



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

XX

Mr. Rick R. Roper
Manager, Cliffside Steam Station
Duke Energy Carolinas LLC
573 Duke Power Road
Mooresboro, NC 28114

Dear Mr. Roper

SUBJECT: Air Quality Permit No. 04044T30
Facility ID: 8100028
Duke Energy Carolinas, LLC
Cliffside Steam Station
Cliffside, North Carolina
Rutherford County
Fee Class: Title V

In accordance with your completed Air Quality Permit Application for Renewal of a Title V permit received January 22, 2008, we are forwarding herewith Air Quality Permit No. 04044T30 to Duke Energy Carolinas LLC, Cliffside Steam Station, Cliffside, Rutherford County, 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 per 15A North Carolina Administrative Code 2Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. **The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.**

As the designated 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. This hearing request must be in the form of

Permitting Section

1641 Mail Service Center, Raleigh, North Carolina 27699-1641
2728 Capital Blvd., Raleigh, North Carolina 27604
Phone: 919-715-6235 / FAX 919-733-5317 / Internet: www.ncair.org

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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 the 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.

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

The changes made to the permit are summarized in the attachment to this letter. Should you have any questions concerning this matter, please contact please contact Mr. Michael Gordon, Environmental Engineer II, at (919) 715-6243.

Sincerely yours,

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

Enclosure

c: Gregg Worley, EPA Region 4
William T. Horton/Duke Energy Carolinas, LLC/P.O. Box 1006, EC11E/Charlotte, NC 28201
Asheville Regional Office
Central Files

Air Quality Permit No. 04044T30
Duke Energy Carolinas, LLC
Cliffside Steam Station
Insignificant Activities under 15A NCAC 2Q .0503(8)

Emission Source I.D.	Emission Source Description	Regulatory Basis for Exemption
I-1	Existing coal pile and coal handling system for Unit No. 1 through Unit No. 5 - fugitive emissions. Includes coal pile, coal unloading operations, conveyors, crusher operations, feed systems, etc.	2Q .0503(8)
I-2	Ash and ash handling system - fugitive emissions. Includes ash removal system, ash loading system, leaks in ash collection pipes and hopper system, emissions during maintenance, hauling of ash in trucks, duct vacuum truck unloading, and associated operations. Note: Cliffside sluices ash from Units 1, 2, 3, & 4 to an ash pond; therefore, fugitives are minimal. Ash handling for Unit 5 is currently contracted to an outside firm. However, potential emissions are calculated for all 5 units to allow future flexibility for performing ash handling for Unit 5 in-house. Potential emissions are calculated for all associated ash handling operations such as truck loading silos, hauling operations, etc.	2Q .0503(8)
I-3	Non-stack emissions of hydrazine and ammonia from throughout the plant (blow-down vents, overpressure vents, deaerator vents, valve leakage, purge vents, etc.) Condensate and feed water systems have potential for fugitive emissions of hydrazine and ammonia from boiler blow-down systems, deaerating feed water heater venting, and steam jet air ejectors.	2Q .0503(8)
I-4	Cooling towers - fugitive emissions of chlorine and biocides, two towers with 9 cells in each tower	2Q .0503(8)
I-5	Propane generators used for backup power for microwave towers, 4 kVA	2Q .0503(8)
I-6	Portable welder, 300 amp, 16 Hp, gasoline-fired	2Q .0503(8)
I-7	Portable generator, 4.5 kVA, gasoline-fired	2Q .0503(8)
I-8	Portable generator, 5 Hp / 2.25 kVA, gasoline-fired	2Q .0503(8)
I-9	Portable hydraulic pump, 16 Hp gasoline-fired	2Q .0503(8)
I-10	Gasoline, fuel oil, and kerosene pumps	2Q .0503(8)
I-11	Two welding shops, both vent directly to the outside atmosphere	2Q .0503(8)
I-12	Sandblasting room, used for site maintenance, exhaust vents back into room	2Q .0503(8)
I-13	Glove-box sandblasting booths, used for site maintenance	2Q .0503(8)
I-14	50,000 gallon aboveground auxiliary fuel-oil storage tank for Unit 5 and associated unloading station, contract awarded on tank in 1972 or early 1973	2Q .0503(8)
I-15	35,000 gallon aboveground auxiliary fuel-oil storage tank for Unit 5 and associated unloading station, tank installed in 1992	2Q .0503(8)
I-16	15,000 gallon aboveground fuel-oil storage tank for Units 1 - 4 and associated unloading station, tank installed in 1940	2Q .0503(8)
I-17	12,000 gallon aboveground fuel-oil storage tank for Units 1 - 4 and associated unloading station, tank installed in 1948	2Q .0503(8)
I-18	6,000 gallon diesel-fuel tank for tractors	2Q .0503(8)
I-19	3,000 gallon fuel-oil tank for locomotives, and associated unloading station	2Q .0503(8)

Emission Source I.D.	Emission Source Description	Regulatory Basis for Exemption
I-20	275 gallon diesel-fuel/kerosene portable tank	2Q .0503(8)
I-21	1,000 gallon underground unleaded gasoline storage tank, and associated unloading stations	2Q .0503(8)
I-22	4,000 gallon used-oil storage tank, and associated loading area	2Q .0503(8)
I-23	300 gallon used-oil holding tank for tractor/ vehicle maintenance	2Q .0503(8)
I-24	Four main turbine lube-oil tanks for Units 1 - 4, 2,300 gallon capacity each tank	2Q .0503(8)
I-25	Main turbine lube-oil tank for Unit 5, 10,290 gallon capacity	2Q .0503(8)
I-26	Four main turbine lube-oil storage tanks, 4,000 gallon capacity each tank (normally empty)	2Q .0503(8)
I-27	Main turbine lube-oil storage tank for Unit 5, 16,000 gallon capacity (normally empty), tank installed in 1972	2Q .0503(8)
I-28	New-oil storage areas (barrels, cans)	2Q .0503(8)
I-29	Satellite accumulation areas for storage of used-oil in drums	2Q .0503(8)
I-30	Transformer AT-1 for Unit 5, 15,906 gallons of transformer oil	2Q .0503(8)
I-31	Transformer AT-2 for Unit 5, 20,764 gallons of transformer oil	2Q .0503(8)
I-32	Transformer 5 UT for Unit 5, 13,380 gallons of transformer oil	2Q .0503(8)
I-33	Transformer 5 AT for Unit 5, 3,907 gallons of transformer oil	2Q .0503(8)
I-34	Transformers 5CTA and 5CTB for Unit 5, 27,810 gallons total capacity of transformer oil	2Q .0503(8)
I-35	Auxiliary transformer for Units 1 - 4, 12,665 gallons of transformer oil	2Q .0503(8)
I-36	Transformers 1A thru 4B for Units 1 - 4, 29,630 gallons total capacity of transformer oil	2Q .0503(8)
I-37	Four 4160 V transformers for Units 1 - 4, 1300 gallons total capacity of transformer oil	2Q .0503(8)
I-38	Large oil circuit breakers for Units 1 - 4, 31,965 gallons total capacity of oil	2Q .0503(8)
I-39	Small oil circuit breakers for Units 1 - 4, 3,960 gallons total capacity of oil	2Q .0503(8)
I-40	Oil circuit breakers for Unit 5, 33,507 gallons of oil	2Q .0503(8)
I-41	Various equipment for Units 1 - 4 containing lubricating oil: 4 ID fans, 212 gal. total 4 pre-heaters, 40 gal. total 4 air compressors, 70 gal. total 12 pulverizer mills, 840 gal. total 4 FD fans, 60 gal. total	2Q .0503(8)
I-42	Various equipment for Unit 5 containing lubricating oil: 2 boiler feed pumps, 1,800 gal. total Heater drain pump, 20 gal. total 3 hotwell pumps, 24 gal. total 6 pulverizer mills, 2,640 gal. total 4 ID and FD fans, 110 gal. total 18 cooling tower fans, 400 gal. total 4 CCW pumps, 50 gal. total 2 pre-heaters, 100 gal. total 4 boiler circulator pumps, 180 gal. total	2Q .0503(8)

Emission Source I.D.	Emission Source Description	Regulatory Basis for Exemption
I-43	Misc. oil trap tanks used for spill collection for oils in transformers and other yard drain locations	2Q .0503(8)
I-44	6,270 gallon aboveground caustic - sodium hydroxide (NaOH) storage tank	2Q .0503(8)
I-45	Caustic - sodium hydroxide (NaOH) day storage tank	2Q .0503(8)
I-46	6,267 gallon aboveground sulfuric acid (H ₂ SO ₄) storage tank	2Q .0503(8)
I-47	2,500 gallon aboveground sulfuric acid (H ₂ SO ₄) storage tank at ash basin for injecting acid into effluent for pH control	2Q .0503(8)
I-48	Hydrazine (N ₂ H ₄) mixing tank and storage drums	2Q .0503(8)
I-49	Misc. cylinders containing: SO ₂ , NO _x , NO ₂ , CO, CO ₂ , chlorine, hydrogen, nitrogen, acetylene, argon, oxygen, helium, HeF, or any combination of these	2Q .0503(8)
I-50	Misc. CFC and HCFC refrigerant cylinders	2Q .0503(8)
I-51	Misc. non-CFC and non-HCFC refrigerant cylinders	2Q .0503(8)
I-52	Propane storage tanks for supplying fuel to microwave heaters	2Q .0503(8)
I-53	Propane cylinders for light-off on auxiliary boilers	2Q .0503(8)
I-54	Satellite accumulation areas for storage of waste paint and solvents	2Q .0503(8)
I-55	Satellite accumulation area for used antifreeze	2Q .0503(8)
I-56	Storage area for new antifreeze in sealed containers	2Q .0503(8)
I-57	Misc. containers of Oil-Dri and oil contaminated materials resulting from cleanup of oil spills	2Q .0503(8)
I-58	Hydroveyer vents for flyash / water mixing operations for sluicing	2Q .0503(8)
I-59	Chiller systems used for cooling of control equipment	2Q .0503(8)
I-60	Fire extinguishers located throughout the plant	2Q .0503(8)
I-61	Continuous Emissions Monitoring System (CEMS) equipment, which emit ozone and other potential pollutants	2Q .0503(8)
I-62	Sewage treatment plant	2Q .0503(8)
I-63	Sewer system vents located throughout the plant	2Q .0503(8)
I-64	Vents from groundwater monitoring wells for areas contaminated with diesel fuel, gasoline, etc. (None on site at current time).	2Q .0503(8)
I-65	Laboratory for performing analyses of plant operating conditions	2Q .0503(8)
I-66	Miscellaneous parts washers	2Q .0503(8)
I-67	Use and storage of small quantities of pesticides and herbicides for on-site pest and weed control	2Q .0503(8)
I-68	Application of paints, solvents, degreasers, etc.	2Q .0503(8)
I-69	Open burning for fire brigade training	2Q .0503(8)
I-70	Application of dust suppression additives	2Q .0503(8)
I-71	Application of boron-oxide based slagging agents	2Q .0503(8)
I-72	Portable spray rig with a 5 HP gasoline -fired engine	2Q .0503(8)
I-73	Steam cleaner - 385,000 Btu/hr, fuel oil 2.75 GPH	2Q .0503(8)
I-74	Portable kerosene space heaters - 110,000 Btu	2Q .0503(8)
I-75	Barbecue grill with LP gas	2Q .0503(8)
I-76	Unit 5 Precipitator transformers (32) - 6080 gallons of oil	2Q .0503(8)

Emission Source I.D.	Emission Source Description	Regulatory Basis for Exemption
I-77	Unit 1-4 Precipitator transformers (14) - 2414 gallons of oil	2Q .0503(8)
I-78	Transformer for Yard Basin pumps - 270 gallons of oil	2Q .0503(8)
I-79	2000 gallon ammonia tank for flue gas conditioning	2Q .0503(8)
I-80	Two 45,000 gallon anhydrous ammonia tanks for SCR	2Q .0503(8)
I-81	Pelletized sulfur process storage tank	2Q .0503(8)
I-82	Chlorine ton cylinders for cooling tower	2Q .0503(8)
I-83	600-1000 lbs elemental sulfur/year blended on coal pile (intermittently produced from occasional spillage, clogging, and leakage resulting from maintenance of SO ₃ injection system and storage). Only elemental sulfur generated on site may be burned.	2Q .0503(8)
I-84	850 gallon above ground diesel fuel oil storage tank	2Q .0503(8)
I-85	One limestone hydraulic conveyor (60 tons/hr maximum throughput)	2Q .0503(8)

ATTACHMENT
Air Quality Permit No. 04044T30
Duke Energy Carolinas, LLC
Cliffside Steam Station

The following changes were made to the Duke Energy Carolinas, LLC, Cliffside Steam Station, Air Permit No. 04044T29:

Old Page No.	New Page No.	Part, Section, or Condition No.	Change
-	-	Cover	Amended to reflect current permit number, issue date, effective date, and associated application information
-	-	Throughout	Removed references to Part II and I since the DAQ no longer separates these sections within the permit.
-	-	Throughout	Corrected EPA Test Method rule citations in various sections from 15A NCAC 2D .0501 to the new 15A NCAC 2D .2600 rules.
-	-	General Conditions	Updated Permit with the latest General Conditions. Version 2.22.1.
-	-	Table of Contents	Revised for additional application attachments (Acid Rain, CAIR).
-	-	Throughout	Added specific conditions from Part II to relevant sections of the permit where necessary.
14	13	2.1.A.4	Removed 35% opacity limit and testing requirements due to incorporation of requirements and limits in the facility CAM plan located in Section 2.1.A.11.
16	14-15	2.1.A.7	Added SO ₂ requirements under 15A NCAC 2D .0606 for the existing scrubbers
17-18	16	2.1.A.9	Removed specific conditions that referenced 15A NCAC 2D .1400 rules and replaced with 15A NCAC 2D .2400 based specific conditions in the CAIR Permit Section 2.6
-	16	2.1.A.9	Incorporated applicable requirements of 15A NCAC 2D .2500 for Mercury emissions from Coal fired Boilers (Unit ID No.'s ES-1 to ES-5)
-	17-19	2.1.A.11	Added CAM plan for Coal fired Boilers (Unit ID No.'s ES-1 to ES-5)
45	45	2.1.J	Added Method 29 for lead to the list of reference test methods.
-	62	2.1.P	Added citation for 15A NCAC 2D .0524 - Subpart OOO in the Regulated Pollutants Table for Particulate Emissions.
76-79	77-82	Section 2.5	Revised Acid Rain effective dates.
			Revised NO _x limits in accordance with averaging plan in Section 2.5 B.
			Revised for new Acid Rain application attachments in Section 2.5 D.
-	83-84	Section 2.6	Added CAIR Permit Section
-	-	Part II	Removed Part II from the permit due to changes in permitting procedures at the DAQ and incorporation of 501(c)(2) changes that the Permittee has completed and is requesting be covered under the permit shield. General Condition NN now covers the general requirements of Part II and specific requirements are incorporated within the main body of the permit (See Sections related to Unit 6)

State of North Carolina,
Department of Environment,
and Natural Resources

Division of Air Quality



AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date*	Expiration Date*
04044T30	04044T29	XXXX	XXXX

* Effective dates for the Phase II Acid Rain portion of this permit may differ from these dates.

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:

Duke Energy Carolinas LLC

Facility ID:

8100028

Facility Site Location:

573 Duke Power Road

City, County, State, Zip:

Cliffside, Rutherford, NC, 28024

Mailing Address:

526 S. Church St., PO Box 1006, Mail Code EC13K

City, State, Zip:

Charlotte, NC, 28201-1006

Application Number:

8100028.08A

Complete Application Date:

January 22, 2008

Primary SIC Code:

4911

Division of Air Quality,

Asheville Regional Office

Regional Office Address:

2090 U. S. Highway 70

Swannanoa, NC 28778

Permit issued this the **XX** day of **XXXXXX**, **XXXX**

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

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(Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)

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(Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)

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2.5 - Phase II Acid Rain Permit Requirements

SECTION 3: GENERAL PERMIT CONDITIONS

ATTACHMENT

List of Acronyms

Acid Rain Permit Application dated June 16, 2007

Phase II NO_x Compliance Plan dated December 18, 2006

Phase II NO_x Averaging Plan dated January 4, 2007

CAIR Permit Application received June 28, 2007

Greenhouse Gas Reduction Plan

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.

SECTION 1- PERMITTED EMISSION SOURCE (S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE (S) AND APPURTENANCES

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-1 (U1Boiler) CAM	One coal/No. 2 fuel oil-fired electric utility boiler (647 million Btu per hour heat input, Unit No. 1) equipped with low-NOx burners	CD-1 (U1ESP)	One hot-side electrostatic precipitator (80,640 square feet of plate area)
ES-2 (U2Boiler) CAM	One coal/No. 2 fuel oil-fired electric utility boiler (647 million Btu per hour heat input, Unit No. 2) equipped with low-NOx burners	CD-2 (U2ESP)	One hot-side electrostatic precipitator (80,640 square feet of plate area)
ES-3 (U3Boiler) CAM	One coal/No. 2 fuel oil-fired electric utility boiler (810 million Btu per hour heat input, Unit No. 3) equipped with low-NOx burners	CD-3 (U3ESP)	One hot-side electrostatic precipitator (87,840 square feet of plate area)
ES-4 (U4Boiler) CAM	One coal/No. 2 fuel oil-fired electric utility boiler (810 million Btu per hour heat input, Unit No. 4) equipped with low-NOx burners	CD-4 (U4ESP)	One hot-side electrostatic precipitator (87,840 square feet of plate area)
ES-5 (U5Boiler) CAM	One coal/No. 2 fuel oil-fired electric utility boiler (6,080 million Btu per hour heat input, Unit No. 5) equipped with low-NO _x concentric firing system and separated over-fire air/lowered firing low-NO _x control equipment (SOFA/LOFIR)*	CD-11b (U5SCR)* CD-12 (U5FG)* CD-13 (U5FG)* CD-5/CD-6 (U5ESP)/ (U6ESP) CD-33*	A selective catalytic reduction system installed in series with: Flue gas ash conditioning systems consisting of: An anhydrous ammonia injection system and; A sulfur trioxide injection system Two cold-side electrostatic precipitators (190,080 square feet of plate area, each) in parallel Wet flue gas desulfurization system consisting of: Spray tower absorber (nominal 211 gal/min limestone slurry injection rate)

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-6 (AuxB)	One No. 2 fuel oil/propane**-fired auxiliary boiler (71.5 million Btu per hour heat input)	N/A	N/A
ES-7 (AuxB)	One No. 2 fuel oil/propane**-fired auxiliary boiler (4 million Btu per hour heat input)	N/A	N/A
ES-8 (FTS)	One flyash transfer and storage system consisting of:		
ES-8A	One flyash vacuum handling system, and;	CD-15 (Fltr)	One fabric-type in-line vacuum filter
ES-8B	One flyash storage silo, truck load out and blow off system	CD-14 (Fltr)	One bagfilter (1,200 square feet of filter area)
ES-9 (FTS)	One flyash transfer and storage system consisting of:		
ES-9A	One flyash vacuum handling system, and;	CD-17 (Fltr)	One bagfilter (678 square feet of filter area)
ES-9B	One flyash storage silo	CD-16 (Fltr)	One bagfilter (392 square feet of filter area)
ES-11 (LSS)	One limestone storage silo	CD-18 (Fltr)	One bagfilter (200 square feet of filter area)
ES-12 (EmGen) MACT	One No. 2 fuel oil-fired emergency/blackout protection diesel generator (1000 kW)	None	N/A
Coal Unloading, Conveying, Storage, and Crushing			
C-1 ⁺⁺ NSPS PSD	One railcar coal unloading station and two unloading hoppers (3,000 tons/hr maximum throughput)	None	N/A
BF-1 ⁺⁺ and BF-2 ⁺⁺ NSPS PSD	Two belt feeders (each 2,500 tons/hr maximum throughput)	None	N/A
C-2 ⁺⁺ NSPS PSD	One coal stock-out conveyor (54 inches wide x 250 feet long, 3,000 tons/hr maximum total throughput)	None	N/A
C-3 ⁺⁺ NSPS PSD	One coal stock-out conveyor (54 inches wide x 400 feet long, 3,000 tons/hr maximum total throughput)	None	N/A
C-4 ⁺⁺ NSPS PSD	One coal stock-out conveyor (54 inches wide x 420 feet long, 3,000 tons/hr maximum total throughput)	None	N/A
C-5 ⁺⁺ and C-7 ⁺⁺ PSD	Two coal telescoping chutes (3,000 tons/hr maximum total throughput)	None	N/A
C-9 ⁺⁺ and C-10 ⁺⁺ PSD	Coal storage pile fugitive emissions (maximum 25 acres)	None	N/A

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
C-11 ⁺⁺ PSD and C-12 ⁺⁺ NSPS PSD	Coal bulldozing and eight reclaim hoppers (each 500 tons/hr maximum throughput)	None	N/A
VF-51 ⁺⁺ to VF-58 ⁺⁺ NSPS PSD	Eight reclaim feeders (each 500 tons/hr maximum throughput)	None	N/A
C-15 ⁺⁺ NSPS PSD	One coal crusher house (3,000 tons/hr maximum crushing capacity) controlled by water sprayers and enclosure	CD-34 ⁺⁺	Dust extraction system, discharged within the coal crusher house
Limestone Unloading, Conveying, Storage, and Crushing			
LS-1 ⁺⁺ PSD and; LS-1A ⁺⁺ and LS-1B ⁺⁺ NSPS PSD	One railcar limestone unloading station (2,800 tons/hr maximum throughput) and; Two unloading hoppers (each 1,250 tons/hr maximum throughput)	None	N/A
BF-3 ⁺⁺ and BF-4 ⁺⁺ NSPS PSD	Two belt feeders (each 1,250 tons/hr maximum throughput)	None	N/A
LS-2 ⁺⁺ NSPS PSD	One limestone stockout conveyor (54 inches wide x 250 feet long, 2,800 tons/hr maximum throughput)	None	N/A
LS-6 ⁺⁺ NSPS PSD	One limestone stockout conveyor (54 inches wide x 780 feet long, 2,800 tons/hr maximum throughput)	None	N/A
LS-8 ⁺⁺ PSD	Limestone storage pile (maximum 0.7 acres)	None	N/A
LS-9 ⁺⁺ PSD and; LS-10 ⁺⁺ NSPS PSD	Limestone bulldozing and two reclaim hoppers (each 300 tons/hr maximum throughput)	None	N/A
VF-40 ⁺⁺ and VF-41 ⁺⁺ NSPS PSD	Two reclaim feeders (each 300 tons/hr maximum throughput)	None	N/A

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
LS-11 ⁺⁺ and; LS13-1 ⁺⁺ and LS13-2 ⁺⁺ NSPS PSD	One limestone reclaim conveyor (30 inches wide x 450 feet long, 300 tons/hr maximum throughput) and two limestone silos (each 1,100 tons capacity)	CD32-1 ⁺⁺ and CD32-2 ⁺⁺	Two air pulse or reverse flow bagfilters (each no greater than 5:2 to 1 air-to-cloth ratio)
LSBM-1 ⁺⁺ and; LSBM-2 ⁺⁺ NSPS PSD	Two limestone ball mills (each 60 tons/hr maximum throughput)	None	N/A
Gypsum Conveying, Loading and Storage			
GS-3 ⁺⁺ and GS-4 ⁺⁺ PSD	Two gypsum stockout conveyors (30 inches wide x 400 feet long and 30 inches wide x 80 feet long, 300 tons/hr maximum throughput each)	None	N/A
GS-9 ⁺⁺ PSD	Gypsum truck loading (300 tons/hr maximum throughput)	None	N/A
GS-5 ⁺⁺ PSD	One gypsum storage pile (maximum 0.45 acres)	None	N/A
Miscellaneous			
Landfill ⁺⁺ PSD	Landfill for ash and gypsum (4 acres)	None	N/A
QP5 ⁺⁺ NSPS PSD MACT	One 700 HP diesel fuel-fired emergency quench water pump	None	N/A
FWP5 ^{***} NSPS	One 420 HP diesel fuel-fired emergency fire water pump	None	N/A

