with a mercury emissions limit or equipment standard will monitor the control device parameters as specified in 40 CFR part 63 subpart SS.
- xi. For kilns and in-line kilns/raw mills complying with the requirements in §63.1344(g), each owner or operator must obtain a certification from the supplier for each shipment of fly ash received to demonstrate that the fly ash was not derived from a source in which the use of activated carbon, or any other sorbent, is used as a method of mercury emissions control. The certification shall include the name of the supplier and a signed statement from the supplier confirming that the fly ash was not derived from a source in which the use of activated carbon, or any other sorbent, is used as a method of emission control.

- xii. If the facility opts to use a fly ash derived from a source in which the use of activated carbon, or any other sorbent, is used as a method of mercury emissions control and demonstrate that the use of this fly ash does not increase mercury emissions, they must obtain daily fly ash samples, composites monthly, and analyze the samples for mercury.

- i. **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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator 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 owner or operator of an affected source who is required to submit progress reports as a condition of receiving an extension of compliance under 40 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 an owner or operator during a startup, shutdown, or malfunction of an affected source (including actions taken to correct a malfunction) are consistent with the procedures specified in the source's startup, shutdown, and malfunction plan specified in 40 CFR §63.6(e)(3), the owner or operator shall state such information in a semiannual report. Reports shall only be required if a startup, shutdown, or malfunction occurred during the reporting period. The startup, shutdown, and malfunction report may be submitted simultaneously with the excess emissions and continuous monitoring system performance reports; and
 - (E) Any time an action taken by an owner or operator during a startup, shutdown, or malfunction (including actions taken to correct a malfunction) is not consistent with the procedures in the startup, shutdown, and malfunction plan, the owner or operator shall make an immediate report of the actions taken for that event within 2 working days, by telephone call or facsimile (FAX) transmission. The immediate report shall be followed by a letter, certified by the owner or operator or other responsible official, explaining the circumstances of the event, the reasons for not following the startup, shutdown, and malfunction plan, and whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred.
 - (F) As required by 40 CFR §63.10(e)(2), the owner or operator shall submit a written report of the results of the performance evaluation for the continuous monitoring system required by 40 CFR §63.8(e). The owner or operator shall submit the report simultaneously with the results of the performance test.
 - (G) As required by 40 CFR §63.10(e)(2), the owner or operator of an affected source using a continuous opacity monitoring system to determine opacity compliance during any performance test required under 40CFR §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 40 CFR §63.10(e)(3), the owner or operator of an affected source equipped with a continuous emission monitor shall submit an excess emissions and continuous monitoring system performance report for any event when the continuous monitoring system data indicate the source is not in compliance with the applicable emission limitation or operating parameter limit.

- (I) The owner or operator 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:
 - (a) All exceedences of maximum control device inlet gas temperature limits specified in 40 CFR §63.1344(a) and (b);
 - (b) All failures to calibrate thermocouples and other temperature sensors as required under 40 CFR §63.1350(f)(7) of this subpart; and
 - (c) 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).
 - (d) The results of any combustion system component inspections conducted within the reporting period as required under 40 CFR §63.1350(i).
 - (e) All failures to comply with any provision of the operation and maintenance plan developed in accordance with 40 CFR §63.1350(a).
 - (J) If the total continuous monitoring system downtime for any CEM or any continuous monitoring system (CMS) for the reporting period is ten percent or greater of the total operating time for the reporting period, the owner of operator shall submit an excess emissions and continuous monitoring system performance report along with the summary report.
- j. **Recordkeeping Requirements** [40 CFR 63.1355]
- (A) The owner or operator shall maintain files of all information (including all reports and notifications) required by this section recorded in a form suitable and readily available for inspection and review as required by 40 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.
 - (B) The owner or operator shall maintain records for each affected source as required by 40 CFR §63.10(b)(2) and (b)(3) of this part; and
 - (1) All documentation supporting initial notifications and notifications of compliance status under 40 CFR §63.9;
 - (2) All records of applicability determination, including supporting analyses; and
 - (3) If the owner or operator has been granted a waiver under 40 CFR §63.8(f)(6), any information demonstrating whether a source is meeting the requirements for a waiver of recordkeeping or reporting requirements.
 - (C) In addition to the recordkeeping requirements in paragraph (B) of this section, the owner or operator of an affected source equipped with a continuous monitoring system shall maintain all records required by §63.10(c).
 - (D) You must keep annual records of the amount of CKD which 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.
 - (E) You must keep records of the amount of CKD recycled on an hourly basis.
 - (F) You must keep records of all fly ash supplier certifications as required by §63.1350(o).