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
NEW EQUIPMENT UNDER UNIT 6 APPLICATION			
ES-6 ⁺⁺ NSPS PSD	One coal/No. 2 fuel oil-fired supercritical electric utility boiler (7850 million Btu per hour heat input, Unit No. 6) equipped with low-NOx burners and over-fire air low-NOx control	CD-19 ⁺⁺ CD-20 ⁺⁺ CD-21 ⁺⁺ CD-22 ⁺⁺	Selective catalytic reduction (SCR) NOx reduction system Two spray dry absorbers operating in parallel to condition gas stream using water/lime slurry (2,824,500 ACFM total inlet gas flow rate) Two fabric filters operating in parallel and downstream of each spray dry absorber (726,800 square feet of filter area) Wet flue gas desulfurization system consisting of spray tower absorber (approximately 313 gal/min limestone slurry injection rate)
ES-Aux 6 ⁺⁺ NSPS PSD MACT	One No. 2 fuel oil/propane ^{**} -fired auxiliary boiler (190 million Btu per hour heat input)	N/A	Low NOx Burners
ES-CT1 ⁺⁺ PSD	One multi-cell cooling tower with drift eliminators (nominally 393,414 gallons per minute re-circulating water flow rate)	N/A	N/A
ES-EG6 ⁺⁺ PSD NSPS MACT	One No. 2 fuel oil fired emergency generator (2350 hp)	N/A	N/A
ES-FWP ⁺⁺ PSD NSPS MACT	One No. 2 fuel oil-fired emergency firewater pump (430 hp)	N/A	N/A
Unit 6 Coal Handling			
ES-C19 ⁺⁺ NSPS PSD	U6 Coal Reclaim Hoppers (400 tons per hour capacity)	N/A	N/A
ES-C27 ⁺⁺ NSPS PSD	Coal Reclaim Conveyor RC11 to U6 Boiler Building (36 inches wide x 1600 feet long, 750 tons per hour maximum capacity)	CD-28 ⁺⁺	Unit 6 Boiler House Coal Handling Bagfilter (no greater than 5:1 gas-to-cloth ratio)
ES-C28 ⁺⁺ NSPS PSD	Coal Reclaim Conveyor RC12 to U6 Boiler Building (36 inches wide x 1600 feet long, 750 tons per hour maximum capacity)		
ES-C29 ⁺⁺ NSPS PSD	Unit 6 Tripper Conveyor TR2 (42 inches wide x 200 feet long, 750 tons per hour maximum capacity)		

ES-C30 ⁺⁺ NSPS PSD	Unit 6 Tripper Conveyor TR3 (42 inches wide x 200 feet long, 750 tons per hour maximum capacity)		
Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-VF1 ⁺⁺ thru ES-VF8 ⁺⁺ NSPS PSD	Coal Reclaim Feeders for Unit 6 (400 tons per hour maximum capacity each)	N/A	N/A
Unit 6 Ash Handling			
ES-A1 ⁺⁺	Wet Bottom Ash Transfer and Pickup (350 tons per hour maximum capacity)	N/A	N/A
ES-A3 ⁺⁺ and ES-A8 ⁺⁺ PSD	Two Dry Fly Ash Pickups at Boiler Economizer	CD-30 ⁺⁺	Ash Handling Point Source Unit 6 Bagfilter (no greater than 5:1 gas-to-cloth ratio)
ES-A9 ⁺⁺ PSD	Dry Fly Ash Pickup at Bagfilter		
ES-A6 ⁺⁺ PSD	Dry Fly Ash Silo		
ES-A7 ⁺⁺ PSD	Dry Fly Ash Truck Loading (350 tons per hour maximum capacity)		
ES-A12 ⁺⁺ PSD	Dry Fly Ash Discharge to Truck (350 tons per hour maximum capacity)	N/A	N/A
Unit 6 Lime Handling			
ES-LSSDA ⁺⁺ PSD	Lime Silo for SDA	CD32-3 ⁺⁺	Bagfilter (no greater than 5:1 gas-to-cloth ratio)
Unit 6 Miscellaneous Source			
ES-FVehicle ⁺⁺ PSD	Facility haul roads	N/A	N/A

* The ammonia and sulfur trioxide ash conditioning, NOx control systems (low-NOx burners, SCR, and SOFA/LOFIR), and wet flue gas desulfurization system may be operated independently of each other or in combination. Each system may be operated intermittently as necessary, based on boiler system requirements, to maintain compliance with applicable particulate, visible emission and/or nitrogen oxides (NOx) regulatory requirements.

** Propane is for start-up only.

*** This emission source (ID No. FWP5) is listed as an administrative amendment pursuant to 15A NCAC 2Q .0514.

+ This emission source (ID No. ES-12, EmGen) is listed as a minor modification per 15A NCAC 2Q .0515. The compliance certification as described in General Condition P is required. The permit shield described in General Condition R does not apply.

++ These emission source(s) and/or control device(s) are listed as a 15A NCAC 2Q .0501 (c) (2) modifications. The permit shield described in General Condition R does not apply and compliance certification as described in General Condition P is not required.

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1 - Emission Source(s) and Control Devices(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. Four coal/No. 2 fuel oil-fired electric utility boilers (ID Nos. ES-1 (U1Boiler), ES-2 (U2Boiler), ES-3 (U3Boiler), and ES-4 (U4Boiler)) equipped with low-NOx burners and associated electrostatic precipitators (ID Nos. CD-1 (U1ESP), CD-2 (U2ESP), CD-3 (U3ESP), and CD-4 (U4ESP)), and;**

One coal/No. 2 fuel oil-fired electric utility boiler (ID No. ES-5 (U5Boiler)) equipped with low-NOX concentric firing and separated over-fire air/lowered firing low-NOX control equipment, and associated selective catalytic reduction system (ID No. CD-11b (U5SCR)) installed in series with flue gas conditioning systems consisting of an ammonia injection system (ID No. CD-12 (U5FG)) and sulfur trioxide injection system (ID No. CD-13 (U5FG)), two electrostatic precipitators (ID Nos. CD-5 (U5ESP) and CD-6 (U5ESP)), and a wet flue gas desulfurization system consisting of a spray tower absorber (ID No. CD-33)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation	
Sulfur Dioxide	<u>Until the startup of flue gas desulfurization system on Unit 5 Boiler (ID No. CD-33)</u> 2.2 pounds per million Btu heat input each (ID Nos. ES-1 (U1 Boiler), ES-2 (U2 Boiler), ES-3 (U3 Boiler), ES-4 (U4 Boiler, and ES-5 (U5 Boiler)))	15A NCAC 2D .0501(e)	
	<u>After the startup of flue gas desulfurization system on Unit 5 Boiler (ID No. CD-33)</u> 1.7 pounds per million Btu heat input each (ID Nos. ES-1 (U1 Boiler), ES-2 (U2 Boiler), ES-3 (U3 Boiler), and ES-4 (U4 Boiler))		
	1.6 pounds per million Btu heat input (ID No. ES-5 (U5 Boiler))		
	Phase II Acid Rain Permit Requirements (see Section 2.5)		15A NCAC 2Q .0402 (40 CFR Part 72)
	Clean Air Interstate Rule (CAIR) Permit Requirements (see Section 2.6)		15A NCAC 2D .2400

Regulated Pollutant	Limits/Standards	Applicable Regulation	
Nitrogen Oxides	When burning only coal 1.8 pounds per million Btu heat input	15A NCAC 2D .0519	
	When burning only oil 0.8 pounds per million Btu heat input		
	When burning coal and oil $E = [(E_c)(Q_c) + (E_o)(Q_o)]/Q_t$ Where: E = emission limit in pounds per million Btu heat input E _c = 1.8 pounds per million Btu heat input E _o = 0.8 pounds per million Btu heat input Q _c = coal heat input in Btu per hour Q _o = oil heat input in Btu per hour Q _t = Q _c + Q _o		
	Phase II Acid Rain Permit Requirements (see Section 2.5)		15A NCAC 2Q .0402 (40 CFR Part 72)
	Clean Air Interstate Rule (CAIR) Permit Requirements (see Section 2.6)		15A NCAC 2D .2400
	See Section 2.1 A.8		40 CFR 52 Subpart II Federal-only Requirement
Visible Emissions	40 percent opacity when averaged over a six-minute period except that: (i) no more than four six-minute periods shall exceed the opacity standard in any one day; and (ii) the percent of excess emissions (defined as the percentage of monitored operating time in a calendar quarter above the opacity limit) shall not exceed 0.8 percent of the total operating hours. If a source operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately previous to this quarter until 500 operational hours are obtained. Excess emissions during startup and shutdown shall be excluded from the determinations in paragraphs (i) and (ii) above, if the excess emissions are exempted according to the procedures set out in 2D .0535(g). Excess emissions during malfunctions shall be excluded from the determinations in paragraphs (i) and (ii) above, if the excess emissions are exempted according to the procedures set out in 2D .0535(c)	15A NCAC 2D .0521	
	State-only Requirement Boiler No. 1 (ES-1) - 8 percent annual average opacity Boiler No. 2 (ES-2) - 12 percent annual average opacity Boiler No. 3 (ES-3) - 8 percent annual average opacity Boiler No. 4 (ES-4) - 8 percent annual average opacity Boiler No. 5 (ES-5) - 16 percent annual average opacity	15A NCAC 2D .0536	
Particulate Matter	0.25 pounds per million Btu heat input	15A NCAC 2D .0536	

Regulated Pollutant	Limits/Standards	Applicable Regulation
Mercury	See Section 2.1.A.9	15A NCAC 2D .2500
Malfunction Abatement Plan	As defined in specific conditions	15A NCAC 2D .0535
Good Operations And Maintenance Practices	As defined in specific conditions	15A NCAC 2D .0606
Particulate Matter	Monitoring for ESP control device	15A NCAC 2D .0614 CAM (40 CFR 64)

1. 15A NCAC 2D .0501(e): COMPLIANCE WITH EMISSION CONTROL STANDARDS

- a. In addition to any control or manner of operation necessary to meet emission standards in 15A NCAC 2D .0500, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards of 15A NCAC 2D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in 15A NCAC 2D .0500 are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls. [15A NCAC 2D .0501(e)]
- b. Until the startup of flue gas desulfurization system (ID No. CD-33) on Unit 5 boiler (ID No. ES-5 (U5Boiler)), emissions of sulfur dioxide from the sources (ID Nos. ES-1(U1 Boiler), ES-2(U2 Boiler), ES-3(U3 Boiler), and ES-4(U4 Boiler), and ES-5 (U5Boiler)) **shall not exceed 2.2 pounds per million Btu heat input each**. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

After the startup of flue gas desulfurization system (ID No. CD-33) on Unit 5 boiler (ID No. ES-5 (U5Boiler)), emissions of sulfur dioxide from the sources (ID Nos. ES-1(U1 Boiler), ES-2(U2 Boiler), ES-3(U3 Boiler), and ES-4(U4 Boiler)) **shall not exceed 1.7 pounds per million Btu heat input each**, and emissions of sulfur dioxide from the source (ID No. ES-5(U5 Boiler)) **shall not exceed 1.6 pounds per million Btu heat input**. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

[15A NCAC 2D .0501(e) and 2D .0608]

Testing [15A NCAC 2D .2601]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f) and 2D .0608]

- d. The Permittee shall assure compliance with 15A NCAC 2D .0501(e) by determining sulfur dioxide emissions in pounds per million Btu using a continuous emissions monitoring (CEM) system meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75). Compliance with sulfur dioxide emission standards shall be determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values (missing data shall be filled in accordance with 40 CFR Part 75) shall be summed, and the sum shall be divided by 24. The minimum number of data points, equally spaced, required to

determine a valid hour value shall be determined by 40 CFR Part 75.

Until the startup of flue gas desulfurization system (ID No. CD-33) on Unit 5 Boiler (ID No. ES-5 (U5Boiler)), if any 24-hour block average exceeds 2.2 pounds per million Btu heat input for the sources (ID Nos. ES-1(U1 Boiler), ES-2(U2 Boiler), ES-3(U3 Boiler), ES-4(U4 Boiler, and ES-5(U5 Boiler)) or records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).

After the startup of flue gas desulfurization system (ID No. CD-33) on Unit 5 boiler (ID No. ES-5 (U5Boiler)), if any 24-hour block average exceeds 1.7 pounds per million Btu heat input (ID Nos. ES-1(U1 Boiler), ES-2(U2 Boiler), ES-3(U3 Boiler), and ES-4(U4 Boiler)) or 1.6 pounds per million Btu heat input (ID No. ES-5(U5 Boiler)) or records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e).

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

- e. The Permittee shall submit the continuous emissions monitoring data showing the 24-hour daily block values in pounds per million Btu for each 24-hour daily block averaging period during the reporting period no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.
- f. **CEM's Monitor Availability** - The Permittee shall submit sulfur dioxide CEM systems monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

STATE-ONLY REQUIREMENT

- g. The Permittee shall operate the Unit 5 boiler (ID No. ES-5) FGD at any time that electricity is being produced by the unit other than during startup.

2. 15A NCAC 2D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS

- a. The emission limit for nitrogen oxides for these sources when burning coal and/or oil shall be calculated by the following equation [15A NCAC 2D .0519]:

$$E = [(Ec)(Qc) + (Eo)(Qo)]/Qt$$

Where:

- E = emission limit for combined burning of coal and oil in pounds per million Btu heat input
- Ec = **1.8 pounds per million Btu** heat input for coal only
- Eo = **0.8 pounds per million Btu** heat input for oil
- Qc = coal heat input in **Btu per hour**
- Qo = oil heat input in **Btu per hour**
- Qt = Qc + Qo actual total heat input to the combination in **Btu per hour**

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0519.
- c. **Monitoring/Recordkeeping** [15A NCAC 2Q .0508(f)]
The Permittee shall assure compliance with 15A NCAC 2D .0519 by determining nitrogen oxide emissions in pounds per million Btu using a continuous emissions monitoring (CEM) system meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75). Compliance with this emission standard shall be determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values (missing data shall be filled in accordance with 40 CFR Part 75) shall be summed, and the sum shall be divided by 24. The minimum number of data points, equally spaced, required to

determine a valid hour value shall be determined by 40 CFR Part 75.

For monitoring purposes, the following emission limits will apply:

- i. When only coal is burned, the emission limit shall be **1.8 pounds per million Btu heat input**.
- ii. When only oil is burned, the emission limit shall be **0.8 pounds per million Btu heat input**.
- iii. When oil is burned other than for startup, the emission limit shall be **1.1 pounds per million Btu heat input**.
At no time shall no more than 70 percent of the total heat input result from the combustion of fuel oil.

If any 24-hour block average exceeds the emission limit, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0519.

- d. The Permittee shall maintain records of monthly coal and oil consumption (written or electronic form) and shall submit such records within 30 days of a request by DAQ.
- e. **Reporting** [15A NCAC 2Q .508(f)]
The Permittee shall submit the continuous emissions monitoring system data showing the 24-hour daily block values for periods of **excess nitrogen oxide emissions** no later than 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. All instances of deviations from the requirements of this permit must be clearly identified.
- f. CEM's Monitor Availability - The Permittee shall submit the nitrogen oxide CEM systems monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, no later than 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.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the boilers (ID Nos. ES-1, (U1 Boiler), ES-2(U2 Boiler), ES-3(U3 Boiler), ES-4(U4 Boiler) and ES-5(U5 Boiler)) **shall not be more than 40 percent opacity** when averaged over a six-minute period. [15A NCAC 2D .0521(c)]
- b. For sources required to install, operate, and maintain continuous opacity monitoring systems (COMS), compliance with the 40 percent opacity limit shall be determined as follows:[15A NCAC 2D .0521(g)]
 - i. No more than four six-minute periods shall exceed the opacity standard in any one day; and
 - ii. The percent of excess emissions (defined as the percentage of monitored operating time in a calendar quarter above the opacity limit) shall not exceed 0.8 percent of the total operating hours. If a source operates less than 500 hours during a calendar quarter, the percent of excess emissions shall be calculated by including hours operated immediately previous to this quarter until 500 operational hours are obtained.

Excess emissions during startup and shutdown shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 2D .0535(g). Excess emissions during malfunctions shall be excluded from the determinations in paragraphs b.i. and b.ii. above, if the excess emissions are exempted according to the procedures set out in 2D .0535(c).

All periods of excess emissions shall be included in the determinations in paragraphs b.i. and b.ii above until such time that the excess emissions are exempted according to the procedures in 2D .0535.

Testing [15A NCAC 2D .2601]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- d. Opacity shall be measured using an opacity monitoring system that meets the performance specifications of Appendix B of 40 CFR Part 60. The opacity monitoring system shall be subjected to a quality assurance program approved by the director. The Permittee, for each unit subject to 2D .0521(g) shall have on file with the director an approved quality assurance program, and shall submit to the director within the time period of his request for his approval a revised quality assurance program, including at least procedures and frequencies for calibration, standards traceability, operational checks, maintenance, auditing, data validation, and a schedule for implementing the quality

assurance program.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if the monitoring is not performed, if the monitored values exceed the limitations given above, or if the records are not maintained.

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

- e. The Permittee shall submit the COMS data in accordance with the reporting requirements given in Section 2.1 A 7.c. All instances of excess emissions must be clearly identified.

4. 15A NCAC 2D .0536: PARTICULATE EMISSIONS FROM ELECTRIC UTILITY BOILERS

- a. Emissions of particulate matter from these sources **shall not exceed 0.25 pounds per million Btu heat input.** [15A NCAC 2D .0536(b)]
- b. The Permittee shall obtain an air permit before installing or enabling Energy Management System (EMS) capability.
- c. The collected flyash shall not be re-injected into these boilers. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0536, if flyash is re-injected in the boiler.

d. Testing [15A NCAC 2D .2601]

If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0536.

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

- e. The Permittee shall use a continuous opacity monitor system (COMS) meeting the requirements of 15A NCAC 2D .0536(g). A stack test shall be conducted in accordance with Method 5 or Method 17 of Appendix A of 40 CFR Part 60 once per calendar year. In the event that a unit exceeds 80 percent of its particulate emission limit during the stack test, the Permittee shall schedule and conduct another stack test within 6 months. Upon demonstration that the source is operating under 80 percent of its particulate limit, as shown by three consecutive semiannual stack tests, the source may resume annual stack tests. If the result of any test is greater than 0.25 pounds per million Btu heat input, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0536.

Reporting [15A NCAC 2D .0536 and 15A NCAC 2Q .0508(f)]

- f. The results of any stack test shall be reported within 30 days, and the test report shall be submitted within 60 days after the test.
- g. The Permittee shall submit the COMS data in accordance with the reporting requirements given in Section 2.1 A 7.c.

All instances of deviations from the requirements of this permit must be clearly identified.

STATE-ONLY REQUIREMENTS

5. 15A NCAC 2D .0536: ANNUAL AVERAGE OPACITY FOR ELECTRIC UTILITY BOILERS

- a. Visible emissions from the utility boiler units shall not exceed the following: [15A NCAC 2D .0536(b)]

Boiler No. 1 (ES-1) - 8 percent annual average opacity
Boiler No. 2 (ES-2) - 12 percent annual average opacity
Boiler No. 3 (ES-3) - 8 percent annual average opacity
Boiler No. 4 (ES-4) - 8 percent annual average opacity
Boiler No. 5 (ES-5) - 16 percent annual average opacity

The average is the sum of the measured non-overlapping six-minute averages of opacity determined only while the unit is in operation divided by the number of such measured non-overlapping six-minute averages. Start-up, shut-down, and non-operating time shall not be included in the annual average opacity calculation, but malfunction time shall be included. [15A NCAC 2D .0536(b)]

Recordkeeping/Reporting [15A NCAC 2D .0536]

- b. The Permittee shall submit a report by the 30th day following the end of each month showing, for each day of the previous month, the calculated annual average opacity of each unit and the annual average opacity limit.

6. 15A NCAC 2D .0535: EXCESS EMISSIONS REPORTING AND MALFUNCTIONS

- a. All electric utility boiler units shall have a malfunction abatement plan approved by the Director as specified in 15A NCAC 2D .0535(d). [15A NCAC 2D .0535]

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

- b. The Permittee shall maintain logs to show that the operation and maintenance parts of the malfunction abatement plan are implemented. These logs (written or electronic form) shall be subject to inspection by DAQ personnel upon request during business hours.

7. 15A NCAC 2D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51 (CONTINUOUS OPACITY MONITORING AND EXCESS EMISSIONS)

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

- a. The Permittee shall use a continuous opacity monitoring system (COMS) to monitor and record opacity, and a continuous emissions monitoring system (CEMS) to monitor and record Sulfur Dioxide (SO₂) emissions. Continuous emissions monitoring and recordkeeping of opacity shall be performed as described in Paragraphs 2 and 3.1.1 through 3.1.5 of Appendix P of 40 CFR Part 51. Continuous emissions monitoring and recordkeeping of SO₂ shall be performed as described in Paragraphs 2 and 3.1.3 through 3.1.5 of Appendix P of 40 CFR Part 51. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51.
- b. Compliance with the sulfur dioxide emission standard is determined by averaging hourly continuous emission monitoring system values over a 24-hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values are summed, and the sum is divided by 24. A minimum of four data points, equally spaced, is required to determine a valid hour value unless the continuous emission monitoring system is installed to meet the provisions of 40 CFR Part 75. If a continuous emission monitoring system is installed to meet the provisions of 40 CFR Part 75, the minimum number of data points are determined by 40 CFR Part 75.
- c. The quarterly excess emissions (EE) reports required under Appendix P of 40 CFR Part 51 shall be used as an indication of good operation and maintenance of the electrostatic precipitators and the scrubbers. These sources shall be deemed to be properly operated and maintained if the percentage of time, calculated on a 6-minute average, in excess of 40 percent (including startups, shutdowns, and malfunctions) for opacity emissions, and the percentage of time, calculated on a 24-hour basis in excess of 2.3 pounds per million Btu (including startups, shutdowns, and malfunctions) for SO₂ emissions, does not exceed 3.0 percent of the total operating time for any given calendar quarter, adjusted for monitor downtime (MD) as calculated below. In addition, these sources shall be deemed to be properly operated and maintained if the %MD does not exceed 2.0 percent.

Percent Excess Opacity Emission (%EE) Calculation:

$$\%EE = \frac{\text{Total Excess Emission Time}^*}{\text{Total Source Operating Time}^{***} - \text{Monitor Downtime}} \times 100$$

Percent Monitor Downtime (%MD) Calculation for COMS:

$$\%MD = \frac{\text{Total Monitor Downtime}^{**}}{\text{Total Source Operating Time}^{***}} \times 100$$

- * Total Excess Emission Time contains any 6-minute period greater than 40% opacity including startup, shutdown, and malfunction for opacity monitoring, and any 24-hour block average that exceeds 2.3 pounds per million Btu of SO₂ measured by the CEMS including startup, shutdown, and malfunction.
- ** Total Monitor Downtime includes Quality Assurance (QA) activities unless exempted by regulation or defined in an agency approved QA Manual. The amount of exempt QA Time will be reported in the quarterly report as such.
- *** If a source operates less than 2200 hours during any quarter, the source may calculate the %EE and/or %MD using all operating data for the current quarter and the preceding quarters until 2200 hours of data are obtained. [N.C.G.S. 143-215.110]

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

- d. The Permittee shall submit the excess emissions and monitor downtime reports as required under Appendix P of 40 CFR Part 51 no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

For periods of excess emissions the following shall also apply:

- i. For opacity, defined as each six-minute period average greater than 40 percent, measurements recorded by the COMS shall be reported as described in Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51 except that a six-minute time period shall be deemed as an appropriate alternative opacity averaging period as described in Paragraph 4.2 of Appendix P of 40 CFR Part 51. A minimum of 36 data points, equally spaced, is required to determine a valid six-minute value.
- ii. For SO₂, the facility shall comply with the requirements for 24-hour block averages described above in Section 2.1.8.b. Reporting shall be in accordance with Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51.

All instances of deviations from the requirements of this permit must be clearly identified.

FEDERAL-ONLY REQUIREMENT:

8. 40 CFR 52 Subpart II: EMISSIONS ALLOCATIONS FOR UTILITY COMPANIES

- a. The total nitrogen oxide (NO_x) emissions from all the coal-fired boilers and combustion turbines that are not listed in 15A NCAC 2D .1417 at Duke Energy Carolinas LLC’s Allen, Belews Creek, Buck, Cliffside, Dan River, Marshall, and Riverbend facilities shall not exceed: [15A NCAC 2D .1416(b)]
 - i. 17,816 tons per ozone season for 2004;
 - ii. 22,270 tons per ozone season for 2005; and
 - iii. 16,780 tons per ozone season for 2006 and each year thereafter until revised according to 15A NCAC 2D .1420.
- b. Furthermore, except as allowed under Section 2.1 A.8.c below, individual sources at these facilities named in the table in this Subparagraph shall not exceed during the ozone season the nitrogen oxide emission allocations in the table. [15A NCAC 2D .1416(b)]

SOURCE	NO _x EMISSION ALLOCATIONS (TONS/SEASON)	NO _x EMISSION ALLOCATIONS (TONS/SEASON)	NO _x EMISSION ALLOCATIONS (TONS/SEASON)
	2004	2005	2006 AND LATER
ES-1 (Boiler 1)	76	95	71
ES-2 (Boiler 2)	82	102	77
ES-3 (Boiler 3)	107	134	101
ES-4 (Boiler 4)	120	150	113
ES-5 (Boiler 5)	1326	1658	1249

- c. Sources (ID Nos. ES-1, ES-2, ES-3, ES-4 and ES-5) shall comply with the requirements of 15A NCAC 2D .1416

using the nitrogen oxide budget-trading program set out in 15A NCAC 2D .1419. If a source operates during the ozone season, it shall have installed and begun operating by May 1, 2004, a continuous emissions monitoring system that complies with 40 CFR Part 96. [15A NCAC 2D .1416(d) and 15A NCAC 2D .1419 (b)(2)]

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f), 15A NCAC 2D .1416(e), .1404(d), and .1404(h)]

- d. The Permittee shall demonstrate compliance with 15A NCAC 2D .1416 by determining nitrogen oxide emissions in tons per ozone season using a continuous emissions monitoring (CEM) system that meets the requirements of 40 CFR Part 75 Subpart H, with such exceptions as allowed under 40 CFR Part 75, Subpart H or 40 CFR 96. The Permittee shall comply with the recordkeeping requirements of 40 CFR 96, Budget Trading Program for State Implementation Plans. All instances of deviations from the requirements of this permit must be clearly identified. If nitrogen oxide emissions for any ozone season exceed the allowances held in the Compliance Account as of November 30 of each year or the recordkeeping requirements are not complied with, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1416.
- e. **Reporting** [15A NCAC 2Q .0508(f), and 15A NCAC 2D .1404(g) and (h)]
The Permittee shall comply with the reporting requirements of 40 CFR 96, Budget Trading Program for State Implementation Plans. The Permittee shall report no later than July 30 of each year the tons of nitrogen oxides emitted during the previous May and June and shall report no later than October 30 the tons of nitrogen oxides emitted during the previous ozone season. One copy of this report shall be sent to the appropriate Regional Office and one copy shall be sent to the Stationary Source Compliance Supervisor at the address shown in General Condition D. All instances of deviations from the requirements of this permit must be clearly identified.

STATE-ONLY REQUIREMENT:

9. 15A NCAC 2D .2500: MERCURY RULES FOR ELECTRIC GENERATORS¹

- a. The Permittee shall comply with all applicable provisions of 15A NCAC 2D .2500.
- b. The following table contains allocations in ounces of total mercury to be emitted annually:

SOURCE	ALLOCATION FOR 2010 – 2017 (Ounces)	ALLOCATION FOR 2018 AND LATER (Ounces)
ES-1 (Boiler 1)	61	25
ES-2 (Boiler 2)	62	25
ES-3 (Boiler 3)	100	40
ES-4 (Boiler 4)	86	35
ES-5 (Boiler 5)	1499	604

- c. The owner or operator of any source covered under this Section shall be subject to the provisions of 40 CFR 60.4106(f).

Monitoring, Reporting, And Recordkeeping [15 NCAC 02D .2503, .2505(a) and .2511]

- d. The emissions of mercury of an Hg budget source shall not exceed the number of allowances that it has in its compliance account according to Rule .2510 of this Section.
- e. The emissions measurements recorded and reported according to 40 CFR 60.4170 through 60.4176 shall be used to determine compliance by each source identified in this rule with its emissions limitation according to 40 CFR 60.4106(c).
- f. The provisions of 40 CFR 60.4106(d) shall be used for excess emissions.
- g. The owner or operator of a Hg budget unit covered under this Section shall comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR 60.4106(b) and (e) and in 40 CFR 60.4170 through 60.4176.
- h. The Permittee shall comply with all applicable requirements of 15A NCAC 2D .2511 “Mercury Emission Limits”.

¹ Sections 15A NCAC 2D .2509 and .2511 are state-enforceable. All other sections of 15A NCAC .2500 will not be enforced at this time.

10. 15A NCAC 2Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

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

The Permittee shall submit for a period of 5 years from the date the modified Unit 5 boiler commences operation (i.e., post change operations for Unit 5 boiler after the commencement of FGD), the actual annual emissions of nitrogen oxides, carbon monoxide, and volatile organic compounds. The Permittee shall submit these reports within 60 days of the completion of each 12-month period. The Permittee may use continuous emissions monitoring data, operational levels, fuel usage data, source test results or any other readily available data of sufficient accuracy for the purpose of documenting Unit 5 boiler's post-change actual annual emissions of nitrogen oxides, carbon monoxide, and volatile organic compounds.

The reported actual annual emissions of nitrogen oxides, carbon monoxide, and volatile organic compounds for Unit 5 boiler will be compared to the projected actual emissions of these pollutants, as included in the Duke Energy Carolinas, LLC permit application 8100028.05C.

If the Director of Division of Air Quality determines that actual annual emissions of either nitrogen oxides or carbon monoxide or volatile organic compounds for Unit 5 boiler for any of the reported five years has exceeded the respective projected actual emissions as included in permit application 8100028.05C and he/she further determines that this increase in emissions is due to the installation of FGD on Unit 5 boiler and such increased emissions would have resulted in a significant net emission increase at the time of submittal of application for installation of FGD on Unit 5 boiler, the Permittee shall be deemed in violation of 15A NCAC 2D .0530.

All instances of deviations from the requirements of this permit must be clearly identified.

11. 15A NCAC 2D .0614: COMPLIANCE ASSURANCE MONITORING

- a. The five coal/No. 2 fuel oil-fired electric utility boilers (Unit I.D.'s ES-1, ES-2, ES-3, ES-4, and ES-5) shall comply with all applicable requirements of 15A NCAC 2D .0614 "Compliance Assurance Monitoring".
- b. The Electrostatic Precipitators shall be properly operated and maintained to control PM emissions from each Boiler (Unit I.D.'s ES-1, ES-2, ES-3, ES-4, and ES-5)

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

c. The Permittee shall comply with the monitoring approach as included in the following Table:

A. Indicator Measurement Approach	Opacity Use of 40 CFR 75 certified COMS connected to a data logger
B. Indicator Range	<p>An excursion is defined as an opacity value (based on a 3-hour block average) greater than:</p> <p style="text-align: center;"> 12 Percent – Unit 1 15 Percent – Unit 2 16 Percent – Unit 3 15 Percent – Unit 4 25 Percent – Unit 5 </p> <p>Excluding periods of startup, shutdown, off-line activities, and maintenance (e.g. soot blowing). Excursions trigger an inspection of the control system and corrective action</p> <p>If five (5) percent or greater of COMS data (averaged over a three hour block period and excluding startup, shutdown, and malfunction periods) recorded in a calendar quarter show opacity values higher than those listed above, a stack test shall be performed in the following calendar quarter to demonstrate compliance with the particulate standard. If the stack test exceeds 80 percent of the PM limit then retesting shall be conducted in accordance with 2.1.A.4.e. If a unit operates less than 2200 hours during any calendar quarter, the facility may evaluate three-hour opacity values using operating data from the current and preceding quarters until 2200 hours of data are obtained.</p> <p>If no changes are being made to the most recently approved protocol as submitted in the latest annual particulate test it is not necessary for the facility to submit testing protocol 45 days prior to the scheduled test date as specified in General Condition JJ. Instead, the facility shall notify the Asheville Regional Office by email, fax, or letter, within fifteen (15) business days of making the determination that stack testing is required. The most recently approved protocol and the anticipated date of testing shall be included with that communication. The facility shall conduct testing no less than fifteen calendar (15) days from the date of this notification.</p>
C. Performance Criteria <ol style="list-style-type: none"> 1. Data Representativeness 2. Verification of Operational Status 3. QA/QC Practices and Criteria 4. Monitoring Frequency 5. Data Averaging Period 6. Data Collection 	<p>The COMS location meets the specifications of 40 CFR Part 75 and 40 CFR 60, Appendix B.</p> <p>Not applicable, use of monitoring equipment is proposed.</p> <p>COMS are self-calibrated every 24 hours. Performance evaluations and calibration checks are carried out per 40 CFR 60, Appendix F. Documentation of performance evaluations, calibration checks, and maintenance logs are kept for a minimum of 5 years.</p> <p>Continuous</p> <p>3-hour block average of 6-minute averages starting at midnight each day. (Total of eight 3-hour block periods)</p> <p>Automated data acquisition system (DAHS). Real-time opacity values will be displayed to control room operators and alarms will be given to the operators when limits are exceeded.</p>

- d. For any excursion, the Permittee shall initiate an inspection of the control equipment and/or the COMS and initiate the necessary repairs as identified by the Malfunction Abatement Plan. In addition to implementing procedures outlined in the malfunction abatement plan, as required in Section 2.1 A.6, the following corrective actions shall be taken as soon as practical:
 - i. The following operating practices and procedures shall be initiated:
 - 1. Identify cause of excursion
 - 2. Isolate ESP field or increase power input to other fields if necessary
 - 3. Reduce load, as necessary, to avoid a violation
 - 4. Proceed to shutdown or confirm malfunction conditions exist if emissions cannot be controlled appropriately
 - 5. Initiate work order for ESP inspection and repair as needed
 - 6. Improve preventative maintenance procedures
 - iv. Nature and cause of excursion shall be documented in operations log.
 - v. Provide notification to DAQ as necessary.

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

- e. The results of any stack test shall be reported within 30 days, and the test report shall be submitted within 60 days after the test.
- f. Quarterly Reports shall include the following information and also comply with the requirements of §64.9 of 40 CFR Part 64:
 - i. The date, time, and duration of each excursion
 - ii. Summary information on the number, duration, and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken
 - iii. The percent of operating time the PSEU has excursions
 - iv. Summary information on the number, duration, and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable)

All instances of deviations from the requirements of this permit must be clearly identified.

B. Two No. 2 fuel oil/propane-fired auxiliary boilers (ID No. ES-6 (AuxB) and ES-7 (AuxB))

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	0.10 pounds per million Btu heat input	15A NCAC 2D .0503
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible Emissions	<p><u>ID No. ES-6 (AuxB)</u> 40 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent opacity if (i) no six-minute period exceeds 90 percent opacity, (ii) no more than one six-minute period exceeds 40 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 40 percent opacity in any 24-hour period.</p> <p><u>ID No. ES-7 (AuxB)</u> 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.</p>	15A NCAC 2D .0521

1. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of fuel oil or propane, that are discharged from this source into the atmosphere shall not exceed 0.10 pound per million Btu heat input each. [15A NCAC 2D .0503 (a)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limits given in Section 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

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

- c. No monitoring/recordkeeping/reporting is required for emissions of particulate matter from this source to assure compliance with this regulation.

2. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input each. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]
- b. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil or propane in this source.

3. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the boiler (ID No. ES-6) shall not be more than 40 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 90 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(c)]

Visible emissions from the boiler (ID No. ES-7) shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. To assure compliance, the Permittee shall perform a Method 9 test for 1 hour using a pre-approved protocol to be submitted in accordance with 15A NCAC 2D .2601 and General Condition JJ before the sources operate more than 1100 hours using No. 2 fuel oil. This monitoring protocol shall be repeated before each subsequent 1100 hours of operation using No. 2 fuel oil from the last test for each source. If the results of any Method 9 test is above the limit in Section 2.1 B.3.a above, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521. No opacity monitoring is required while the source is burning propane.

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

- d. The Permittee shall keep records of the hours and associated dates, when these sources are in operation using No. 2 fuel oil, and the dates of performance of Method 9 tests. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit the results of the Method 9 test as a part of the quarterly report described in Section 2.1 A.7.c. above. All instances of deviations from the requirements of this permit must be clearly identified.

- C. One flyash transfer and storage system (ID No. ES-8(FTS)) consisting of:**
One flyash vacuum handling system (ID No. ES-8A) and associated vacuum filter (ID No. CD-15 (Fltr)),
and;
One flyash storage silo, truck load out and blow off system (ID No. ES-8B) and associated bagfilter (ID No. CD-14 (Fltr));
One flyash transfer and storage system (ID No. ES-9(FTS)) consisting of:
One flyash vacuum handling system (ID No. ES-9A) and associated bagfilter (ID No. CD-17(Fltr)), and;
One flyash storage silo (ID No. ES-9B) and associated bagfilter (ID No. CD-16(Fltr));
and;
One limestone storage silo (ID No. ES-11(LSS)) and associated bagfilter (ID No. CD-18(Fltr))

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons/hr, or}$ $E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr}$ <p>Where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour</p>	15A NCAC 2D .0515
Visible Emissions	40 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 40 percent opacity if (i) no six-minute period exceeds 90 percent opacity, (ii) no more than one six-minute period exceeds 40 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 40 percent opacity in any 24-hour period.	15A NCAC 2D .0521

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation(s): [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons/hr, or}$$

$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr}$$

Where: E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

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

- c. Particulate matter emissions from these sources shall be controlled by the bagfilters and vacuum filter. 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 must include the following:
 - i. A monthly visual inspection of the system ductwork, and material collection unit for leaks; and
 - ii. An annual internal inspection of the bagfilters' and vacuum filters' structural integrity.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork, bagfilters and vacuum filter are not inspected and maintained according to the schedule above.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic form) 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 vacuum filter; and
 - iv. Any variance from manufacturer's recommendations, if any, and corrections made.The Permittee shall submit the results of any maintenance performed on the bagfilters and vacuum filter within 30 days of a written request by the DAQ.

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

- e. The Permittee shall submit a summary report of monitoring and recordkeeping activities by 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. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source for any 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" for the source by December 27, 2003. 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 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 .2601 is below the limit given in Section 2.1 C.2.a above.If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit a summary report of the observations by 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. All instances of deviations from the requirements of this permit must be clearly identified.

D. One emergency/blackout protection diesel generator (ID No. ES-12 (EmGen))

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible Emissions	20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity if (i) no six-minute period exceeds 87 percent opacity, (ii) no more than one six-minute period exceeds 20 percent opacity in any hour, and (iii) no more than four six-minute periods exceed 20 percent opacity in any 24-hour period.	15A NCAC 2D .0521
HAPS	Notification Requirements	15A NCAC 2D .1111 40 CFR 63 Subpart ZZZZ

1. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from this source shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]
- b. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in this source.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(d)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 D.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. To assure compliance, the Permittee shall perform a Method 9 test for 1 hour using a pre-approved protocol to be submitted in accordance with 15A NCAC 2D .2601 and General Condition JJ before the sources operate more than 1100 hours using No. 2 fuel oil. This monitoring protocol shall be repeated before each subsequent 1100 hours of operation using No. 2 fuel oil from the last test for each source. If the results of any Method 9 test are above the limit in Section 2.1 D.2.a above, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- d. The Permittee shall keep records of the hours and associated dates, when these sources are in operation using No. 2 fuel oil, and the dates of performance of Method 9 tests. The Permittee shall be deemed in noncompliance with 15A

NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit the results of the Method 9 test as a part of the quarterly report described in Section 2.1 A.7.c. above. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT – 40 CFR PART 63 SUBPART ZZZZ)

- a. **Notification and Recordkeeping** [15A NCAC 2Q .0508(f)]

The Permittee shall meet the initial notification requirements of §63.6645(d). This notification must be submitted not later than 120 days after the source becomes subject to Subpart ZZZZ and shall include an applicability determination statement that the source has no additional requirements under this subpart and explain the basis of the exclusion (*Notification was submitted in 2005 satisfying this permit condition*). The Permittee shall comply with the recordkeeping requirements of §63.10(b)(3) and keep a record of the applicability determination on site at the source for a period of 5 years after the determination. This source is exempt from the General Provisions (40 CFR Part 60, Subpart A) and from any other provisions of Subpart ZZZZ.

E. Coal Unloading, Conveying, Storage, and Crushing

One railcar coal unloading station and two unloading hoppers (ID No. C-1)

Two belt feeders (ID Nos. BF-1 and BF-2)

Three coal stockout conveyors (ID Nos. C-2, C-3, and C-4)

Two coal telescoping chutes (ID Nos. C-5 and C-7)

Coal storage pile fugitives (ID Nos. C-9 and C-10)

Coal bulldozing and reclaim hoppers (ID Nos. C-11 and C-12)

Eight reclaim feeders (ID Nos. VF-51 through VF-58)

One coal crusher house (ID No. C-15) and associated dust extraction system

(ID No. CD-34)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E = 4.10 \times P^{0.67} \quad \text{for } P \leq 30 \text{ tons/hr, or}$ $E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons/hr}$ <p>Where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour (ID Nos. C-14 and C-15)</p>	15A NCAC 2D .0515
Visible Emissions	<p>20 percent opacity except during start-up, shutdown and malfunction</p> <p>(ID Nos. C-5 and C-7)</p>	15A NCAC 2D .0521
Particulate Matter	<p>Less than 20 percent opacity except during start-up, shutdown and malfunction</p> <p>(ID Nos. C-1, BF-1, BF-2, C-2, C-3, C-4, C-12, VF-51 through VF-58, and C-15)</p>	15A NCAC 2D .0524 [NSPS Subpart Y]
PM And PM ₁₀	<p>See Section 2.2 A. 1.</p> <p>(ID Nos. C-1, BF-1, BF-2, C-2, C-3, C-4, C-5, C-7, C-9, C-10, C-11, C-12, VF-51 through VF-58, and C-15)</p>	15A NCAC 2D .0530

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources (ID No. C-15) shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \text{ Where } E = \text{allowable emission rate in pounds per hour}$$
$$P = \text{process weight in tons per hour}$$

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

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

- c. Particulate matter emissions from the emission sources (ID No. C-15) shall be controlled by the dust extraction system (ID No. CD-34). 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. After initial startup, inspect the filters every two weeks for the first three months of operation to check for proper dust collection and disposal and to check for fan blade wear; and
 - ii. A semi-annual (for each 6 month period following the initial startup) inspection of the dust extraction system, including inspection of the filters for proper dust collection and disposal, and inspection the fan blade for excessive wear.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and dust extraction system are not inspected and maintained.

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

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

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

- e. The Permittee shall submit the results of any maintenance performed on the dust extraction system within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report 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. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (ID Nos. C-5 and C-7) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources (ID Nos. C-5 and C-7) for any 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" for the sources in the first 30 days following the commencement of operation. 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 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 .2601 is below the limit given in Section 2.1 E.2. a. above.
- If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit a summary report of the observations 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. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS [40 CFR 60 SUBPART Y]

- a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, 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." [15A NCAC 2D .0524]

Emission Standards [§60.252(c)]

- b. Visible emissions (except during startup, shutdowns, and malfunction) from sources (ID Nos. C-1, BF-1, BF-2, C-2, C-3, C-4, C-12, VF-51 through VF-58, and C-15) shall be less than 20 percent opacity.

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

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- d. To assure compliance, once a month the Permittee shall observe the emission points of these sources (ID Nos. C-1, BF-1, BF-2, C-2, C-3, C-4, C-12, VF-51 through VF-58, and C-15) for any visible emissions above normal. For sources enclosed in a building or underground, the observation shall be made around any opening from the enclosure. 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" for the sources in the first 30 days following completion of performance test required in Part II of the permit. 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 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 .2601 is below the limit given in Section 2.1 E.3. a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- e. 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.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

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

- f. The Permittee shall submit a summary report of the observations 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. All instances of deviations from the requirements of this permit must be clearly identified.

F. Limestone Unloading, Conveying, Storage, and Crushing

One railcar limestone unloading station (ID No. LS-1) and two unloading hoppers (ID Nos. LS-1A and LS-1B)

Two belt feeders (ID Nos. BF-3 and BF-4)

One limestone stockout conveyor (ID No. LS-2)

One limestone stockout conveyor (ID No. LS-6)

Limestone storage pile (ID No. LS-8)

Limestone bulldozing and reclaim hoppers (ID Nos. LS-9 and LS-10)

Two reclaim feeders (ID Nos. VF-40 and VF-41)

One limestone reclaim conveyor (ID No. LS-11), two limestone silos (ID Nos. LS13-1 and LS13-2), and associated baghouses (ID Nos. CD32-1 and CD32-2)

Two limestone ball mills (ID Nos. LSBM-1 and LSBM-2)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	As defined in specific conditions (ID Nos. LS-1, LS-1A, LS-1B, BF-3, BF-4, LS-2, LS-6, LS-8, LS-9, LS-10, VF-40, VF-41, LS-11, LS13-1, LS13-2, LSBM-1 and LSBM-2)	15A NCAC 2D .0510
Visible Emissions	20 percent opacity except during start-up, shutdown and malfunction (ID No. LS-1)	15A NCAC 2D .0521
Particulate Matter	As defined in specific conditions (ID Nos. LS-1A, LS-1B, BF-3, BF-4, LS-2, LS-6, LS-10, VF-40, VF-41, LS-11, LS13-1, LS13-2, LSBM-1 and LSBM-2)	15A NCAC 2D .0524 [NSPS Subpart OOO]

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM And PM ₁₀	See Section 2.2 A. 1. (ID Nos. LS-1, LS-1A, LS-1B, BF-3, BF-4, LS-2, LS-6, LS-8, LS-9, LS-10, VF-40, VF-41, LS-11, LS13-1, LS13-2, LSBM-1 and LSBM-2)	15A NCAC 2D .0530
Particulate Matter	See Section 2.2 B. 1. (ID Nos. LS-1, LS-1A, LS-1B, BF-3, BF-4, LS-2, LS-6, LS-8, LS-9, LS-10, VF-40, VF-41, LS-11, LS13-1, LS13-2, LSBM-1 and LSBM-2)	15A NCAC 2D .0540

1. 15A NCAC 2D .0510: PARTICULATES FROM SAND, GRAVEL, OR CRUSHED STONE OPERATIONS

- a. The Permittee shall not cause, allow, or permit any material in a sand, gravel, or crushed stone operation to be produced, handled, transported or stockpiled without taking measures to reduce to a minimum any particulate matter from becoming airborne to prevent exceeding the ambient air quality standards beyond the property line for particulate matter, both PM₁₀ and total suspended particulates.
- b. Fugitive non-process dust emissions from sand, gravel, or crushed stone operations shall be controlled by 15A NCAC 2D .0540.
- c. The Permittee shall control process-generated emissions from crushers with wet suppression, and conveyors, screens, and transfer points, such that the applicable opacity standards are not exceeded.

Testing [15A NCAC 2D .2601]

- d. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.2. a. or Section 2.1 F.3. b., c., and d. below, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0510.