3. **15A NCAC 2D .0530 “Prevention of Significant Deterioration (PSD)”**

To comply with the best available control technology (BACT) determination pursuant to 15A NCAC 2D .0530, "Prevention of Significant Deterioration", criteria pollutant emissions shall be controlled from the Kiln System { Coal/petroleum coke-fired preheater/precalciner kiln with inline raw mill } such that emissions shall not exceed:

- 1,861 tons NO_x /year per consecutive 12-month period
- 433 tons PM/year per consecutive 12-month period
- 391 tons PM₁₀/year per consecutive 12-month period
- 1,456 tons SO₂/year per consecutive 12-month period
- 3,066 tons CO/year per consecutive 12-month period
- 175 tons VOCs/year per consecutive 12-month period

a. Pursuant to 15A NCAC 2D .0530 “Prevention of Significant Deterioration” the facility shall comply with the following limits:

- i. Less than or equal to 6000 tons per day clinker production
- ii. Less than or equal to 2,190,000 tons per year of clinker production
- iii. Less than or equal to 2,400,000 tons per year of cement production

b. **Best Available Control Technology (BACT)**

- i. BACT for filterable PM₁₀ emissions from the preheater/precalciner/kiln/inline raw mill/clinker cooler bagfilter is an outlet grain loading of 0.012 grains/scf as measured at the main stack.
- ii. BACT for filterable PM₁₀ emissions from the coal mill bagfilter is an outlet grain loading of 0.01 grains/scf.
- iii. BACT for carbon monoxide (CO) emissions from the preheater/precalciner kiln/inline raw mill/clinker cooler main stack is 2.80 lbs CO per ton of clinker, 30-day rolling average, as measured using a Continuous Emission Rate Monitor in accordance with Appendix F of Part 60 and Approved Division of Air Quality protocol.
- iv. BACT for sulfur dioxide (SO₂) emissions from the preheater/precalciner kiln/inline raw mill/clinker cooler/ coal mill main stack is 1.33 lbs SO₂ per ton of clinker, 30-day rolling average and 1.80 lb/ton of clinker, maximum 24-hour average, as measured using a Continuous Emission Rate Monitor in accordance with Appendix F of Part 60 and Approved Division of Air Quality protocol.
- v. BACT for nitrogen dioxide (NO_x) emissions from the preheater/precalciner kiln/inline raw mill/clinker cooler/ coal mill main stack is 1.70 lbs NO_x per ton of clinker, 30-day rolling average, as measured using a Continuous Emission Rate Monitor in accordance with Appendix F of Part 60 and Approved Division of Air Quality protocol.
- vi. BACT for volatile organic compounds (VOCs) emissions from the preheater/precalciner/ kiln/inline raw mill/clinker cooler/coal mill emissions from the main stack is using good combustion practices and 0.16 lbs VOCs per ton of clinker as measured by a CEMs in accordance with Appendix F of Part 60 and Approved Division of Air Quality protocol.

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

- 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 this permit condition if the sulfur content of the coal or pet coke exceeds this limit.
 - (A) 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:
 - (1) the name of the coal and/or pet coke supplier;
 - (2) the maximum sulfur content of the coal and/or pet coke received per total shipment;

- (3) 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:
 - (a) sampling -- ASTM Method D 2234;
 - (b) preparation -- ASTM Method D 2013;
 - (c) gross calorific value (Btu) -- ASTM Method D-5865
 - (d) moisture content --ASTM Method D 3173; and
 - (e) 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 (SO₂) emissions from fuel.

Prior to utilizing a fuel source with a sulfur content greater than 2%, the Permittee shall conduct a demonstration to show (if any) the variability of SO₂ 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 matter 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:
 - 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 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.

4. 15A NCAC 2D .0524, 40 CFR Part 60, Subpart F “Portland Cement Plants”

- Kiln, clinker cooler, raw mill system, finish mill system, raw mill dryer, raw mill storage, clinker storage, finished product storage, conveyor transfer points, bagging and bulk loading and unloading systems.

Currently this facility is not subject to New Source Performance Standards, Subpart F “Cement Plants”.

Amendments to New Source Performance Standards, Subpart F, were proposed in the Federal Register on June 16, 2008 for all affected facilities that are constructed after June 16, 2008. The Permittee shall comply with all applicable provisions contained in the final rule promulgated pursuant to the June 16, 2008 proposal {includes pollutants PM, SO₂, and NO_x}.

2.2- Multiple Emission Source(s) 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 (ID No. ES-Mine1)
- Rock/limestone loading operations (rock from front end loader to haul truck, unloading haul truck to jaw crusher, ID No. ES-Mine2)
- Limestone/marl pile located in quarry area (ID No. ES-FQSP1)
- Spoils/other pile located in quarry area (ID No. ES-FQSP2)
- Overburden pile located in quarry area (ID No. ES-FQSP4)
- Quarry roads (ID No. ES-QURD)
- Spoils/other stacker pile (ID No. ES-FQ6)

2. Paved Plant Roads (PLTRD), Storage piles (SP)

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

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 & Emergency generator	Ammonia	----- -	-----	2.5 lbs/hr
	Benzene	6792.04 lbs/yr	-----	-----
	Flourides	----- -	5.4 lbs/day	0.225 lbs/hr
	Hydrogen Chloride	----- -	-----	7.175 lbs/hr
	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	29.59 lbs/yr	-----	----- -
	Beryllium & comp.	1.84 lbs/yr	-----	----- -
	Cadmium	5.13 lbs/yr	-----	-----
	Chromium VI	2.29 lbs/yr	-----	-----
	Manganese	----- -	5.326 lbs/day	-----
	Mercury	----- -	0.720 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 must 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 device(s) and appurtenances.

8. This permit is nontransferable by the Permittee. Future owners and operators must 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 water quality or land quality control 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.**

Permit issued this the **XXth** day of **XXXX, XXXXXXXX**.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

DRAFT Revision 4 (September 9, 2009)

Donald R. van der Vaart, Ph.D., P.E., Chief, Air Permits Section

Division of Air Quality

By Authority of the Environmental Management Commission

Air Permit No. 097300R08