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

- e. The Permittee shall comply with the monitoring/recordkeeping/reporting required in Section 2.1 F.2.c. through e. and Section 2.1 F.3. f. through k. below. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0510 if monitoring/recordkeeping requirements in Section 2.1 F.2. c. and d. and Section 2.1 F.3. f. through i. are not complied with.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (ID No. LS-1) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F. 2. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. To assure compliance, once a month the Permittee shall observe the emission points of this source (ID No. LS-1) for any 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" for the sources in the first 30 days following the commencement of operation. 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 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 .2601 is below the limit given in Section 2.1 F.2. a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit a summary report of the observations 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. All instances of deviations from the requirements of this permit must be clearly identified.
- f. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, 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." [15A NCAC 2D .0524]

Emission Standards [§60.672]

- a. Stack emissions of particulate matter from affected facilities (ID Nos. LS-11, LS13-1, and LS13-2) shall not exceed 0.05 g/dscm (0.022 gr/dscf) and 7 percent opacity.
- b. Fugitive emissions from affected facility (ID No. LS-6) shall not be more than 10 percent opacity.
- c. Fugitive emissions from enclosed affected facilities (ID Nos. LS-1A, LS-1B, BF-3, BF-4, LS-2, LS-10, VF-40, and VF-41) shall not be more than 10 percent opacity. Fugitive emissions from enclosed affected facilities (ID Nos. LSBM-1 and LSBM-2) shall not be more than 15 percent opacity.

OR

- d. The building enclosing the affected facilities shall comply with the following emission limits:
 - i. No visible fugitive emissions are allowed from any building enclosing any transfer point on a conveyor belt or any other affected facility except emissions from a vent as defined in §60.671. Affected buildings include limestone unloading structure, transfer house for conveyor LS-2, reagent preparation building for two ball mills, and underground tunnel for two reclaim hoppers and two reclaim feeders.
 - ii. Any vent of any building enclosing any transfer point on a conveyor belt or any other affected facility shall not discharge stack emissions of particulate matter greater than 0.05 g/dscm (0.022 gr/dscf) and 7 percent opacity. Affected buildings include limestone unloading structure, transfer house for conveyor LS-2, and reagent preparation building for two ball mills, and underground tunnel for two reclaim hoppers and two reclaim feeders.

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

- e. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 F.3.b. through d. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- f. Particulate matter emissions from the affected facilities (ID Nos. LS-11, LS13-1, and LS13-2) shall be controlled by the bagfilters (ID Nos. CD32-1 and CD32-2). 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 bagfilters structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the ductwork and bagfilters are not inspected and maintained.

- g. To assure compliance, once a month the Permittee shall observe the emission points of the affected facilities (ID Nos. LS-1A, LS-1B, BF-3, BF-4, LS-2, LS-6, LS-10, VF-40, VF-41, LS-11, LS13-1, LS13-2, LSBM-1, and LSBM-2) including building enclosures for any visible emissions above normal. For those sources enclosed in a building (ID Nos. LS-1A, LS-1B, BF-3, BF-4, LS-2, LS-10, VF-40, VF-41, LSBM-1, and LSBM-2), the observations shall be made at any opening from the building and the observation shall verify that there are no visible emissions. The monthly observation must be made for each of the calendar year period to ensure compliance with this requirement. The Permittee shall establish normal for the sources including building enclosures in the first 30 days following the completion of performance test required in Part II of the permit. If visible emissions from the sources including building enclosures are observed to be above normal, the Permittee shall either:
- i. Take appropriate action to correct the above-normal emissions 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 .2601 is below the limit given in Section 2.1 F.3.b. through d. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0524.

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

- h. 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

- i. The results of the visible emissions 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

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

- j. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
- k. The Permittee shall submit a summary report 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. All instances of deviations from the requirements of this permit must be clearly identified.

**G. Gypsum Conveying, Loading and Storage
Landfill for ash and gypsum**

Two gypsum stockout conveyors (ID Nos. GS-3 and GS-4)

Gypsum truck loading (ID No. GS-9)

One gypsum storage pile (ID No. GS-5)

Landfill for ash and gypsum (ID No. Landfill)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible Emissions	20 percent opacity except during start-up, shutdown and malfunction (ID Nos. GS-3, GS-4, and GS-9)	15A NCAC 2D .0521
PM And PM ₁₀	See Section 2.2 A. 1. (ID Nos. GS-3, GS-4, GS-5, GS-9, and Landfill)	15A NCAC 2D .0530

1. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (ID Nos. GS-3, GS-4, and GS-9) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources (ID Nos. GS-3, GS-4, and GS-9) for any 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" for the sources in the first 30 days following the commencement of operation. 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 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 .2601 is below the limit given in Section 2.1 G.1. a. above.
 If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit a summary report of the observations 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. All instances of deviations from the requirements of this permit must be clearly identified.

H. One diesel fuel-fired emergency quench water pump (ID No. QP5)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	<p>< 500 ppm sulfur (October 1, 2007 through September 30, 2010)</p> <p>< 15 ppm sulfur (beginning October 1, 2010)</p>	<p>15A NCAC 2D .0524 [40 CFR 60 Subpart IIII]</p> <p>15A NCAC 2D .0524 [40 CFR 60 Subpart IIII]</p>
Visible Emissions	20 percent opacity except during start-up, shutdown and malfunction	15A NCAC 2D .0521
PM And PM ₁₀	See Section 2.2 A.1.	15A NCAC 2D .0530
HAPS	Initial notification requirement only	15A NCAC 2D .1111

1. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (ID No. QP5) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of diesel fuel in this source.

2. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS [40 CFR 60 SUBPART IIII]

- a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart IIII, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Emission Standards

- b. The Permittee shall comply with the following emission standards for compression ignition (CI) engine for model year 2007 and later in emergency quench water pump (ID No. QP5):

VOC and NOx (combined): 4 g/kW-hr

CO: 3.5 g/kW-hr

PM: 0.20 g/kW-hr

[§60.4205(b) and §89.112]

- c. The Permittee is not subject to the smoke emission standard for CI engine for model year 2007 and later in emergency quench water pump (ID No. QP5). This engine shall be operated as a constant speed engine only.

[§60.4205(b) and §89.113]

- d. The Permittee shall use diesel fuel in a CI engine of emergency quench water pump (ID No. QP5) with a sulfur content of less than 500 ppm beginning October 1, 2007. The Permittee shall use diesel fuel in a CI engine of emergency quench water pump (ID No. QP5) with a sulfur content of less than 15 ppm beginning October 1, 2010.

[§60.4207, and §80.510(a) and (b)]

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

- e. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 H. 3. b. and d. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- f. The Permittee shall operate and maintain the CI engine of emergency quench water pump (ID No. QP5) over the entire life of the engine according to the manufacturer's written instructions or procedures, which are approved by the engine manufacturer. If the manufacturer's written instructions or procedures as approved by the engine manufacturer are not complied with, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

[§60.4206]

- g. The CI engine in emergency quench water pump (ID No. QP5) shall be equipped with a non-resettable hour meter prior to startup. If the CI engine of emergency quench water pump (ID No. QP5) is not equipped with a non-resettable hour meter prior to startup, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

[§60.4209(a)]

- h. If the stationary CI internal combustion engine in emergency quench water pump (ID No. QP5) is equipped with a diesel particulate filter to comply with the emission standards in Section 2.1 H.3.b. above, the Permittee shall install backpressure monitor on the diesel particulate filter that notifies the Permittee when the high backpressure limit of the engine is approached. If the stationary CI internal combustion engine in emergency quench water pump (ID No. QP5) is equipped with a diesel particulate filter but the Permittee has not installed the backpressure monitor on the diesel particulate filter or the Permittee is not monitoring the backpressure of the diesel particulate filter, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

[§60.4209(b)]

- i. The Permittee shall operate and maintain the CI engine of emergency quench water pump (ID No. QP5) in accordance with the manufacturers written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. The Permittee may only change engine settings that are permitted by the manufacturer.

The Permittee shall also meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the requirements in this Section 2.1 H.3.i. are not complied.

[§60.4211(a)]

j. The Permittee shall purchase a CI engine for the model year 2007 and later, certified to meet the emission standards in Section 2.1 H.3. b. and d. above for emergency quench water pump (ID No. QP5). This engine shall be installed and configured according to the manufacturers specifications. If the installed CI engine is not certified to meet the emission standards in Section 2.1 H.3. b. and d. above or the CI engine is not configured according to the manufacturers specifications, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.
[§60.4211(c)]

k. The Permittee may operate a CI engine of emergency quench water pump (ID No. QP5) for maintenance checks and readiness testing for up to 100 hours per year provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Operation during an actual emergency shall not be subject to a limit on hours. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Because the Permittee is required to comply with emission standards under §60.4205 for CI engine in emergency quench water pump (ID No. QP5) and not under §60.4204, any operation other than emergency operation, and maintenance and testing as allowed in §60.4211 is prohibited. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the requirements in this Section 2.1 H.3.k. are not complied with.
[§60.4211(e)]

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

l. Starting with the model years in Table 5 to NSPS Subpart IIII, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if these records are not maintained.
[§60.4214(b)]

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

- m. No initial notification under §60.7 is required for an emergency use CI engine in emergency quench water pump (ID No. QP5). [§60.4214(b)]
- n. If the stationary CI internal combustion engine in emergency quench water pump (ID No. QP5) is equipped with a diesel particulate filter, the Permittee shall keep records of any corrective action taken after the backpressure monitor has notified the Permittee that the high backpressure limit of the engine is approached. [§60.4214(c)]
- o. The Permittee shall submit a summary report 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. All instances of deviations from the requirements of this permit must be clearly identified.

**3. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY
[40 CFR 63 SUBPART ZZZZ]**

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

The Permittee shall submit initial notification for emergency quench water pump (ID No. QP5) no later than 120 days after initial start-up. The Permittee shall include in this notification the information in §63.9(b)(2)(i) through (v), and a statement that the emergency quench water pump (ID No. QP5) has no additional requirements and explain the basis of exclusion. This source is not subject to any other requirements of this Subpart or the General Provisions under Subpart A.
[§63.6590(b)(i) and §63.6645(d)]

I. One diesel fuel-fired emergency firewater pump (ID No. FWP5)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	<p>< 500 ppm sulfur (October 1, 2007 through September 30, 2010)</p> <p>< 15 ppm sulfur (beginning October 1, 2010)</p>	<p>15A NCAC 2D .0524 [40 CFR 60 Subpart III]</p> <p>15A NCAC 2D .0524 [40 CFR 60 Subpart III]</p>
Visible Emissions	20 percent opacity except during start-up, shutdown and malfunction	15A NCAC 2D .0521

1. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from this source (ID No. FWP5) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 2D .0521 (d)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 I.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of diesel fuel in this source.

2. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS [40 CFR 60 SUBPART III]

- a. The Permittee shall comply with all applicable provisions, including the requirements for emission standards, notification, testing, reporting, record keeping, and monitoring, contained in Environmental Management Commission Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart III, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Emission Standards

- b. The Permittee shall comply with the following emission standards for stationary fire pump engine of emergency fire water pump (ID No. FWP5) for model year 2008 and earlier:

VOC and NOx (combined): 10.5 g/kW-hr (7.8 g/HP-hr)
CO: 3.5 g/kW-hr (2.6 g/HP-hr)
PM: 0.54 g/kW-hr (0.4 g/HP-hr)

[§60.4205(c)]

- c. The Permittee shall use diesel fuel in the fire pump engine of the emergency fire water pump (ID No. FWP5) with a sulfur content of less than 500 ppm beginning October 1, 2007. The Permittee shall use diesel fuel in fire pump engine of emergency fire water pump (ID No. FWP5) with a sulfur content of less than 15 ppm beginning October 1, 2010.

[§60.4207(a) and (b), and §80.510(a) and (b)]

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

- d. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 I. 3. b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- e. The Permittee shall operate and maintain the fire pump engine of the emergency fire water pump (ID No. FWP5) over the entire life of the engine according to the manufacturer's written instructions or procedures, which are approved by the engine manufacturer. If the manufacturer's written instructions or procedures as approved by the engine manufacturer are not complied, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. [§60.4206]
- f. The fire pump engine of the emergency fire water pump (ID No. FWP5) shall be equipped with a non-resettable hour meter prior to startup. If the fire pump engine of the emergency fire water pump (ID No. FWP5) is not equipped with a non-resettable hour meter prior to startup, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. [§60.4209(a)]
- g. If the stationary fire pump engine of the emergency fire water pump (ID No. FWP5) is equipped with a diesel particulate filter to comply with the emission standards in Section 2.1 I.3.b. above, the Permittee shall install backpressure monitor on the diesel particulate filter that notifies the Permittee when the high backpressure limit of the engine is approached. If the stationary fire pump engine of emergency fire water pump (ID No. FWP5) is equipped with a diesel particulate filter but the Permittee has not installed the backpressure monitor on the diesel particulate filter or the Permittee is not monitoring the backpressure of the diesel particulate filter, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. [§60.4209(b)]
- h. The Permittee shall operate and maintain the fire pump engine of the emergency fire water pump (ID No. FWP5) in accordance with the manufacturers written instructions or procedures developed by the Permittee that are approved by the engine manufacturer. The Permittee may only change engine settings that are permitted by the manufacturer. The Permittee shall also meet the requirements of 40 CFR 89, 94 and/or 1068 as applicable. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the requirements in this Section 2.1 I.3.h. are not complied. [§60.4211(a)]
- i. The Permittee shall purchase the fire pump engine of the emergency fire water pump (ID No. FWP5) for the model year 2008 and earlier, capable of meeting the emission standards in Section 2.1 I.3.b. above. This engine shall be installed and configured according to the manufacturers specifications. To demonstrate compliance, the Permittee shall maintain a record of engine manufacturer data indicating compliance with the standards. If the engine manufacturer data demonstrating compliance with the emission standards in Section 2.1 I.3. b. above is not maintained or the fire pump engine is not configured according to the manufacturers specifications, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. [§60.4211(b)]
- j. The Permittee may operate the fire pump engine of the emergency fire water pump (ID No. FWP5) for maintenance checks and readiness testing for up to 100 hours per year provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Operation during an actual emergency shall not be subject to a limit on hours. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Because the Permittee is required to comply with emission standards under §60.4205 for fire pump engine of the emergency fire water pump (ID No. FWP5) and not under §60.4204, any operation other than emergency operation, and maintenance and testing as allowed in §60.4211 is prohibited. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the requirements in this Section 2.1 I.3.j. are not complied. [§60.4211(e)]

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

- k. Starting with the model years in Table 5 to NSPS Subpart IIII, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if these records are not maintained.
[§60.4214(b)]

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

- l. No initial notifications under §60.7(a)(1) and (3) are required for fire pump engine of the emergency fire water pump (ID No. FWP5). [§60.4214(b)]
 - m. If the stationary fire pump engine of the emergency fire water pump (ID No. FWP5) is equipped with a diesel particulate filter, the Permittee shall keep records of any corrective action taken after the backpressure monitor has notified the Permittee that the high backpressure limit of the engine is approached. [§60.4214(c)]
 - n. The Permittee shall submit a summary report 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. All instances of deviations from the requirements of this permit must be clearly identified.
- J. One coal/No. 2 fuel oil-fired supercritical electric utility boiler (ID No. ES-6) equipped with low-NOX concentric firing and over-fire air low-NOX control, and with associated selective catalytic reduction system (ID No. CD-19), two spray dry absorbers (ID No. CD-20), two fabric filters (ID No. CD-21), and a wet flue gas desulfurization system (ID Nos. CD-22)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	1.4 lb/MWh gross energy output (30-day rolling average), or 95% reduction (30-day rolling average)	15A NCAC 2D .0524 NSPS (40 CFR Part 60 Subpart Da)
	<u>State-only Requirement</u> 0.15 lb/MMBtu heat input (30-day rolling average)	Senate Bill S1587 (passed in General Assembly 2005 legislative session)
	See Section 2.2 A	15A NCAC 2Q.0317(a)(1) (PSD avoidance)
Nitrogen Oxides (Expressed As NO ₂)	1.0 lb/MWh gross energy output (30-day rolling average)	15A NCAC 2D .0524 NSPS (40 CFR Part 60 Subpart Da)
	When burning only coal 1.8 pounds per million Btu heat input	15A NCAC 2D .0519
	When burning only oil 0.8 pounds per million Btu heat input	

Regulated Pollutant	Limits/Standards	Applicable Regulation
Nitrogen Oxides (Expressed As NO ₂)	<p>When burning both coal and oil</p> $E = [(Ec)(Qc) + (Eo)(Qo)]/Qt$ <p>Where: E = emission limit for combined burning of coal and oil in pounds per million Btu heat input Ec = 1.8 pounds per million Btu heat input for coal only Eo = 0.8 pounds per million Btu heat input for oil only Qc = coal heat input in Btu per hour Qo = oil heat input in Btu per hour Qt = Qc + Qo</p>	15A NCAC 2D .0519
	0.15 lb/MMBtu for gaseous and solid fuels 0.18 lb/MMBtu for liquid fuels	40 CFR 52 Subpart II Federal-only Requirement
	CAIR Nitrogen Oxide New Unit Allocations	15A NCAC 2D .2412 State-Only Requirement
	See Section 2.2 C	15A NCAC 2Q.0317(a)(1) (PSD avoidance)
Particulate Matter	0.10 lb/MMBtu heat input	15A NCAC 2D .0503
	0.015 lb/MMBtu heat input (filterable only)	15A NCAC 2D .0524 NSPS (40 CFR Part 60 Subpart Da)
PM ₁₀	0.012 lb/MMBtu heat input (filterable only) 0.018 lb/MMBtu heat input (filterable + condensable)	15A NCAC 2D .0530 PSD
Visible Emissions	20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity	15A NCAC 2D .0524 NSPS (40 CFR Part 60 Subpart Da)
Mercury (Hg)	0.020 lb/GWh gross energy output when burning only bituminous coal 0.066 lb/GWh gross energy output when burning only sub-bituminous coal 0.016 lb/GWh gross energy output when burning only coal refuse For blended coals, the weighted emission rate is computed based on all coal types using the procedures in 40 CFR 45a(a)(5)	15A NCAC 2D .0524 NSPS (40 CFR Part 60 Subpart Da)
	0.019 lb/GWh gross energy output	15A NCAC 2D .2500 State-only Requirement
Carbon Monoxide	0.120 lb/MMBtu heat input	15A NCAC 2D .0530 PSD
VOC's	0.003 lb/MMBtu heat input	
Sulfuric Acid	0.005 lb/MMBtu heat input	
Lead	0.000022 lb/MMBtu heat input	

1. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Da)

a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .0524, "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart Da, including Subpart A "General Provisions." [15A NCAC 2D .0524]

b. The following emission limits shall not be exceeded [15A NCAC 2D .0524]:

POLLUTANT	EMISSION LIMIT
Particulate Matter	0.015 lb/MMBtu heat input (filterable only)
Visible Emissions	20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity
Sulfur Dioxide	1.4 lb/MWh gross energy output (30-day rolling average), or 95% reduction (30-day rolling average)
Nitrogen Oxides (Expressed As NO ₂)	1.0 lb/MWh gross energy output (30-day rolling average)
Mercury (Hg)	0.020 lb/GWh gross energy output when burning only bituminous coal 0.066 lb/GWh gross energy output when burning only sub-bituminous coal 0.016 lb/GWh gross energy output when burning only coal refuse For blended coals, the weighted emission rate is computed based on all coal types using the procedures in 40 CFR 45a(a)(5) (12-month rolling average)

Particulate matter, opacity, nitrogen oxides and mercury standards apply at all times except during periods of startup, shutdown, or malfunction. Sulfur dioxide standards apply at all times except during periods of startup and shutdown.

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

c. After the initial performance test required under §60.8, compliance with the sulfur dioxide emission limitations or percentage reduction requirements (whenever applicable) under §60.43a and the nitrogen oxides emission limitations under §60.44a is based on the average emission rate for 30 successive boiler operating days*. A separate performance test is completed at the end of each boiler-operating day after the initial performance test, and a new 30 day average emission rate for both sulfur dioxide and nitrogen oxides and a new percent reduction for sulfur dioxide are calculated to show compliance with the standards. [§60.48a(e)]

* For units constructed, reconstructed, or modified after February 28, 2005, boiler operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the steam-generating unit. It is not necessary for fuel to be combusted the entire 24-hour period.

d. If additional emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 J.1.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

e. The opacity and particulate matter emission standards under §60.42a, the nitrogen oxides emission standards under §60.44a, and the Hg emission standards under §60.45a apply at all times except during periods of startup, shutdown, or malfunction.

f. After the initial performance test in Part II required under §60.8, compliance with the sulfur dioxide emission limitation or percentage reduction requirement under §60.43a and the nitrogen oxides emission limitations under §60.44a is based on the average emission rate for 30 successive boiler operating days. A separate performance test is completed at the end of each boiler operating day after the initial performance test, and a new 30 day average emission rate for both sulfur dioxide and nitrogen oxides and, if necessary, a new percent reduction for sulfur dioxide are calculated to show compliance with the standards. As long as the Permittee meets the sulfur dioxide emission limitation of 1.4 lb/MWh gross energy output, the percentage reduction requirement is not applicable.

[§60.48a(e)]

- g. The Permittee shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring the opacity of emissions discharged to the atmosphere in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures" unless the source installs a continuous particulate monitoring system to demonstrate compliance as provided under paragraph p.ii below. If opacity interference due to water droplets exists in the stack (from the use of the FGD system), the opacity is monitored upstream of the interference (at the inlet to the FGD system). If opacity interference is experienced at all locations (both at the inlet and outlet of the sulfur dioxide control system), alternate parameters indicative of the particulate matter control system's performance are monitored (subject to the approval of the Director). [§60.49a(a)]
- h. The Permittee shall install, calibrate, maintain, and operate a continuous monitoring system (CEMS), and record the output of the system, for measuring sulfur dioxide emissions in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." If necessary to demonstrate compliance based on 95% removal, sulfur dioxide emissions shall be monitored at both the inlet and outlet of the sulfur dioxide control device. An "as fired" fuel monitoring system (upstream of coal pulverizers) meeting the requirements of Method 19 may be used to determine potential sulfur dioxide emissions in place of a continuous sulfur dioxide emission monitor at the inlet to the sulfur dioxide control device. [§60.49a(b)]
- i. The owner or operator of an affected facility shall install, calibrate, maintain, and operate a CEMS, and record the output of the system, for measuring nitrogen oxides emissions discharged to the atmosphere, in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." If the owner or operator has installed a nitrogen oxides emission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of §60.51a. Data reported to meet the requirements of §60.51a shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter. [§60.49a(c)]
- j. The owner or operator of an affected facility shall install, calibrate, maintain, and operate a continuous monitoring system, and record the output of the system, for measuring the oxygen or carbon dioxide content of the flue gases at each location where sulfur dioxide or nitrogen oxides emissions are monitored, in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures." [§60.49a(d)]
- k. The CEMS for sulfur dioxide, nitrogen oxides, oxygen and carbon dioxide shall be operated and data recorded during all periods of operation of the affected facility including periods of startup, shutdown, malfunction or emergency conditions, except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments.
- l. The procedures established in 40 CFR Part 60.49a(i) shall be used to conduct monitoring system performance evaluations under §60.13(c) and calibration checks under §60.13(d).
- m. The owner or operator of an affected facility demonstrating compliance with an output-based standard shall install, certify, operate, and maintain a continuous flow monitoring system meeting the requirements of Performance Specification 6 of appendix B and procedure 1 of appendix F of this subpart, and record the output of the system, for measuring the flow of exhaust gases discharged to the atmosphere; or alternatively, data from a continuous flow monitoring system certified according to the requirements of 40 CFR 75.20, meeting the applicable quality control and quality assurance requirements of 40 CFR 75.21, and validated according to 40 CFR 75.23, may be used. [§60.49a(l) and (m)]
- n. The owner or operator of an affected facility demonstrating compliance with an Hg limit in §60.45a shall install and operate a CEMS to measure and record the concentration of Hg in the exhaust gases from each stack according to the requirements in 40 CFR 60.49(p)(1) through (p)(3). Alternatively, for an affected facility that is also subject to the requirements of subpart I of 40 CFR 75, the owner or operator may install, certify, maintain, operate and quality-assure the data from a Hg CEMS according to §75.10 and appendices A and B to part 75, in lieu of following the procedures in 40 CFR 60.49(p)(1) through (p)(3). [§60.49a(p)]
As an alternative to the CEMS required in 40 CFR 60.49(p), the owner or operator may use a sorbent trap monitoring system (as defined in 40 CFR 72.2) to monitor Hg concentration, according to the procedures described in 40 CFR 75.15 and appendix K to 40 CFR 75. [§60.49a(q)]

- o. Compliance provisions for sources subject to §60.45a for Hg. The owner or operator of an affected facility subject to §60.45a (new sources constructed or reconstructed after January 30, 2004) shall calculate the Hg emission rate (lb/GWh) for each calendar month of the year, using hourly Hg concentrations measured according to the provisions of §60.49a(p) in conjunction with hourly stack gas volumetric flow rates measured according to the provisions of §60.49a(l) or (m), and hourly gross electrical outputs, determined according to the provisions in §60.49a(k). Compliance with the applicable standard under §60.45a is determined on a 12-month rolling average basis. [§60.48a(l)]
- p. The owner or operator of an affected facility shall demonstrate compliance with the PM emission limit in Section 2.1 J.1.b above as follows [§60.48a(o)]:
 - i. Except as provided for in paragraph ii below, the owner or operator shall demonstrate compliance with the PM emission limit according to the requirements in paragraphs (A) through (C) below and use a continuous opacity monitoring system (COMS) to demonstrate compliance with the opacity limit in Section 2.1 J.1.b.
 - (A) The owner or operator must conduct a performance test to demonstrate initial compliance with the PM limit by the applicable date specified in §60.8(a). Thereafter, the owner or operator must conduct each subsequent performance test within 12 calendar months of the date of the prior performance test. Each performance test must be conducted according to the requirements in §60.8 using the test methods and procedures in §60.50a.
 - (B) The owner or operator must monitor the performance of each fabric filter (baghouse) operated to comply with the PM emission limit by using a COMS according to the requirements in paragraphs (I) through (VI) below unless the owner or operator elects to comply with the alternative provided in paragraph (C) below.
 - (I) Each COMS must meet Performance Specification 1 in 40 CFR Part 60, Appendix B.
 - (II) The owner or operator must comply with the quality assurance requirements in paragraphs (o)(4)(ii)(A) through (E) of §60.42a(o).
 - (III) During each performance test conducted according to paragraph (A) above, the owner or operator must establish an opacity baseline level. The value of the opacity baseline level is determined by averaging all of the 6-minute average opacity values (reported to the nearest 0.1 percent opacity) from the COMS measurements recorded during each of the test run intervals conducted for the performance test, and then adding 2.5 percent opacity to the calculated average opacity value for all of the test runs. If the calculated average opacity value for all of the test runs is less than 5.0 percent, then the opacity baseline level is set at 5.0 percent. The baseline value must be changed in this permit administratively within 30 days of approval of the test results by the DAQ.
 - (IV) The owner or operator must evaluate the preceding 24-hour average opacity level measured by the COMS each boiler operating day excluding periods of affected source startup, shutdown, or malfunction. If the measured 24-hour average opacity emission level is greater than the baseline opacity level determined in paragraph (III) above, the owner or operator must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high opacity incident and take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the measured 24-hour average opacity to a level below the baseline opacity level.
 - (V) The owner or operator must record the opacity measurements, calculations performed, and any corrective actions taken. The record of corrective action taken must include the date and time during which the measured 24-hour average opacity was greater than baseline opacity level, and the date, time, and description of the corrective action.
 - (VI) If the measured 24-hour average opacity remains at a level greater than the opacity baseline level after 7 days, then a new PM emission performance test must be conducted according to paragraph (A) above and establish a new opacity baseline value according to paragraph (B) above. This new performance test must be conducted within 60 days of the date that the measured 24-hour average opacity was first determined to exceed the baseline opacity level unless a waiver is granted by the DAQ.
 - (C) As an alternative to complying with the requirements of paragraph (B) above, the owner or operator may elect to monitor the performance of a fabric filter (baghouse) operated to comply with the PM emission limit by using a bag leak detection system according to the requirements in paragraphs (I) through (V) below.
 - (I) Each bag leak detection system must meet the specifications and requirements in paragraphs (o)(4)(i)(A) through (H) of §60.42a(o).

- (II) The owner or operator must develop and submit to the DAQ for approval a site-specific monitoring plan for each bag leak detection system. The bag leak detection system must be operated and maintained according to the site-specific monitoring plan at all times. Each monitoring plan must describe the items in paragraphs (o)(4)(ii)(A) through (F) of §60.42a(o).
 - (III) For each bag leak detection system, the owner or operator must initiate procedures to determine the cause of every alarm within 1 hour of the alarm. Except as provided in paragraph (o)(4)(ii)(F) of §60.42a(o), the owner or operator must alleviate the cause of the alarm within 3 hours of the alarm by taking whatever corrective action(s) are necessary. Corrective actions may include, but are not limited to the following:
 - (a) Inspecting the fabric filter for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in PM emissions;
 - (b) Sealing off defective bags or filter media;
 - (c) Replacing defective bags or filter media or otherwise repairing the control device;
 - (d) Sealing off a defective fabric filter compartment;
 - (e) Cleaning the bag leak detection system probe or otherwise repairing the bag leak detection system; or
 - (f) Shutting down the process producing the PM emissions.
 - (IV) The owner or operator must maintain records of the information specified in paragraphs (a) through (c) below for each bag leak detection system.
 - (a) Records of the bag leak detection system output;
 - (b) Records of bag leak detection system adjustments, including the date and time of the adjustment, the initial bag leak detection system settings, and the final bag leak detection system settings; and
 - (c) The date and time of all bag leak detection system alarms, the time that procedures to determine the cause of the alarm were initiated, if procedures were initiated within 1 hour of the alarm, the cause of the alarm, an explanation of the actions taken, the date and time the cause of the alarm was alleviated, and if the alarm was alleviated within 3 hours of the alarm.
 - (V) If after any period composed of 30 boiler operating days during which the alarm rate exceeds 5 percent of the process operating time (excluding control device or process startup, shutdown, and malfunction), then the owner or operator must conduct a new PM performance test according to paragraph (A) above. This new performance test must be conducted within 60 days of the date that the alarm rate was first determined to exceed 5 percent limit unless a waiver is granted by the DAQ.
- ii. As an alternative to meeting the compliance provisions specified in paragraph i above, the owner or operator may elect to install, certify, maintain, and operate a CEMS measuring PM emissions discharged from the affected facility to the atmosphere and record the output of the system as specified in paragraphs (A) through (H) below [§60.48a(p)].
- (A) The owner or operator shall submit a written notification to the DAQ of intent to demonstrate compliance with Subpart Da by using a CEMS measuring PM. This notification shall be sent at least 30 calendar days before the initial startup of the monitor for compliance determination purposes. The owner or operator may discontinue operation of the CEMS monitor and instead return to demonstration of compliance with Subpart Da according to the requirements in §60.42a(o) by submitting written notification to the DAQ of such intent at least 30 calendar days before shutdown of the monitor for compliance determination purposes.
 - (B) Each CEMS shall be installed, certified, operated, and maintained according to the requirements in §60.49a(v).
 - (C) The initial performance evaluation shall be completed no later than 180 days after the date of initial startup of the affected facility, as specified under Subpart A of 40 CFR Part 60 or within 180 days of the date of notification to the DAQ required under paragraph (A) above, whichever is later.
 - (D) Compliance with the PM emissions limit shall be determined based on a 24-hour daily (block) average of the hourly arithmetic average emissions concentrations using the CEMS outlet data. The 24-hour block arithmetic average emission concentration shall be calculated using EPA Reference Method 19 of Appendix A of 40 CFR Part 60, section 4.1.
 - (E) At a minimum, valid CEMS hourly averages shall be obtained for 75 percent of all operating hours on a 30-day rolling average basis. Beginning on January 1, 2012, valid CEMS hourly averages shall be obtained for 90 percent of all operating hours on a 30-day rolling average basis. At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

- (F) The 1-hour arithmetic averages required shall be expressed in MMBtu/hr and shall be used to calculate the boiler operating day daily arithmetic average emission concentrations. The 1-hour arithmetic averages shall be calculated using the data points required under §60.13(e)(2) of Subpart A of 40 CFR Part 60.
 - (G) All valid CEMS data shall be used in calculating average emission concentrations even if the minimum CEMS data requirements of paragraph (E) above are not met.
 - (H) When PM emissions data are not obtained because of CEMS breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the DAQ or EPA Reference Method 19 of Appendix A of 40 CFR Part 60 to provide, as necessary, valid emissions data for a minimum of 90 percent (only 75 percent is required prior to January 1, 2012) of all operating hours per 30-day rolling average.
- q. The owner or operator of an affected facility subject to a Hg limit shall provide notifications in accordance with §60.7(a) and shall maintain records of all information needed to demonstrate compliance including performance tests, monitoring data, fuel analyses, and calculations, consistent with the requirements of §60.7(f). [§60.52a]

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

In addition to any other reporting required by 40 CFR §60.51a or notification requirements to the EPA, the Permittee shall NOTIFY the DAQ in writing of the following:

- r. For sulfur dioxide, nitrogen oxides, particulate matter, and Hg emissions, the performance test data from the initial and subsequent performance test and from the performance evaluation of any CEMS (including the transmissometer) are submitted to the Director. [§60.51a(a)]
- s. The owner or operator of an affected facility shall submit the written reports required under §60.51a and subpart A to the Director semiannually for each six-month period. All semiannual reports shall be postmarked by the 30th day following the end of each six-month period. The owner or operator may submit electronic quarterly reports for SO₂ and/or NO_x and/or opacity and/or Hg in lieu of submitting the written reports required under §60.51a(b), (g), and (i). The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. [§60.51a(j) and (k)]
- t. For the purposes of the reports required under §60.7, periods of excess emissions are defined as all 6-minute periods during which the average opacity exceeds the applicable opacity standards under §60.42a(b). Opacity levels in excess of the applicable opacity standard and the date of such excesses are to be submitted to the Director each calendar quarter. [§60.51a(i)]
- u. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .0530, "Prevention of Significant Deterioration of Air Quality" as promulgated in 40 CFR 51.166. [15A NCAC 2D .0530]

b. The following emission limits shall not be exceeded [15A NCAC 2D .0530]:

POLLUTANT	BACT EMISSION LIMIT	CONTROL TECHNOLOGY
PM ₁₀	0.012 lb/MMBtu heat input (filterable only) 0.018 lb/MMBtu heat input (filterable + condensable) Compliance with the PM ₁₀ emission limits shall be based on a calendar day averaging time except that compliance will be determined over a shorter time period (no less than 6 hours) if the source elects to run the reference test method for less than 24 hours.	Spray dry absorber followed by fabric filter baghouse
Visible Emissions	20 percent opacity (6-minute average), except for one 6-minute period per hour of not more than 27 percent opacity	Fabric filter baghouse
Carbon Monoxide	0.120 lb/MMBtu heat input Compliance with the carbon monoxide emission limit shall be based the reference test method (minimum 6 hours).	Good combustion control
VOC's	0.003 lb/MMBtu heat input Compliance with the VOC emission limit shall be based the reference test method (minimum 6 hours).	Good combustion control
Sulfuric Acid	0.005 lb/MMBtu heat input Compliance with the sulfuric acid emission limit shall be based the reference test method (minimum 6 hours).	Spray dry absorber followed by fabric filter baghouse
Lead	0.000022 lb/MMBtu heat input Compliance with the lead emission limit shall be based the reference test method (minimum 6 hours).	Fabric filter baghouse

Particulate matter, opacity, nitrogen oxides and mercury standards apply at all times except during periods of startup.

Testing [15A NCAC 2D .0530]

c. Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall demonstrate compliance with the BACT emission limits by conducting the initial performance test in Part II and, thereafter, conduct the performance test annually, utilizing EPA reference methods, as in effect on the date of permit issuance, contained in 40 CFR 60, Appendix A, AND in accordance with a testing protocol (using testing protocol submittal form) approved by the Division of Air Quality, as follows:

<u>POLLUTANT</u>	<u>TEST METHOD</u>
PM ₁₀ (including condensables)	Methods 19 (O ₂ dry basis factor), 5B and 202
Carbon Monoxide	Method 10
Volatile Organic Compounds	Method 25A or Method 18
Sulfuric Acid	Method 8
Lead	Method 29

Use of any other test method for compliance purposes must be approved in advance by the Division of Air Quality, and must be based on a test protocol that documents the alternate method is at least as accurate as the reference method test listed above.

- i. Test results shall be the average of 3 valid test runs.
- ii. Within 60 days after achieving the maximum production rate at which the facility will be operated, but not later than 180 days after the initial start-up of the affected facility, the Permittee shall conduct the required performance test(s) and submit a written report of the test(s) to the Regional Supervisor, Division of Air Quality.
- iii. This permit may be revoked, with proper notice to the Permittee, or enforcement procedures initiated, if the results of the test(s) indicate that the facility does not meet applicable limitations.

- d. Filterable and condensable PM10 emissions from pulverized coal boilers have not been widely quantified at very low emission rates and may be subject to positive bias in the test method. If the owner/operator can demonstrate to the DAQ's satisfaction that the filterable PM10 emission rate of 0.012 lb/MMBtu is exceeded during testing or does not provide adequate margin for regulatory compliance, the DAQ may modify the permit to revise the filterable PM10 allowable emission rate to a level not to exceed 0.015 lb/MMBtu. Further, if the owner/operator can demonstrate to the DAQ's satisfaction that the actual condensable portion of PM10 causes the total PM10 emission rate of 0.018 lb/MMBtu to be exceeded or does not provide adequate margin for regulatory compliance, the DAQ may modify the permit to revise the total (filterable + condensable) PM10 allowable emission rate to a level not to exceed 0.024 lb/MMBtu, which is the level at which the modeling was performed. Only as a result of the initial compliance test required in Section 2.1 J.2.c above may the emissions of PM10 from the Unit 6 boiler not be considered to be a violation so long as the filterable PM10 emissions, as determined by EPA Methods 5, 17, 201, or 201A, do not exceed 0.015 lb/MMBtu and the total PM10 emissions, including condensable PM10 emissions, as determined by EPA Method 202 or other DAQ-approved method, do not exceed 0.024 lb/MMBtu. The PM10 emission limits apply at all times except as described in Section 2.1 J.2.g below. If the emission rate of PM10 is exceeded during the initial stack test a follow-up test shall be performed within 60 days of completion of the initial test.
- e. If additional emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 J1.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- f. To ensure compliance with the PM emission limit in Section 2.1 J.1.b above, the Permittee shall comply with the monitoring requirements in Section 2.1 J.1.p.i and ii except that the above BACT particulate and PM-10 limits apply instead of the NSPS limits.
- g. Excess emissions during startup, shutdown and malfunctions shall be evaluated pursuant to 15A NCAC 2D .0535.
- h. The Permittee shall monitor and record the heat input rate to the boiler in order to demonstrate compliance with the National Ambient Air Quality Standards. Each hourly average heat input rate and rolling 24-hr average heat input rate, using valid CEMS data, shall be recorded (written or electronic format) and made available to an authorized DAQ representative upon request. If the heat input rate exceeds 7850 MMBtu/hr on a rolling 24-hr average basis, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

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

- i. The Permittee shall submit excess emissions and monitoring system performance reports for the opacity continuous emissions monitoring system, postmarked by the 30th day following the end of each calendar year quarter.
- j. For PM10, carbon monoxide, VOC's and sulfuric acid emissions, the performance test data from the initial and subsequent performance test and from the performance evaluation of any CEMS (including the transmissometer) shall be submitted.
- k. All instances of deviations from the requirements of this permit must be clearly identified.

STATE-ONLY REQUIREMENT:

3. PART I SECTION 5.4 of S1587 (GENERAL ASSEMBLY OF NORTH CAROLINA SESSION 2005)

- a. The Permittee shall install advanced control technology designed to remove ninety-nine percent (99%) of baseline emissions of SO2 as defined in 15A NCAC 2D .0530(b)(1)(A) from the electric generating unit (ID No. ES-6). The Permittee shall operate the advanced control technology at any time that electricity is being produced by the unit other than during startup.
- b. Actual emissions of SO2 from the boiler (ID No. ES-6) shall be no greater than 0.15 lb/MMBtu as measured by the continuous emissions monitoring system (CEMS) on a rolling 30-day average*.

Testing [15A NCAC 2D .2601]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limits given in Section 2.1 J.3.b above, the Permittee shall be deemed in noncompliance with Part I Section 5.4 of Ratified S1587.

- d. Under the provisions of NCGS 143-215.108, the Permittee shall demonstrate compliance with the emission limits in Section 2.1 J.3.b above by testing the boiler for SO₂ utilizing EPA Reference Method(s), contained in 40 CFR Part 60 Appendix A or in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing shall be completed and the results submitted within 180 days of startup of flue gas desulfurization system (ID No. CD-21) unless an alternate date is approved by the DAQ. If the results of this test are above the limit given in Section 2.1 J.3.b above, the Permittee shall be deemed in noncompliance with Part I Section 5.4 of S1587.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f) and Part I Section 5.4 of S1587]

- e. The Permittee shall assure compliance with Part I Section 5.4 of Ratified S1587 by determining sulfur dioxide emissions in pounds per million Btu using a CEMS meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75). Compliance with sulfur dioxide emission standards shall be determined based on a 30-day rolling average. To compute the 30-day rolling average, determine the valid average hourly values from 30 successive boiler-operating days* (missing data shall be filled in accordance with 40 CFR Part 75), and the sum shall be divided by 720. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75.

If any 30-day rolling average of SO₂ exceeds 0.15 lb/MMBtu or the advanced control technology designed to remove ninety-nine percent (99%) of baseline emissions as defined in which 15A NCAC 2D .0530(b)(1)(A) for SO₂ has not been installed on the boiler (ID No. ES-6), the Permittee shall be deemed in noncompliance with Part I Section 5.4 of S1587.

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

- f. The Permittee shall submit the continuous emissions monitoring data showing the 30-day rolling average values in pounds per million Btu for each 30-day averaging period during the reporting period no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. The Permittee may submit electronic quarterly reports for SO₂ in lieu of submitting the written reports. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. All instances of deviations from the requirements of this permit must be clearly identified.
- g. CEM's Monitor Availability - The Permittee shall submit sulfur dioxide CEMS monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

* For purposes of this condition, boiler-operating day is any 24-hour period during which fossil fuel is combusted in a steam-generating unit for the entire 24 hours.

4. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of fuel oil or propane that are discharged from this source into the atmosphere shall not exceed 0.10 pounds per million Btu heat input. [15A NCAC 2D .0503 (a)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limits given in Section 2.1 J.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

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

- c. No monitoring/recordkeeping/reporting is required for emissions of particulate matter from this source to assure compliance with this regulation.

5. 15A NCAC 2D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS

- a. Emissions of nitrogen oxides from this source when burning coal and oil (No. 2 fuel oil or recycled No.2 fuel oil) shall be calculated by the following equation [15A NCAC 2D .0519]:

$$E = [(Ec)(Qc) + (Eo)(Qo)]/Qt$$

- Where: E = emission limit for combined burning of coal and oil in pounds per million Btu heat input
 Ec = 1.8 pounds per million Btu heat input for coal only
 Eo = 0.8 pounds per million Btu heat input for oil only
 Qc = coal heat input in Btu per hour
 Qo = oil heat input in Btu per hour
 Qt = Qc + Qo

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 J.5.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0519.

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

- c. The monitoring, recordkeeping, and reporting requirements specified under 15A NCAC 2D .0524 in Sections 2.1 J.1.i, k, l, r, and s shall satisfy this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0519 if the monitoring, recordkeeping, and reporting requirements in Sections 2.1 J.1.i, k, l, r and s are not performed.

FEDERAL-ONLY REQUIREMENT:**6. 40 CFR 52 Subpart II: EMISSIONS ALLOCATIONS FOR UTILITY COMPANIES**

- a. Emissions of nitrogen oxides shall not exceed 0.15 lb/MMBtu for gaseous and solid fuels and 0.18 lb/MMBtu for liquid fuels or shall not exceed BACT, whichever requires the greater degree of reduction.
- b. Offsets. If emission allocations are not granted under 15A NCAC 2D .1421 or are not equal to or greater than the emissions of nitrogen oxides of the source for that ozone season, until revised under 15A NCAC 2D .1420, the owner or operator of the source shall acquire emission allocations of nitrogen oxides under 15A NCAC 2D .1419 from other sources sufficient to offset its emissions.
- c. Source (ID No. ES-6) shall comply with the requirements of 15A NCAC 2D .1418 using the nitrogen oxide budget trading program set out in 15A NCAC 2D .1419. A source shall not operate during the ozone season until it has installed and is operating a continuous emissions monitoring system that complies with 40 CFR Part 96. [15A NCAC 2D .1418(e) and 15A NCAC 2D .1419(c)(2)]

Monitoring/Recordkeeping [15A NCAC 2Q.0508(f), 15A NCAC 2D.1418(d), and 15A NCAC 2D.1404(d) and (h)]

- d. The Permittee shall assure compliance with 15A NCAC 2D .1418 by determining nitrogen oxide emissions in tons per ozone season using a continuous emissions monitoring (CEM) system that meets the requirements of 40 CFR Part 75 Subpart H, with such exceptions as allowed under 40 CFR Part 75, Subpart H or 40 CFR 96. The Permittee shall comply with the recordkeeping requirements of 40 CFR 96, Budget Trading Program for State Implementation Plans. All instances of deviations from the requirements of this permit must be clearly identified. If nitrogen oxide emissions exceed the limit in Section 2.1 J.6.a above, allowances held in the Compliance Account as of November 30 of each year or the recordkeeping requirements are not complied with, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1418.

Reporting [15A NCAC 2Q .0508(f), and 15A NCAC 2D .1404(g) and (h)]

- e. The Permittee shall comply with the reporting requirements of 40 CFR 96, Budget Trading Program for State Implementation Plans. The Permittee shall report no later than July 30 of each year the tons of nitrogen oxides emitted during the previous May and June and shall report no later than October 30 the tons of nitrogen oxides emitted during the previous ozone season. One copy of this report shall be sent to the appropriate Regional Office and one copy shall be sent to the Stationary Source Compliance Supervisor at the address shown in General Condition D. All instances of deviations from the requirements of this permit must be clearly identified.

STATE-ONLY REQUIREMENT:

7. 15A NCAC 2D .2412 NEW UNIT GROWTH

- a. The Permittee shall timely apply for Nitrogen Oxide allocations in accordance with 15A NCAC 2D.2412 and 40 CFR Part 96.

8. 15A NCAC 2D .0614: COMPLIANCE ASSURANCE MONITORING (40 CFR 64)

- a. The Permittee shall submit the information required under §64.4 for these sources as part of the application for a significant permit revision under 40 CFR Part 70.

9. 15A NCAC 2Q .0402: ACID RAIN PERMITTING PROCEDURES (40 CFR PART 72)

- a. The Permittee shall submit a complete Title IV Acid Rain permit application under 40 CFR Part 72.30 to the Division of Air Quality at least 24 months before the date on which the new units commence operation.

STATE-ONLY REQUIREMENT:

10. 15A NCAC 2D .2500: MERCURY RULES FOR ELECTRIC GENERATORS

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .2500, “Mercury Rules for Electric Generators” [15A NCAC 2D .2500]
- b. The following emission limits shall not be exceeded [15A NCAC 2D .2500]:

POLLUTANT	EMISSION LIMIT
Mercury	0.019 lb/GWh gross energy output (12-month rolling average)

- c. The Hg designated representative of each Hg Budget source shall submit a complete Hg Budget permit application under §60.4122 covering each Hg Budget unit at least 18 months before the later of January 1, 2010 or the date on which the Hg Budget unit commences operation.

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

- d. If additional emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 J.10.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .2500.

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

- e. The Permittee shall comply with the monitoring requirements in Section 2.1 J.1.e, n, o, q, r, s and u.
- f. The Permittee shall submit to DAQ continuous mercury emissions data from all coal-fired units operated by Duke Energy beginning January 1, 2009 through June 30, 2010. The information shall be used by the DAQ, together with available mercury emissions data from other comparable coal-fired units, to determine whether the mercury emissions limit given in this provision shall be lowered.

STATE-ONLY REQUIREMENT:

11. THE FOLLOWING ADDITIONAL REQUIREMENTS FOR SULFUR DIOXIDE AND NITROGEN OXIDES APPLY:

- a. Actual emissions of nitrogen oxides from the boiler (ID No. ES-6) shall be no greater than 0.07 lb/MMBtu as measured by the continuous emissions monitoring system (CEMS) on a rolling 30-day average*. The emissions limit shall not apply during periods of startup, shutdown defined for purposes of this nitrogen oxides emissions limit as periods when a boiler is being brought into operation or out of operation and the gas temperature at the Selective Catalytic Reduction system is below 620 degrees Fahrenheit.
- b. Actual emissions of sulfur dioxide from the boiler (ID No. ES-6) shall be no greater than 0.12 lb/MMBtu as measured by the continuous emissions monitoring system (CEMS) on a rolling 30-day average*.

Testing [15A NCAC 2D .2601]

- c. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ.
- d. The Permittee shall demonstrate compliance with the emission limits in Section 2.1 J.11a and b above by testing the boilers for sulfur dioxide and nitrogen oxides utilizing EPA Reference Method(s), contained in 40 CFR Part 60 Appendix A or in accordance with a testing protocol approved by the DAQ. Details of the emissions testing and reporting requirements can be found in Section 3 - General Condition JJ. Testing for sulfur dioxide shall be completed and the results submitted within 180 days of startup of flue gas desulfurization system (ID No. CD-22) and testing for nitrogen oxides shall be completed and the results submitted within 180 days of startup of Selective Catalytic Reduction system (ID No. CD-19) unless alternate dates are approved by the DAQ.

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

- e. The Permittee shall demonstrate compliance with this section by determining nitrogen oxides and sulfur dioxide emissions in pounds per million Btu using a CEMS meeting the requirements of 40 CFR Part 75 except that data shall not be bias-adjusted and data shall not include data substituted using the missing data procedures of 40 CFR Part 75. Compliance with nitrogen oxides and sulfur dioxide emission standards shall be determined based on a 30-day rolling average. To compute the 30-day rolling average, determine the valid average hourly values from 30 successive boiler-operating days.* The CEMS shall obtain emissions data for at least 90 percent of all operating hours for each 30 successive boiler-operating days. The sum of all valid data for each 30 successive operating days shall be divided by the number of valid hourly values during the period less the number of hours excluded due to startup, shutdown, or malfunction. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75.

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

- f. The Permittee shall submit the continuous emissions monitoring data showing the 30-day rolling average values in pounds per million Btu for each 30-day averaging period during the reporting period no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. The Permittee may submit electronic quarterly reports for nitrogen oxides and sulfur dioxide in lieu of submitting the written reports. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. All instances of deviations from the requirements of this permit must be clearly identified.
- g. **CEM's Availability** - The Permittee shall submit sulfur dioxide and nitrogen oxides CEMS monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

* For purposes of this condition, boiler operating day is any 24-hour period during which fossil fuel is combusted in a steam generating unit for the entire 24 hours.

STATE-ONLY REQUIREMENT:**12. THE FOLLOWING ADDITIONAL REQUIREMENTS FOR CARBON DIOXIDE IMPACT APPLY:**

- a. Permittee shall mitigate the potential impacts of carbon dioxide emissions from Unit 6 pursuant to the Greenhouse Gas Reduction Plan ("Plan") (attached). The Plan provides for retirement of 800 megawatts of older coal-fired electric generating capacity by December 31, 2018 as well as a commitment by the Permittee to take additional action to render Cliffside Unit 6 carbon neutral by 2018. The retirements required under the Plan will be in addition to the retirement of Cliffside Units 1-4 required under 2.2 C.(1)(a)(i). The retirement schedule set out in the Plan may be revised, subject to approval by the DAQ, if the North Carolina Utilities Commission determines that the scheduled retirement of any unit identified for retirement pursuant to the Plan will have a material impact on the reliability of Permittee's electric generating system. Nothing in this condition shall be interpreted to prohibit Permittee from receiving credit for emissions reductions realized as a result of the retirement of units identified in the Plan.

STATE-ONLY REQUIREMENT:**13. THE FOLLOWING ADDITIONAL REQUIREMENTS FOR HAZARDOUS AIR POLLUTANTS APPLY:**

- a. Emissions from the boiler (ID No. ES-6) cannot exceed 10 tons per year for any single Hazardous Air Pollutant (HAP), as listed in Section 112(b) of the federal Clean Air Act, or 25 tons per year of any combination of HAPs.
- b. The Permittee shall at all times operate the spray dry absorber, and the flue gas desulfurization scrubber with the minimum number of limestone slurry recycle spray pumps to achieve 99.913% hydrogen chloride (HCl) control efficiency as measured during the first required stack test (see Testing below).

Testing [15A NCAC 2D .2601]

- c. Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall perform quarterly stack tests for HCl. The testing shall be conducted at loads greater than 90% of the maximum production rate in accordance with a testing protocol (using testing protocol submittal form) approved by the Division of Air Quality using coal consistent in chlorine content and HHV with coals used throughout the previous 12-month period. Details of the emissions testing and requirements can be found in Section 3 - General Condition JJ.
- i. Test results shall be the average of 3 valid test runs.
 - ii. Within 90 days after achieving 90% of the maximum production rate at which the facility will be operated, the Permittee shall conduct the first quarterly performance test and submit a written report of the test(s) to the Regional Supervisor, Division of Air Quality.
 - iii. If test results show actual HCl emissions are greater than 1.83 lb/hr for any two quarters in a rolling 12-month period, the Permittee shall install, operate and maintain a continuous emission monitor (CEM) for HCl.
 - iv. If test results show actual HCl emissions are below 1.83 lb/hr for four consecutive quarters, then only annual testing is required as long as emissions remain below 1.83 lb/hr during the annual tests.
 - v. If test results from the annual testing (in iv. above) show actual HCl emissions are greater than 1.83 lb/hr, then quarterly testing shall resume.
- d. In addition to the stack testing (in c above), the control efficiency for HCl and hydrogen fluoride (HF) shall be determined during the first required quarterly stack test.
- e. During the first required quarterly stack test, the Permittee shall determine the number of limestone slurry recycle spray pumps that must operate in order to achieve 99.913% control efficiency for HCl across the control device train (from boiler outlet to scrubber outlet).
- f. If the control efficiency is less than 99.913% for HCl, the Permittee shall submit an application to amend the permit.

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

- g. In addition to testing in Sections 13. c-f above, the Permittee shall sample and analyze all coal burned in Unit 6 on an as-received basis. A composite sample consisting of a representative sample from each train shipment received shall be analyzed for chlorine and higher heat value (HHV) content. The results of the analyses shall be recorded in a logbook (written or electronic format) per total shipment and include the following information:
- i. The name of the coal supplier;
 - ii. The chlorine content and HHV of the coal as received for each train shipment;
 - iii. A statement verifying that the methods used to sample and analyze the coal were in accordance with the following:
 - (A) Sampling -- ASTM Method D 2234

- (B) Preparation -- ASTM Method D 2013
 - (C) Gross calorific value (HHV) -- ASTM Method D-5865
 - (D) Moisture content --ASTM Method D 3173
 - (E) Chlorine content -- ASTM Method D 2361-02
- iv. If the annual average value of chlorine exceeds 3209 ppm on a dry basis or the annual average HHV is less than 9376 Btu/lb on an as-received basis, the Permittee shall amend this permit to install, operate and maintain a continuous emission monitor (CEM) for HCl.

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

- h. The Permittee shall submit the following information during the reporting period no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September:
- i. Chlorine content on a dry basis of each train shipment of coal received for Unit 6, the monthly average values, and the rolling 12-month average value.
 - ii. HHV on an as-received basis of each train shipment of coal received for Unit 6, the monthly average values, and the rolling 12-month average value.
- All instances of deviations from the requirements of this permit must be clearly identified.

K. One No. 2 fuel oil/propane-fired auxiliary boiler (ID No. ES-Aux 6)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 lb/MMBtu heat input	15A NCAC 2D .0516
	0.30 weight percent sulfur content fuel	15A NCAC 2D .0524 NSPS (40 CFR Part 60 Subpart Db)
	0.05 weight percent sulfur content fuel	15A NCAC 2D .0501(e)
Nitrogen Oxides (Expressed As NO ₂)	0.30 weight percent nitrogen content fuel	15A NCAC 2D .0524 NSPS (40 CFR Part 60 Subpart Db)
Particulate Matter	0.10 lb/MMBtu heat input	15A NCAC 2D .0503
	0.30 weight percent sulfur content fuel	15A NCAC 2D .0524 NSPS (40 CFR Part 60 Subpart Db)
Visible Emissions	0.30 weight percent sulfur content fuel	15A NCAC 2D .0524 NSPS (40 CFR Part 60 Subpart Db)
	20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.	15A NCAC 2D .0521
PM ₁₀	0.014 lb/MMBtu heat input (filterable only) 0.024 lb/MMBtu heat input (filterable + condensable)	15A NCAC 2D .0530 PSD
Carbon Monoxide	0.036 lb/MMBtu heat input	
VOC's	0.0024 lb/MMBtu heat input	
Carbon Monoxide	0.036 lb/MMBtu heat input	15A NCAC 2D .0501(e)

1. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Db)

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .0524, "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart Db, including Subpart A "General Provisions." [15A NCAC 2D .0524]
- b. The boiler shall only fire No. 2 fuel oil (except for propane during startup) with a nitrogen content of 0.30 weight percent or less and operation of the boiler is limited to a combined annual capacity factor of 10 percent or less. [§60.44b(j)]
- c. The following emission limits shall not be exceeded [15A NCAC 2D .0524]:
 - i. Sulfur Dioxide – Units firing only oil that contains no more than 0.30 weight percent sulfur are exempt from all other sulfur dioxide emission limits. [§60.42b(k)(1)]
 - ii. Particulate Matter and Opacity – Units firing only oil that contains no more than 0.30 weight percent sulfur are not subject to the PM or opacity limits. [§60.43b(h)(5)]
 - iii. Nitrogen Oxides – The boiler is not subject to the nitrogen oxides emission limits as long as the requirements in Section 2.1 K.1.b above (nitrogen content not to exceed 0.30 weight percent and annual capacity factor does not exceed 10 percent) are met. [§60.44b(j) and (k)]

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

- d. The owner or operator shall demonstrate the maximum heat input capacity of the steam generating unit by operating the facility at maximum capacity for 24 hours in accordance with 40 CFR §60.46b(g). This demonstration of maximum heat input capacity shall be made during the initial performance test. It shall be made within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial start-up of the facility. The Director may require subsequent demonstrations at any other time. If this demonstration indicates that the maximum heat input capacity of the affected facility is less than that stated by the manufacturer of the affected facility, the maximum heat input capacity determined during this demonstration shall be used to determine the capacity utilization rate for the affected facility. Otherwise, the maximum heat input capacity provided by the manufacturer is used. [§60.46b(g)]
- e. The owner or operator of an affected facility who elects to demonstrate that the affected facility burns only very low sulfur oil under §60.42b (k)(1) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier which certify that the oil meets the definition of distillate oil as defined in §60.41b. [§60.45b(j) and 60.49b(r)]
- f. The owner or operator of an affected facility that burns very low sulfur oil is not subject to the emissions monitoring requirements for sulfur dioxide if the owner or operator obtains and maintains fuel receipts as described in Section 2.1 K.1.e above. [§60.47b(f)]
- g. Units that burn only oil that contains no more than 0.30 weight percent sulfur are not required to conduct PM emissions monitoring if they maintain fuel supplier certifications of the sulfur content of the fuel burned as described in Section 2.1 K.1.e above. [§60.48b(j)]
- h. The owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [§60.49b(d)]
- i. The owner or operator shall maintain records as follows:
 - i. Calendar date,
 - ii. The number of hours of operation, and
 - iii. A record of the hourly steam load. [§60.49b(p)]
- j. The owner or operator shall submit to the Director a report containing:
 - i. The annual capacity factor over the previous 12 months,
 - ii. The results of any nitrogen oxides emission tests required during the reporting period, the hours of operation during the reporting period, and the hours of operation since the last nitrogen oxides emission test. [§60.49b(q)]
- k. All records shall be maintained for a period of at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The records can be kept offsite for the remaining 3 years. [§60.49b(o)]

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

1. In addition to any other reporting required by 40 CFR §60.49b or notification requirements to the EPA, the Permittee is required to NOTIFY the DAQ in writing of the following:
 - i. The owner or operator shall submit notification of the date of initial startup, as provided by §60.7 with the information listed in 40 CFR §60.49b(a). [§60.49b(a)]
 - ii. The owner or operator shall submit to the Director the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the boiler described in Section 2.1 K.1.d above. [§60.49b(b)]
 - iii. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0503: PARTICULATES FROM FUEL BURNING INDIRECT HEAT EXCHANGERS

- a. Emissions of particulate matter from the combustion of fuel oil or propane that are discharged from these sources into the atmosphere shall not exceed 0.10 pounds per million Btu heat input. [15A NCAC 2D .0503 (a)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limits given in Section 2.1 K.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

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

- c. No monitoring/recordkeeping/reporting is required for emissions of particulate matter from this source to assure compliance with this regulation.

3. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

- a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input each. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]
- b. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil or propane in these sources.

4. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(c)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 K.4. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of No. 2 fuel oil in this source.

5. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .0530, "Prevention of Significant Deterioration of Air Quality" as promulgated in 40 CFR 51.166. [15A NCAC 2D .0530]

b. The following emission limits shall not be exceeded [15A NCAC 2D .0530]:

POLLUTANT	BACT EMISSION LIMIT	CONTROL TECHNOLOGY
PM ₁₀	0.014 lb/MMBtu heat input (filterable only) 0.024 lb/MMBtu heat input (filterable + condensable)	Low ash fuel 10% capacity factor
Carbon Monoxide	0.036 lb/MMBtu heat input Compliance with the carbon monoxide emission limit shall be based the reference test method (minimum 6 hours).	Good combustion control
VOC's	0.0024 lb/MMBtu heat input	Good combustion control

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

POLLUTANT	EMISSION LIMIT				
	Annual (tons/yr) ^a	per 24-hour (lb)	per 8-hour (lb)	per 3-hour (lb)	per 1-hour (lb)
Carbon Monoxide	3.00		54.72		6.84
PM ₁₀	2.00*	109.44*			

* Assumes 100% of TSP is PM-10 and operation at 876 hours per year. Boiler is limited to a 10% annual capacity factor to qualify as a limited-use boiler for NSPS and MACT.

d. The Permittee shall monitor and record the heat input rate to the boiler in order to demonstrate compliance with the National Ambient Air Quality Standards. Each hourly average heat input rate and rolling 24-hr average heat input rate, using valid CEMS data, shall be recorded (written or electronic format) and made available to an authorized DAQ representative upon request. If the heat input rate exceeds 190 MMBtu/hr on a rolling 24-hr average basis, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

6. 15A NCAC 2D .0501(e): COMPLIANCE WITH EMISSION CONTROL STANDARDS

- a. In addition to any control or manner of operation necessary to meet emission standards in 15A NCAC 2D .0500, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards of 15A NCAC 2D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in 15A NCAC 2D .0500 are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls. [15A NCAC 2D .0501(e)]
- b. The maximum sulfur content of the fuel oil received and burned in the Auxiliary Boiler (ID No. ES-Aux 6) shall not exceed 0.05 percent by weight. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e) if the sulfur content of the fuel oil exceeds this limit.
- c. Emissions of carbon monoxide from the Auxiliary Boiler (ID No. ES-Aux 6) shall not exceed 0.036 lb/MMBtu. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501(e) if this limit is exceeded.

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

- d. An initial performance test for carbon monoxide must be conducted in accordance with an approved protocol and General Condition JJ no later than 180 days after startup of the source. The results of the performance test must be submitted within 60 days after the completion of the test.

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

- e. To assure compliance with the sulfur content limit of 0.05 percent by weight, the Permittee shall monitor the sulfur content of the fuel oil by using fuel oil supplier certification per total shipment received. The fuel oil supplier

- certification shall be recorded and maintained in a logbook (written or electronic format) per total shipment.
- f. To assure compliance with the carbon monoxide emission limit of 0.036 lb/MMBtu, the Permittee shall conduct annual performance tests for carbon monoxide. Each annual performance test must be conducted between 10 and 12 months after the previous performance test. The results of the performance tests must be submitted within 60 days after the completion of the tests.

L. One multi-cell cooling tower (ID No. ES-CT1)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E = 4.10 \times P^{0.67}$ for P # 30 tons/hr Or $E = 55.0 \times P^{0.11} - 40$ for P > 30 tons/hr Where: E = allowable emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 2D .0515
Particulates/PM-10	As defined in specific conditions	15A NCAC 2D .0530 PSD

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from this source shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67} \quad \text{for } P \# 30 \text{ tons per hour}$$

or

$$E = 55.0 \times P^{0.11} - 40 \quad \text{for } P > 30 \text{ tons per hour}$$

Where E = allowable emission rate in pounds per hour
 P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in 2.1 L.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

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

- c. No monitoring/recordkeeping/reporting is required for particulate matter emissions from this source.

2. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

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

AFFECTED SOURCE	POLLUTANT	BACT EMISSION LIMIT	
		Annual (tons/yr) ^a	per 24-hour (lb)
Multi-cell cooling tower (ID No. ES-CT1*)	PM ₁₀	12.94	70.8

^a Tons per rolling consecutive 12-month period.

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

b. No monitoring/recordkeeping/reporting is required for particulate emissions from this source.

**M. One No. 2 fuel oil-fired emergency generator (ID No. ES-EG6)
One No. 2 fuel oil-fired emergency firewater pump (ID No. ES-FWP)**

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur Dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible Emissions	20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period	15A NCAC 2D .0521
Nitrogen Oxides VOC's Carbon Monoxide Particulates	As defined in specific conditions	15A NCAC 2D .0524 NSPS (40 CFR Part 60 Subpart IIII)
Various	As defined in specific conditions	15A NCAC 2D .0530 PSD
HAP's	Notification Requirements (Emergency generator ID No. ES-EG6)	15A NCAC 2D .1111 MACT 40 CFR 63 Subpart ZZZZ

1. 15A NCAC 2D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 2D .0516]

Testing [15A NCAC 2D .2601]

b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 M.1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

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

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in this source.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources shall not be more than 20 percent opacity (except during startup, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. [15A NCAC 2D .0521(c)]

Testing [15A NCAC 2D .2601]

b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 M.2. a. above, the Permittee shall be

deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. No monitoring/recordkeeping/reporting is required for visible emissions from the firing of No. 2 fuel oil in this source.

3. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART IIII)

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .0524, "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart IIII, including Subpart A "General Provisions." [15A NCAC 2D .0524]

- b. The following emission limits shall not be exceeded [15A NCAC 2D .0524, §60.4202(a) and §60.4205(c)]:

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT (g/hp-hr)
Emergency Generator (ID No. ES-EG6) [§60.4202(a)]	Nitrogen Oxides + VOC's	4.8
	Carbon Monoxide	2.6
	PM	0.15
Emergency Firewater Pump (ID No. ES-FWP) [§60.4205(c)]	Nitrogen Oxides + VOC's	7.8 (2008 and earlier) 3.0 (2009 and later)
	Carbon Monoxide	2.6
	PM	0.40 (2008 and earlier) 0.15 (2009 and later)

Testing [15A NCAC 2D .2601]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limits given in Section 2.1 M.1.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- d. For operation after October 1, 2007, the engine must use diesel fuel with a sulfur content of less than 500 ppm (40CFR80.510(a)). For operation after October 1, 2010, the engine must use diesel fuel with sulfur content of less than 15 ppm (40CFR80.510(b)). [§60.4207]
- e. The engine must be equipped with a non-resettable hour meter prior to startup, for an engine that is to be classified as emergency use. [§60.4209]
- f. The manufacturer must certify the engine in accordance with procedures in 40CFR89 and test the engines as required by that rule. [§60.4210]
- g. The owner/operator must operate and maintain the engine in accordance with the manufacturer's written instructions. The owner or operator may only change those engine settings that are permitted by the manufacturer. [§60.4211(a)]
- h. The owner or operator of an engine for 2007 or later must comply by assuring that the engine purchased is certified to meet the applicable emissions standards and must install and configure the engine according to the manufacturers specifications. [§60.4211(c)]
- i. An emergency engine may be operated for maintenance and readiness checks for up to 100 hours per year. Operation during an actual emergency is not subject to a limit on hours. [§60.4211(e)]
- j. No initial notification is required for an emergency use engine. However, the owner or operator must keep records of all the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter, unless the engine is shown to meet the standards applicable to non-emergency use engines. [§60.4214]

k. If any of the above monitoring/recordkeeping requirements in this section are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. [40 CFR 60.8 and 60.45]

4. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The following Best Available Control Technology (BACT) limit shall not be exceeded: [15A NCAC 2D .0530]:

AFFECTED SOURCE	POLLUTANT	BACT EMISSION LIMIT (g/hp-hr)	CONTROL TECHNOLOGY
Emergency Generator (ID No. ES-EG6)	Nitrogen Oxides + VOC's	4.8	Low-NOx engine design 0.05% sulfur fuel oil Good combustion control Max. 100 hr/yr usage
	Carbon Monoxide	0.5	Good combustion control Max. 100 hr/yr usage
	PM ₁₀	0.15	0.05% sulfur fuel oil Max. 100 hr/yr usage
Emergency Firewater Pump (ID No. ES-FWP)	Nitrogen Oxides + VOC's*	7.8 (2008 and earlier) 3.0 (2009 and later)	Low-NOx engine design 0.05% sulfur fuel oil Good combustion control Max. 100 hr/yr usage
	Carbon Monoxide	0.5	Good combustion control Max. 100 hr/yr usage
	PM ₁₀	0.40 (2008 and earlier) 0.15 (2009 and later)	0.05% sulfur fuel oil Max. 100 hr/yr usage

* These diesel engines are not subject to BACT for NOx. However, for purposes of BACT for VOC, the BACT standard is based on federal model year performance standards for diesel engines which specify a limit based on the combined NO + VOC emissions.

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

AFFECTED SOURCE	POLLUTANT	EMISSION LIMIT				
		Annual (tons/yr) ^a	per 24-hour (lb)	per 8-hour (lb)	per 3-hour (lb)	per 1-hour (lb)
Emergency Generator (ID No. ES-EG6)	Carbon Monoxide			107.76		13.47
	PM ₁₀	0.19*	3.89*			
Emergency Firewater Pump (ID No. ES-FWP)	Carbon Monoxide			19.68		2.46
	PM ₁₀	0.04*	0.71*			

* Assumes 100% of TSP as PM10 and operation at 100 hours per year. The engines are limited to 100 hours per year to qualify as emergency-use under NSPS.

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

- b. The hours of operation for these sources shall be less than 100 per consecutive 12-month period and no more than one hour per 24-hour (daily block) period.
- c. The Permittee shall record monthly and total annually the hours of operation for these sources. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not maintained.

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

- d. The Permittee shall submit a summary report of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and post marked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period

between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 for the calendar year for the preceding three-month period between July and September.

5. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (MACT – 40 CFR PART 63 SUBPART ZZZZ)

a. **Notification and Recordkeeping** [15A NCAC 2Q .0508(f)]

The Permittee shall meet the initial notification requirements of §63.6645(d) for the emergency generator (ID No. ES-EG6). This notification must be submitted not later than 120 days after the source becomes subject to Subpart ZZZZ and shall include an applicability determination statement that the source has no additional requirements under this subpart and explain the basis of the exclusion. The Permittee shall comply with the recordkeeping requirements of §63.10(b)(3) and keep a record of the applicability determination on site at the source for a period of 5 years after the determination. This source is exempt from the General Provisions (40 CFR Part 60, Subpart A) and from any other provisions of Subpart ZZZZ.

N. Unit 6 Coal Handling consisting of the following:

U6 Coal Reclaim Hoppers (ID No. ES-C19)

**Unit 6 Boiler House Coal Handling Point Source
Coal Reclaim Conveyor RC11 to U6 Boiler Building (ID No. ES-C27), Coal Reclaim Conveyor RC12 to U6 Boiler Building (ID No. ES-C28), Unit 6 Tripper Conveyor TR2 (ID No. ES-C29), and Unit 6 Tripper Conveyor TR3 (ID No. ES-C30) with associated bagfilter (ID No. CD-28)**

Coal Reclaim Feeders for Unit 6 (ID Nos. ES-VF1 thru ES-VF8)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E = 4.10 P^{0.67}$ Where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 2D .0515
Visible Emissions	20 percent opacity	15A NCAC 2D .0524 (40 CFR Part 60 Subpart Y)
PM ₁₀	See Section 2.2 A	15A NCAC 2D .0530

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67}$$

Where E = allowable emission rate in pounds per hour
 P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .2601]

b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 N.1.a. above, the Permittee shall be

deemed in noncompliance with 15A NCAC 2D .0515.

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

- c. Particulate matter emissions from sources (ID Nos. ES-C27, ES-C28, ES-C29 and ES-C30) shall be controlled by the bagfilter (ID No. CD-28). 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance in Section 2.1 N.1.c above for the sources (ID Nos. ES-C27, ES-C28, ES-C29 and ES-C30) 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

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

- e. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report 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. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60 SUBPART Y)

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements in accordance with 15A NCAC 2D .0524, "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60, Subpart Y, including Subpart A "General Provisions." [15A NCAC 2D .0524]
- b. On or after the date on which the performance test required to be conducted under 40 CFR 60.8 is completed, visible emissions shall not be 20 percent opacity or greater except during periods of startup, shutdown and malfunction.

Testing [15A NCAC 2D .2601]

- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 N.2.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- d. To assure compliance, once a month the Permittee shall observe the emission points of this source for any visible emissions above normal. For sources enclosed in a building or underground, the observation shall be made around any opening from the enclosure. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 2D .0524 or (c) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 for 30 minutes is below the limit given in Section 2.1 N.2.b above. If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0524.

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

- e. 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.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

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

- f. The Permittee shall submit a summary report of the observations by 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. All instances of deviations from the requirements of this permit must be clearly identified.

O. Unit 6 Ash Handling consisting of the following:

Wet Bottom Ash Transfer and Pickup (ID No. ES-A1)

Ash Handling Point Source Unit 6

Two Dry Fly Ash Pickups at Boiler Economizer (ID No. ES-A3 and ES-A8), Dry Fly Ash Pickup at Bagfilter (ID No. ES-A9), Dry Fly Ash Silo (ID No. ES-A6), and Dry Fly Ash Truck Loading (ID No. ES-A7) with associated bagfilter (CD-30)

Dry Fly Ash Discharge to Truck (ID No. ES-A12)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	$E = 4.10 P^{0.67}$ Where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 2D .0515
Visible Emissions	20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.	15A NCAC 2D .0521
PM ₁₀	See Section 2.2 A	15A NCAC 2D .0530

1. 15A NCAC 2D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

- a. Emissions of particulate matter from these sources shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0515(a)]

$$E = 4.10 \times P^{0.67}$$

Where E = allowable emission rate in pounds per hour
P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 O.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

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

- c. Particulate matter emissions from the sources (ID Nos. ES-A3, ES-A6, ES-A7, ES-A8, and ES-A9) shall be controlled by the bagfilter (ID No. CD-30). 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.

- d. The results of inspection and maintenance in Section 2.1 O.1.c above for the sources (ID Nos. ES-A3, ES-A6, ES-A7, ES-A8, and ES-A9) 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.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if these records are not maintained.

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

- e. The Permittee shall submit the results of any maintenance performed on the bagfilters within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report 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. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0521: CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from these sources (ID Nos. ES-A1, ES-A3, ES-A6, ES-A7, ES-A8, ES-A9 and ES-A12) shall not be more than 20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 O.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521.

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

- c. To assure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. For sources enclosed in a building or underground, the observation shall be made around any opening from the enclosure. The Permittee shall establish "normal" for these sources in the first 30 days following the start up of these sources. If visible emissions from these sources are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 2D .2601 for 30 minutes is below the limit given in Section 2.1 O.2.a above. If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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.
 The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0521 if these records are not maintained.

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

- e. The Permittee shall submit a summary report of the observations 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. All instances of deviations from the requirements of this permit must be clearly identified.

P. Lime Silo for SDA (ID No. ES-LSSDA) with associated bagfilter (ID No. CD32-3)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	Ambient air quality standards	15A NCAC 2D .0510
Particulate Matter	0.05 g/dscm (0.022 gr/dscf) (Bagfilter ID No. CD32-3 for source ES-LSSDA)	15A NCAC 2D .0524 Subpart 000
Visible Emissions	7 percent opacity (Bagfilter ID No. CD32-3 for source ES-LSSDA)	
PM ₁₀	See Section 2.2 A	15A NCAC 2D .0530
Fugitive Non-Process Dust Emissions	Fugitive non-process dust emissions shall not cause or contribute to substantive complaints	15A NCAC 2D .0540

1. 15A NCAC 2D .0510: PARTICULATES FROM SAND, GRAVEL, OR CRUSHED STONE OPERATIONS

- a. The Permittee shall not cause, allow, or permit any material to be produced, handled, transported or stockpiled without taking measures to reduce to a minimum any particulate matter from becoming airborne to prevent exceeding the ambient air quality standards beyond the property line for particulate matter, both PM10 and total suspended particulates.
 - b. Fugitive non-process dust emissions shall be controlled by 15A NCAC 2D .0540.
- Testing** [15A NCAC 2D .2601]
- c. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 P.2.b or c below, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0510.

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

- d. The monitoring required in Section 2.1 P.2.f and g below shall satisfy this requirement. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 2D .0510 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 2D .2601 for 30 minutes is below the limit given in Section 2.1 P.2.c below. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0510.

2. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART OOO

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, 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." [15A NCAC 2D .0524]

Emission Limitations [15A NCAC 2D .0524]

- b. Stack emissions of particulate matter from the bagfilter (ID No. CD32-3 for source ES-LSSDA) shall not exceed 0.05 g/dscm (0.022 gr/dscf).
- c. Visible emissions from the bagfilter (ID No. CD32-3 for source ES-LSSDA) shall not be more than 7 percent opacity.

Testing [15A NCAC 2D .2601]

- d. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 P.2.b or c above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

- e. To assure compliance, once a month the Permittee shall observe the emission source (ID No. ES-LSSDA) for any visible emissions above normal. For sources enclosed in a building or underground, the observation shall be made around any opening from the enclosure. The Permittee shall establish "normal" for the sources in the first 30 days following completion of the initial performance test. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) immediately shutdown the source and repair the malfunction, (b) be deemed to be in noncompliance with 15A NCAC 2D .0524 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 2D .2601 for 30 minutes is below the limit given in Section 2.1 P.2.c above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0524.
- f. Particulate matter emissions from the source (ID No. ES-LSSDA) shall be controlled by the associated bagfilter (ID No. CD32-3). 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 internal inspection of the bagfilters structural integrity.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if the ductwork and bagfilters are not inspected and maintained.

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

- g. The results of inspection and maintenance in Section 2.1 P.2.g above for source (ES-LSSDA) 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 bagfilter; and
 - iv. Any variance from manufacturer's recommendations, if any, and corrections made.
- The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524 if these records are not maintained.

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

- h. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- i. The Permittee shall submit a summary report of the observations by 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. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 2D .0540: PARTICULATES FROM FUGITIVE NON-PROCESS DUST EMISSION SOURCES

- a. For the purpose of this Rule the following definitions shall apply:
 - i. "Fugitive non-process dust emission" means particulate matter that is not collected by a capture system and is generated from areas such as pit areas, process areas, haul roads, stockpiles, and plant roads.
 - ii. "Substantive complaints" means complaints that are verified with physical evidence acceptable to the DAQ.
- b. The Permittee shall not cause or allow fugitive non-process dust emissions to cause or contribute to substantive complaints.
- c. If fugitive non-process dust emissions from a facility required to comply with this Rule cause or contribute to substantive complaints, the Permittee shall:
 - i. Within 30 days upon receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a written description of what has been done and what will be done to reduce fugitive non-process dust emissions from that part of the facility that caused the second substantive complaint;
 - ii. Within 90 days of receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a control plan as described in Paragraph (e) of this Rule; and
 - iii. Within 30 days after the Director approves the plan, be in compliance with the plan.
- d. The Director may require that the Permittee develop and submit a fugitive non-process dust control plan as described in Paragraph (e) of this Rule if:
 - i. Ambient air quality measurements or dispersion modeling acceptable to the DAQ show violation or a potential for a violation of an ambient air quality standard for particulates in 15A NCAC 2D .0400 "Ambient Air Quality Standards;" or
 - ii. If the DAQ observes excessive fugitive non-process dust emissions from the facility beyond the property boundaries.

The control plan shall be submitted to the Director no later than 90 days after notification. The facility shall be in compliance with the plan within 30 days after the Director approves the plan.
- e. The fugitive dust control plan shall:
 - i. Identify the sources of fugitive non-process dust emissions within the facility;
 - ii. Describe how fugitive non-process dust will be controlled from each identified source;
 - iii. Contain a schedule by which the plan will be implemented;
 - iv. Describe how the plan will be implemented, including training of facility personnel; and
 - v. Describe methods to verify compliance with the plan.
- f. The Director shall approve the plan if he finds that:
 - i. The plan contains all required elements in Paragraph (e) of this Rule;
 - ii. The proposed schedule contained in the plan will reduce fugitive non-process dust emissions in a timely manner;
 - iii. The methods used to control fugitive non-process dust emissions are sufficient to prevent fugitive non-process dust emissions from causing or contributing to a violation of the ambient air quality standards for particulates; and
 - iv. The described compliance verification methods are sufficient to verify compliance with the plan.

If the Director finds that the proposed plan does not meet the requirements of this Paragraph he shall notify the Permittee of any deficiencies in the proposed plan. The Permittee shall have 30 days after receiving written notification from the Director to correct the deficiencies.
- g. If after a plan has been implemented, the Director finds that the plan inadequately controls fugitive non-process dust emissions; he shall require the Permittee to correct the deficiencies in the plan. Within 90 days after receiving written notification from the Director identifying the deficiency, the Permittee shall submit a revision to his plan to correct the deficiencies.

Q. Facility haul roads (ID No. FVehicle)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
PM ₁₀	See Section 2.2 A	15A NCAC 2D .0530

2.2 - Multiple Emission Source(s) Specific Limitations and Conditions

- A. One railcar coal unloading station and two unloading hoppers (ID No. C-1)**
Two belt feeders (ID Nos. BF-1 and BF-2)
Three coal stockout conveyors (ID Nos. C-2, C-3, and C-4)
Two coal telescoping chutes (ID Nos. C-5 and C-7)
Coal storage pile fugitives (ID Nos. C-9 and C-10)
Coal bulldozing and reclaim hoppers (ID Nos. C-11 and C-12)
Eight reclaim feeders (ID Nos. VF-51 through VF-58)
One coal crusher house (ID No. C-15) and associated dust extraction system (ID No. CD-34)
One railcar limestone unloading station (ID No. LS-1) and two unloading hoppers (ID Nos. LS-1A and LS-1B)
Two belt feeders (ID Nos. BF-3 and BF-4)
One limestone stockout conveyor (ID No. LS-2)
One limestone stockout conveyor (ID No. LS-6)
Limestone storage pile (ID No. LS-8)
Limestone bulldozing and reclaim hoppers (ID Nos. LS-9 and LS-10)
Two reclaim feeders (ID Nos. VF-40 and VF-41)
One limestone reclaim conveyor (ID No. LS-11), two limestone silos (ID Nos. LS13-1 and LS13-2), and associated baghouses (ID Nos. CD32-1 and CD32-2)
Two limestone ball mills (ID Nos. LSBM-1 and LSBM-2)
Two gypsum stockout conveyors (ID Nos. GS-3 and GS-4)
Gypsum truck loading (ID No. GS-9)
One gypsum storage pile (ID No. GS-5)
Landfill for ash and gypsum (ID No. Landfill)
One diesel fuel-fired emergency quench water pump (ID No. QP5)
U6 Coal Reclaim Hoppers (ID No. ES-C19)
Coal Reclaim Conveyor RC11 to U6 Boiler Building (ID No. ES-C27), Coal Reclaim Conveyor RC12 to U6 Boiler Building (ID No. ES-C28), Unit 6 Tripper Conveyor TR2 (ID No. ES-C29), and Unit 6 Tripper Conveyor TR3 (ID No. ES-C30) with associated bagfilter (ID No. CD-28)
Coal Reclaim Feeders for Unit 6 (ID Nos. ES-VF1 thru ES-VF8)
Wet Bottom Ash Transfer and Pickup (ID No. ES-A1)
Two Dry Fly Ash Pickups at Boiler Economizer (ID No. ES-A3 and ES-A8), Dry Fly Ash Pickup at Bagfilter (ID No. ES-A9), Dry Fly Ash Silo (ID No. ES-A6), and Dry Fly Ash Truck Loading (ID No. ES-A7) with associated bagfilter (CD-30)
Dry Fly Ash Discharge to Truck (ID No. ES-A12)
Lime Silo for SDA (ID No. ES-LSSDA) with associated bagfilter (ID No. CD32-3)
Facility haul roads (ID No. FVehicle)

1. 15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The following Best Available Control Technology (BACT) limits shall not be exceeded:

EMISSION SOURCE	POLLUTANT	BACT EMISSION LIMITS	CONTROL TECHNOLOGY
One railcar coal unloading station and two unloading hoppers (ID No. C-1)	PM ₁₀	20 percent opacity [6-minute average]	Partially covered building and dust suppression (Water or chemical)
Two belt feeders (ID Nos. BF-1 and BF-2)	PM ₁₀	20 percent opacity [6-minute average]	Underground
Three coal stockout conveyors (ID Nos. C-2, C-3, and C-4)	PM ₁₀	20 percent opacity [6-minute average]	Partial enclosure and dust suppression (Water or chemical)
Two coal telescoping chutes (ID Nos. C-5 and C-7)	PM ₁₀	20 percent opacity [6-minute average]	Dust suppression (Water or chemical)
Coal storage pile fugitives (ID Nos. C-9 and C-10)	PM ₁₀	None	Good pile management and dust suppression (Water or chemical)
Coal bulldozing (ID No. C-11)	PM ₁₀	None	Dressing of working pile
Coal reclaim hoppers (ID No. C-12)	PM ₁₀	20 percent opacity [6-minute average]	Underground
Eight reclaim feeders (ID Nos. VF-51 through VF-58)	PM ₁₀	20 percent opacity [6-minute average]	Underground
One coal crusher house (ID No. C-15)	PM ₁₀	20 percent opacity [6-minute average]	Dust extraction system, partial enclosure for conveyor and enclosed building for crusher house
One railcar limestone unloading station (ID No. LS-1)	PM ₁₀	20 percent opacity [6-minute average]	Partially covered building and dust suppression (Water or chemical)
Two limestone unloading hoppers (ID No. LS-1A and LS-1B)	PM ₁₀	10 percent opacity [6-minute average]	Partially covered building and dust suppression (Water or chemical)
Two belt feeders (ID Nos. BF-3 and BF-4)	PM ₁₀	10 percent opacity [6-minute average]	Underground
One limestone stockout conveyor (ID No. LS-2)	PM ₁₀	10 percent opacity [6-minute average]	Partial enclosure and covered building
One limestone stockout conveyor (ID No. LS-6)	PM ₁₀	10 percent opacity [6-minute average]	Partial enclosure and dust suppression (water or chemical)

EMISSION SOURCE	POLLUTANT	BACT EMISSION LIMITS	CONTROL TECHNOLOGY
One limestone storage pile (ID No. LS-8)	PM ₁₀	None	Good pile management and dust suppression (Water or chemical)
Limestone bulldozing (ID No. LS-9)	PM ₁₀	None	Dressing of working pile
Limestone reclaim hoppers (ID Nos. LS-10)	PM ₁₀	10 percent opacity [6-minute average]	Underground
Two limestone reclaim feeders (ID Nos. VF-40 and VF-41)	PM ₁₀	10 percent opacity [6-minute average]	Underground
One limestone reclaim conveyor (ID No. LS-11) and two limestone silos (ID Nos. LS13-1, and LS13-2)	PM ₁₀	0.01 grain/dscf (filterable only) for both PM and PM ₁₀ [3-hr average], and 7 percent opacity [6-minute average]	Baghouse, partially underground and partial enclosures for conveyors
Two limestone ball mills (ID Nos. LSBM-1 and LSBM-2)	PM ₁₀	15 percent opacity [6-minute average]	Total enclosure
Two gypsum stockout conveyors (ID Nos. GS-3 and GS-4)	PM ₁₀	20 percent opacity [6-minute average]	None
Gypsum truck loading (ID No. GS-9)	PM ₁₀	20 percent opacity [6-minute average]	None
One gypsum storage pile (ID No. GS-5)	PM ₁₀	None	Good pile management and dust suppression (Water or chemical)
Landfill for ash and gypsum (ID No. Landfill)	PM ₁₀	None	Good pile management and dust suppression (Water or chemical)
Emergency quench water pump (ID No. QP5)	PM ₁₀	0.2 gram/kW-hr (filterable only) [3-hr average]	None
U6 Coal Reclaim Hoppers (ID No. ES-C19)	PM ₁₀	20 percent opacity [6-minute average]	Underground
Coal Reclaim Feeders for Unit 6 (ID Nos. ES-VF1 thru ES-VF8)	PM ₁₀	20 percent opacity [6-minute average]	Underground
Coal Reclaim Conveyor RC11 to U6 Boiler Building (ID No. ES-C27), Coal Reclaim Conveyor RC12 to U6 Boiler Building (ID No. ES-C28), Unit 6 Tripper Conveyor TR2 (ID No. ES-C29), and Unit 6 Tripper Conveyor TR3 (ID No. ES-C30)	PM ₁₀	0.01 grain/dscf (filterable only) for both PM and PM ₁₀ [3-hr average], and 20 percent opacity [6-minute average]	Baghouse, partial enclosures and enclosed buildings

EMISSION SOURCE	POLLUTANT	BACT EMISSION LIMITS	CONTROL TECHNOLOGY
Two Dry Fly Ash Pickups at Boiler Economizer (ID Nos. ES-A3 and ES-A8), Dry Fly Ash Pickup at Bagfilter (ID No. ES-A9), Dry Fly Ash Silo (ID No. ES-A6), and Dry Fly Ash Truck Loading (ID No. ES-A7)	PM ₁₀	0.01 grain/dscf (filterable only) for both PM and PM ₁₀ [3-hr average], and 20 percent opacity [6-minute average]	Baghouse
Dry Fly Ash discharge to truck (ID No. ES-A12)	PM ₁₀	20 percent opacity [6-minute average]	Dust suppression (Water or chemical)
Lime Silo for SDA (ID No. ES-LSSDA)	PM ₁₀	0.01 grain/dscf (filterable only) for both PM and PM ₁₀ [3-hr average], and 20 percent opacity [6-minute average]	Baghouse
Facility haul roads (ID No. FVehicle)	PM ₁₀	None	Dust suppression (Water or chemical)

* BACT emission limits shall apply at all times. However, emissions resulting from startup, shutdown or malfunction as defined in under 15A NCAC 2D .0535, exceeding above limits in Section 2.2 A.1.a. Table are permitted, provided that the Permittee to the extent practicable, maintains and operates each emission source including any associated air pollution control equipment listed in this Table, in a manner consistent with good air pollution control practice for minimizing emissions.

b. The following emission limits shall apply and shall not be exceeded in order to demonstrate compliance with the National Ambient Air Quality Standards as required by 15A NCAC 2D .0530 and 40 CFR 51.166(k):

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS	
		Annual Tons/year ^a	Daily Pounds/24 hr
One railcar coal unloading station and two unloading hoppers (ID No. C-1)	PM ₁₀ (Filterable and condensable both)	0.40	10.59
Three coal stockout conveyors (ID Nos. C-2, C-3, and C-4)	PM ₁₀ (Filterable and condensable both)	1.20	31.77
Two coal telescoping chutes (ID Nos. C-5 and C-7)	PM ₁₀ (Filterable and condensable both)	0.40	10.59
Coal storage pile fugitives (ID Nos. C-9 and C-10)	PM ₁₀ (Filterable and condensable both)	1.64	9.01
Coal bulldozing (ID No. C-11)	PM ₁₀ (Filterable and condensable both)	4.18	22.90
One coal crusher house (ID No. C-15)	PM ₁₀ (Filterable and condensable both)	0.03	0.72
One railcar limestone unloading station (ID No. LS-1) and two unloading hoppers (ID Nos. LS-1A and LS-1B)	PM ₁₀ (Filterable and condensable both)	0.01	2.16

EMISSION SOURCE	POLLUTANT	EMISSION LIMITS	
		Annual Tons/year ^a	Daily Pounds/24 hr
One limestone stockout conveyor (ID No. LS-2)	PM ₁₀ (Filterable and condensable both)	0.06	11.88
One limestone stockout conveyor (ID No. LS-6)	PM ₁₀ (Filterable and condensable both)	0.06	11.88
One limestone storage pile (ID No. LS-8)	PM ₁₀ (Filterable and condensable both)	0.09	0.47
Limestone bulldozing (ID No. LS-9)	PM ₁₀ (Filterable and condensable both)	0.84	4.60
One limestone silo (ID No. LS13-1)	PM ₁₀ (Filterable and condensable both)	0.004	0.24
One limestone silo (ID No. LS13-2)	PM ₁₀ (Filterable and condensable both)	0.004	0.24
Two gypsum stockout conveyors (ID Nos. GS-3 and GS-4)	PM ₁₀ (Filterable and condensable both)	0.04	0.70
One gypsum storage pile (ID No. GS-5)	PM ₁₀ (Filterable and condensable both)	0.29	1.60
Gypsum truck loading (ID No. GS-9)	PM ₁₀ (Filterable and condensable both)	0.09	1.39
Landfill for ash and gypsum (ID No. Landfill)	PM ₁₀ (Filterable and condensable both)	5.31	29.01
Emergency quench water pump (ID No. QP5)	PM ₁₀ (Filterable and condensable both)	0.06	27.8
Coal Reclaim Conveyor RC11 to U6 Boiler Building (ID No. ES-C27), Coal Reclaim Conveyor RC12 to U6 Boiler Building (ID No. ES-C28), Unit 6 Tripper Conveyor TR2 (ID No. ES-C29), and Unit 6 Tripper Conveyor TR3 (ID No. ES-C30)	PM ₁₀ (Filterable and condensable both)	15.02	82.29
Two Dry Fly Ash Pickups at Boiler Economizer (ID Nos. ES-A3 and ES-A8), Dry Fly Ash Pickup at Bagfilter (ID No. ES-A9), Dry Fly Ash Silo (ID No. ES-A6), and Dry Fly Ash Truck Loading (ID No. ES-A7)	PM ₁₀ (Filterable and condensable both)	0.01	0.03
Dry Fly Ash discharge to truck (ID No. ES-A12)	PM ₁₀ (Filterable and condensable both)	0.05	0.57
Lime Silo for SDA (ID No. ES-LSSDA)	PM ₁₀ (Filterable and condensable both)	0.004	0.24
Facility haul roads (ID No. FVehicle)	PM ₁₀ (Filterable and condensable both)	5.04	30.00

^a Tons per rolling consecutive 12-month period.

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

- c. If emissions testing is required, the testing shall be performed in accordance General Condition JJ. If the results of this test are above the limits given in Section 2.2 A. 1. a. and b. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

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

- d. The maximum throughput of rail car coal unloading (ID No. C-1) shall not exceed 5,000 tons/hr and 5,422,440 tons per consecutive 12-month period.
- e. The maximum throughput of rail car limestone unloading (ID No. LS-1) shall not exceed 2,800 tons/hr and 796,651 tons per consecutive 12-month period.
- f. The maximum throughput of gypsum stockout conveyor (ID No. GS-3) shall not exceed 300 tons/hr and 913,445 tons per consecutive 12-month period.
- g. The Permittee shall keep records of throughput of rail car coal unloading (ID No. C-1), rail car limestone unloading (ID No. LS-1), and gypsum stockout conveyor (ID No. GS-3) on a daily basis, and then totaled for each month. If any consecutive 12 month's total throughput for rail car coal unloading (ID No. C-1), rail car limestone unloading (ID No. LS-1), or gypsum stockout conveyor (ID No. GS-3) exceed the respective limits in Section 2.2 A.1. d., e., and f., respectively, above, or if the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530.

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

- h. The Permittee shall submit a semi-annual summary report, 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 maximum throughput of rail car coal unloading (ID No. C-1), rail car limestone unloading (ID No. LS-1), and gypsum stockout conveyor (ID No. GS-3), for each of the 12-month periods in the previous 17 months.
 - ii. All instances of deviations from the requirements of this permit must be clearly identified.

B. One railcar limestone unloading station (ID No. LS-1) and two unloading hoppers (ID Nos. LS-1A and LS-1B)

Two belt feeders (ID Nos. BF-3 and BF-4)

One limestone stockout conveyor (ID No. LS-2)

One limestone stockout conveyor (ID No. LS-6)

Limestone storage pile (ID No. LS-8)

Limestone bulldozing and reclaim hoppers (ID Nos. LS-9 and LS-10)

Two reclaim feeders (ID Nos. VF-40 and VF-41)

One limestone reclaim conveyor (ID No. LS-11), two limestone silos (ID Nos. LS13-1 and LS13-2), and associated baghouses (ID Nos. CD32-1 and CD32-2)

Two limestone ball mills (ID Nos. LSBM-1 and LSBM-2)

1. 15A NCAC 2D .0540: PARTICULATES FROM FUGITIVE NON-PROCESS DUST EMISSION SOURCES

- a. The Permittee shall not cause or allow fugitive non-process dust emissions (i.e., particulate matter that is not collected by a capture system and is generated from areas such as pit areas, process areas, haul roads, stockpiles, and plant roads) to cause or contribute to substantive complaints (i.e., complaints that are verified with physical evidence acceptable to the DAQ).
- b. If fugitive non-process dust emissions cause or contribute to substantive complaints, the Permittee shall:
 - i. Within 30 days upon receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a written description of what has been done and what will be done to reduce fugitive non-process dust emissions from that part of the facility that caused the second substantive complaint;
 - ii. Within 90 days of receipt of written notification from the Director of a second substantive complaint in a 12-month period, submit to the Director a control plan; and
 - iii. Within 30 days after the Director approves the plan, be in compliance with the plan.

- c. The Director may require that the Permittee develop and submit a fugitive non-process dust control plan if:
 - i. Ambient air quality measurements or dispersion modeling acceptable to the DAQ show violation or a potential for a violation of an ambient air quality standard for particulates in 15A NCAC 2D .0400 “Ambient Air Quality Standards;” or
 - ii. If the DAQ observes excessive fugitive non-process dust emissions from the facility beyond the property boundaries.

The control plan shall be submitted to the Director no later than 90 days after notification. The facility shall be in compliance with the plan within 30 days after the Director approves the plan.

- d. A fugitive dust control plan shall:
 - i. Identify the sources of fugitive non-process dust emissions within the facility;
 - ii. Describe how fugitive non-process dust will be controlled from each identified source;
 - iii. Contain a schedule by which the plan will be implemented;
 - iv. Describe how the plan will be implemented, including training of facility personnel; and
 - v. Describe methods to verify compliance with the plan.
- e. The Director shall approve the plan if he finds that:
 - i. The plan contains all required elements;
 - ii. The proposed schedule contained in the plan will reduce fugitive non-process dust emissions in a timely manner;
 - iii. The methods used to control fugitive non-process dust emissions are sufficient to prevent fugitive non-process dust emissions from causing or contributing to a violation of the ambient air quality standards for particulates; and
 - iv. The described compliance verification methods are sufficient to verify compliance with the plan.

If the Director finds that the proposed plan does not meet the requirements, he shall notify the Permittee of any deficiencies in the proposed plan. The Permittee shall have 30 days after receiving written notification from the Director to correct the deficiencies.

- f. If after a plan has been implemented, the Director finds that the plan inadequately controls fugitive non-process dust emissions; he shall require the Permittee to correct the deficiencies in the plan. Within 90 days after receiving written notification from the Director identifying the deficiency, the Permittee shall submit a revision to his plan to correct the deficiencies.

C. One coal/No. 2 fuel oil-fired electric utility boiler (ID No. ES-5(U5Boiler)) equipped with low-NOX concentric firing and separated over-fire air/lowered firing low-NOX control equipment, and associated selective catalytic reduction system (ID No. CD-11b (U5SCR)) installed in series with flue gas conditioning systems consisting of an ammonia injection system (ID No. CD-12 (U5FG)) and sulfur trioxide injection system (ID No. CD-13 (U5FG)), two electrostatic precipitators (ID Nos. CD-5 (U5ESP) and CD-6 (U5ESP)), and wet flue gas desulfurization system consisting of spray tower absorber (ID No. CD-33)

One coal/No. 2 fuel oil-fired supercritical electric utility boiler (ID No. ES-6) equipped with low-NOX concentric firing and over-fire air low-NOX control, and with associated selective catalytic reduction system (ID No. CD-19), two spray dry absorbers (ID No. CD-20), two fabric filters (ID No. CD-21), and a wet flue gas desulfurization system (ID Nos. CD-22)

The following table provides a summary of limits and standards for the emission source(s) describe above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
Nitrogen Oxides	2,465 tons per year – Unit 5 only 6,370 tons per year – Units 5 and 6	15A NCAC 2Q.0317(a)(1) (PSD avoidance)
Sulfur Dioxide	25,185 tons per year – Units 5 and 6	

**1. 15A NCAC 2Q .0317: AVOIDANCE CONDITION for
15A NCAC 2D .0530: PREVENTION OF SIGNIFICANT DETERIORATION***

- a. In order to avoid applicability of 15A NCAC 2D .0530(g), the Permittee shall comply with the following [15A NCAC 2D .0530]:
- i. Units 1-4 (ID Nos. ES-1, ES-2, ES-3 and ES-4) and the associated auxiliary boiler (ID No. ES-7) shall be shutdown and the Unit 5 wet flue gas desulfurization system (ID No. CD-33) shall be operational consistent with PSD regulations with regard to netting prior to startup of the new boiler (Unit 6).
 - ii. Unit 5 (ID No. ES-5) shall not discharge into the atmosphere more than **2,465 tons per year** of nitrogen oxides on a rolling consecutive 12-month period basis.
 - iii. Unit 5 and 6 (ID Nos. ES-5 and ES-6) shall not discharge into the atmosphere more than **6,370 tons per year** of nitrogen oxides on a rolling consecutive 12-month period basis.
 - iv. Units 5 and 6 (ID Nos. ES-5 and ES-6) shall not discharge into the atmosphere more than **25,185 tons per year** of sulfur dioxide on a rolling consecutive 12-month period basis.

***THIS CONDITION IS NOT SHIELDED PURSUANT TO 15A NCAC 2Q .0512(a).**

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

- b. The Permittee shall keep records of the monthly nitrogen oxides and sulfur dioxide emissions from each source (ID Nos. ES-5 and ES-6), in a logbook (written or in electronic format). The monthly nitrogen oxides and sulfur dioxide emissions shall be determined using CEMS data. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0530 if these records are not kept or if nitrogen oxides or sulfur dioxide emissions exceed the limits in Section 2.2 C.1.a.ii, iii and iv above.

Construction on Prevention of Significant Deterioration (PSD) Sources

If construction does not commence on the PSD affected facilities within 18 months after the effective date of a permit pursuant to the PSD regulations, or if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time, as determined by the Director, the Permittee may be required to reevaluate its BACT analysis.

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

- d. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of nitrogen oxides and sulfur dioxide emissions from each source (ID Nos. ES-5 and ES-6) and the total for both sources based on the calculations above (tons per rolling consecutive 12-month period) 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 sulfur dioxide emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

2.3 - Other Applicable Requirements

A. 15A NCAC 2Q .0508(h): PREVENTION OF ACCIDENTAL RELEASES - SECTION 112 (r) OF THE CLEAN AIR ACT

1. The Permittee is subject to Section 112(r) of the Clean Air Act and shall comply with all applicable requirements in accordance with 40 CFR Part 68 [15A NCAC 2Q .0508(h)]

2.4 - Permit Shield for Non-applicable Requirements

This condition is to clarify that issuance of this permit provides no shield from the Act, or regulations promulgated thereunder, including state regulations, pertaining to requirements of the New Source Performance Standards or major or minor new source preconstruction review requirements, which EPA is currently alleging or may allege in the future as having been violated by the Permittee. The permit may be subject to reopening to include a compliance plan and schedule addressing any judicial or administrative order establishing new applicable requirements arising out of past or ongoing noncompliance with those provisions for any affected emission units.

In addition to any other provision of this permit, the DAQ retains the authority to reopen and revise this permit under the following circumstances [15A NCAC 2Q .0517]:

- a. To incorporate additional conditions related to carbon dioxide emissions if necessary to comply with state or federal statutes or rules addressing carbon dioxide emissions; or
- b. To include additional requirements necessary to conform the permit to the terms of any settlement or final judgment in the federal enforcement action U.S. v. Duke Energy, Civil Action No. 1:00 CV 1262.

The Permittee is shielded from the following non-applicable requirements as of the date of issuance of this permit based on information furnished with all previous applications. This shield does not apply to future modifications or changes in the method of operation. [15A NCAC 2Q .0512(a)(1)(B)]

A. The following requirements are not applicable to boilers ID Nos. ES-1, ES-2, ES-3, ES-4, and ES-5; nor auxiliary boiler ES-6:

1. 15A NCAC 2D .2618, testing for mercury emissions, is not applicable because 15A NCAC 2D .0537, “Control of Mercury Emissions”, does not apply to fuel combustion.
2. 15A NCAC 2D .2602, testing for sources for which emissions are based on process rates, is not applicable because emissions for these sources are not based on process rates.
3. 15A NCAC 2D .0607, calibration and maintenance requirements do not apply as these sources do not combust wood and wood-fossil fuels.
4. 15A NCAC 2D .1110, NESHAP promulgated in 40 CFR Part 61, is not applicable because no NESHAP evaluation has been triggered.
5. 15A NCAC 2D .0902(c), applicability of VOC rules to sources in non-attainment areas, is not applicable because there are no rules applicable to these sources in 2D .0900.
6. 15A NCAC 2D .0902(f)(1), exemptions from VOC rules in 15A NCAC 2D .0900, is not applicable because there are no rules applicable to these sources in 2D .0900.
7. 15A NCAC 2D .0903(b), recordkeeping on VOC emissions and control equipment, is not applicable because there are no rules applicable to these sources in 2D .0900.
8. 15A NCAC 2D .0903(d)(2), recordkeeping on VOC source compliance, is not applicable because there are no rules applicable to these sources in 2D .0900.
9. 15A NCAC 2D .0903(e), recordkeeping on VOC’s, is not applicable because there are not rules applicable to these sources in 2D .0900.
11. 15A NCAC 2D .0912 is not applicable because there are no rules applicable to these sources in 2D .0900.
13. 15A NCAC 2D .0939(a), testing for VOC’s for sources subject to 2D .0912, is not applicable because there are no rules applicable to these sources in 2D .0900.

14. 15A NCAC 2D .0939(b), testing for VOC's for sources subject to 2D .0912, is not applicable because there are no rules applicable to these sources in 2D .0900.
15. 15A NCAC 2D .1400, NOX requirements for non-attainment counties, is not applicable because Rutherford County is not an non-attainment area.
16. 15A NCAC 2Q .0508(p)(1), recordkeeping on alternative operating scenarios, is not applicable because there are no alternative operating scenarios.

B. The following requirements are not applicable to boilers ID Nos. ES-1, ES-2, ES-3, ES-4, and ES-5:

1. 15A NCAC 2D .0503(a), particulates from fuel burning indirect heat exchangers, is not applicable since the boilers are covered under 15A NCAC 2D .0536 for particulate emissions.

C. The following requirements are not applicable to auxiliary boilers ID Nos. ES-6 and ES-7:

1. 15A NCAC 2D .2612, compliance testing for nitrogen oxides, is not applicable because there are no nitrogen oxide requirements applicable to these sources.
2. 15A NCAC 2D .2609, particulate testing for steam generators which utilize soot blowing shall determine the contribution of soot blowing, is not applicable to these sources because these source do not utilize soot blowing.
3. 15A NCAC 2D .0519, nitrogen oxide emission limits, is not applicable because the auxiliary boilers have a heat input rating of less than 250 million Btu per hour each.
4. 15A NCAC 2D .0535(d) and (e), malfunction abatement plan requirements and submittal, is not applicable because the plan is only required for electric utility boilers.
5. 15A NCAC 2D .0536, emission limits for particulate matter from utility boilers, is not applicable because these sources are not utility boilers.
6. 15A NCAC 2D .0606, monitoring of fossil-fired steam generators in accordance with Appendix P of 40 CFR Part 51, is not applicable because the auxiliary boilers have a heat input rating of less than 250 million Btu per hour each.
7. 15A NCAC 2D .0608, sulfur dioxide emissions from other coal or residual oil burners, is not applicable because these sources do not burn coal or residual oil.
8. 15A NCAC 2Q .0401, implementation of Phase II of the federal acid rain program pursuant to the requirements of Title IV of the Clean Air Act as provided in 40 CFR Part 72, is not applicable because these sources are not utility units.

2.5 - Phase II Acid Rain Permit Requirements

ORIS code: 2721

Effective: January 1, 2007 through December 31, 2011

A. Statement of Basis

Statutory and Regulatory Authorities: In accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended and Titles IV and V of the Clean Air Act, the Department of Environment and Natural Resources, Division of Air Quality issues this permit pursuant to Title 15A North Carolina Administrative Codes, Subchapter 2Q .0400 and 2Q .0500, and other applicable Laws.

B. SO₂ Allowance Allocations and NO_x Requirements for each affected unit

		2007	2008	2009	2010	2011
ES-1 Unit 1 Boiler ID No. 1	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	898*	898*	898*	1*	1*
	NO _x limit	<p>Pursuant to 40 CFR 76.11, the Division of Air Quality approves a NOX emissions averaging plan for this unit, effective from calendar years 2007 through 2011.</p> <p>Under the plan, the actual Btu-weighted annual average NOX emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NOX emission rate for the same units had they each been operated, during the same period of time, in compliance with the individual applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for the plan year, then this unit shall be deemed to be in compliance for the year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for the plan year and if this unit fails to meet the annual average alternative contemporaneous emission limitation of 0.60 lb/MMBtu or has an annual heat input greater than 1,748,054 MMBtu, then excess emissions of nitrogen oxides occur during the year at this unit. A penalty for excess emissions will be assessed in accordance with 40 CFR 77.6.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plan shall be final only when the Indiana Department of Environmental Management; Commonwealth of Kentucky, Department of Environmental Protection; and South Carolina Department of Health and Environmental Control have also approved this averaging plan.</p> <p>In addition to the described NOX compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NOX compliance plan and requirements covering excess emissions.</p>				

		2007	2008	2009	2010	2011
ES-2 Unit 2 Boiler ID No. 2	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	872*	872*	872*	1*	1*
	NO _x limit	<p>Pursuant to 40 CFR 76.11, the Division of Air Quality approves a NO_x emissions averaging plan for this unit, effective from calendar years 2007 through 2011.</p> <p>Under the plan, the actual Btu-weighted annual average NO_x emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NO_x emission rate for the same units had they each been operated, during the same period of time, in compliance with the individual applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for the plan year, then this unit shall be deemed to be in compliance for the year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for the plan year and if this unit fails to meet the annual average alternative contemporaneous emission limitation of 0.57 lb/MMBtu or has an annual heat input greater than 1,766,424 MMBtu, then excess emissions of nitrogen oxides occur during the year at this unit. A penalty for excess emissions will be assessed in accordance with 40 CFR 77.6.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plan shall be final only when the Indiana Department of Environmental Management; Commonwealth of Kentucky, Department of Environmental Protection; and South Carolina Department of Health and Environmental Control have also approved this averaging plan.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2007	2008	2009	2010	2011
ES-3 Unit 3 Boiler ID No. 3	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	1291*	1291*	1291*	21*	21*
	NO _x limit	<p>Pursuant to 40 CFR 76.11, the Division of Air Quality approves a NO_x emissions averaging plan for this unit, effective from calendar years 2007 through 2011.</p> <p>Under the plan, the actual Btu-weighted annual average NO_x emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NO_x emission rate for the same units had they each been operated, during the same period of time, in compliance with the individual applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for the plan year, then this unit shall be deemed to be in compliance for the year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for the plan year and if this unit fails to meet the annual average alternative contemporaneous emission limitation of 0.59 lb/MMBtu or has an annual heat input greater than 3,200,829 MMBtu, then excess emissions of nitrogen oxides occur during the year at this unit. A penalty for excess emissions will be assessed in accordance with 40 CFR 77.6.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plan shall be final only when the Indiana Department of Environmental Management; Commonwealth of Kentucky, Department of Environmental Protection; and South Carolina Department of Health and Environmental Control have also approved this averaging plan.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2007	2008	2009	2010	2011
ES-4 Unit 4 Boiler ID No. 4	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	1305*	1305*	1305*	17*	17*
	NO _x limit	<p>Pursuant to 40 CFR 76.11, the Division of Air Quality approves a NO_x emissions averaging plan for this unit, effective from calendar years 2007 through 2011.</p> <p>Under the plan, the actual Btu-weighted annual average NO_x emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NO_x emission rate for the same units had they each been operated, during the same period of time, in compliance with the individual applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for the plan year, then this unit shall be deemed to be in compliance for the year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for the plan year and if this unit fails to meet the annual average alternative contemporaneous emission limitation of 0.59 lb/MMBtu or has an annual heat input greater than 3,331,625 MMBtu, then excess emissions of nitrogen oxides occur during the year at this unit. A penalty for excess emissions will be assessed in accordance with 40 CFR 77.6.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plan shall be final only when the Indiana Department of Environmental Management; Commonwealth of Kentucky, Department of Environmental Protection; and South Carolina Department of Health and Environmental Control have also approved this averaging plan.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

		2007	2008	2009	2010	2011
ES-5 Unit 5 Boiler ID No. 5	SO ₂ allowances, under Tables 2, 3, or 4 of 40 CFR part 73.	14036*	14036*	14036*	11861*	11861*
	NO _x limit	<p>Pursuant to 40 CFR 76.11, the Division of Air Quality approves a NO_x emissions averaging plan for this unit, effective from calendar years 2007 through 2011.</p> <p>Under the plan, the actual Btu-weighted annual average NO_x emission rate for the units in the plan shall be less than or equal to the Btu-weighted annual average NO_x emission rate for the same units had they each been operated, during the same period of time, in compliance with the individual applicable emission limitations under 40 CFR 76.5, 76.6, or 76.7, except that for any early election units, the applicable emission limitations shall be under 40 CFR 76.7. If the designated representative demonstrates that the requirement of the prior sentence (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) is met for the plan year, then this unit shall be deemed to be in compliance for the year with its alternative contemporaneous annual emission limitation and annual heat input limit.</p> <p>If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for the plan year and if this unit fails to meet the annual average alternative contemporaneous emission limitation of 0.09 lb/MMBtu or has an annual heat input less than 41,176,110 MMBtu, then excess emissions of nitrogen oxides occur during the year at this unit. A penalty for excess emissions will be assessed in accordance with 40 CFR 77.6.</p> <p>In accordance with 40 CFR 72.40(b)(2), approval of the averaging plan shall be final only when the Indiana Department of Environmental Management; Commonwealth of Kentucky, Department of Environmental Protection; and South Carolina Department of Health and Environmental Control have also approved this averaging plan.</p> <p>In addition to the described NO_x compliance plan, this unit shall comply with all other applicable requirements of 40 CFR part 76, including the duty to reapply for a NO_x compliance plan and requirements covering excess emissions.</p>				

* The number of allowances allocated to Phase II-affected units by U.S. EPA may change under 40 CFR part 73. In addition, the number of allowances actually held by an affected source in a unit account may differ from the number allocated by U.S. EPA. Neither of the aforementioned conditions necessitates a revision to the unit SO₂ allowance allocations identified in this permit (See 40 CFR 72.84).

C. Comments, Notes and Justifications

None.

D. Phase II Permit Applications and Phase II NO_x Compliance Plan (attached)

The permit applications submitted for this facility, as approved by the Department of Environment and Natural Resources, Division of Air Quality, are part of this permit. The owners and operators of these Phase II acid rain sources must comply with the standard requirements and special provisions set forth in the following attached applications:

Acid Rain Permit Application dated June 18, 2007

Phase II NO_x Compliance Plan revised December 18, 2006

Phase II NO_x Averaging Plan revised January 4, 2007

2.6 - Clean Air Interstate Rules (CAIR) Permit Requirements

STATE-ONLY REQUIREMENT:

A. 15A NCAC 2D .2403: NITROGEN OXIDE EMISSIONS

1. The total nitrogen oxide (NO_x) emissions from Duke Energy Carolinas LLC's Cliffside Steam Station facility shall not exceed, except as provided in 15A NCAC 2D .2408:
 - a. 2,932 tons annually for 2009-2014; and
 - b. 2,495 tons annually for 2015 and later[15A NCAC 2D .2403]
2. Sources (ID Nos. ES-1, ES-2, ES-3, ES-4 and ES-5) shall comply with the requirements of 15A NCAC 2D .2400 using the trading program and banking set out in 40 CFR Part 96.
[15A NCAC 2D .2407]
3. The owner or operator of any unit or source covered under this Section shall be subject to the provisions of 40 CFR 96.106(f).

Monitoring/Recordkeeping/Reporting [15A NCAC 2D .2403, and 15A NCAC 2D .2407(a)]

4. The emissions of nitrogen oxides of a CAIR NO_x source shall not exceed the number of allowances that it has in its compliance account established and administered under Rule .2408 of this Section.
5. The emissions measurements recorded and reported according to 40 CFR Part 96 Subpart HH shall be used to determine compliance by each CAIR NO_x source with its emissions limitation according to 40 CFR 96.106(c) including 96.106(c)(5) and (6).
6. The provisions of 40 CFR 96.106(d) shall be used for excess emissions.

STATE-ONLY REQUIREMENT:

B. 15A NCAC 2D .2405: NITROGEN OXIDE EMISSIONS DURING OZONE SEASON

1. Ozone season NO_x emissions from Duke Energy Carolinas LLC's Cliffside Steam Station facility shall not exceed, except as provided in 15A NCAC 2D .2408:
 - a. 1,350 tons during the ozone season for 2009-2014; and
 - b. 1,148 tons during the ozone season for 2015 and laterThe ozone season shall be defined as the period of time extending from May 1st to September 30th of each calendar year.
[15A NCAC 2D .2405(a)(1) and (b)]

Monitoring/Recordkeeping/Reporting [15A NCAC 2D .2405(d) and (e), and 15A NCAC 2D .2407(a)]

2. The Permittee shall comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR 96.306(b) and (e), and 40 CFR 96 Subpart HHHH for each CAIR Ozone Season NO_x unit.
3. The Permittee shall use emissions measurements recorded and reported according to 40 CFR 96 Subpart HHHH to determine compliance with its emissions limitations in 15A NCAC 2D .2405 in accordance with 40 CFR 96.306(c) including 96.306(c)(5) and (6). The nitrogen oxide ozone season emissions shall not exceed the number of allowances that it has in its compliance account established and administered under 15A NCAC 2D .2408. For purposes of making deductions for excess emissions for the ozone season in 2008 under the NO_x SIP Call (15A NCAC 02D .1400), the Administrator shall deduct allowances allocated under this Rule (15A NCAC 2D .2405) for the ozone season in 2009

STATE-ONLY REQUIREMENT:

C. 15A NCAC 02D .2404: SULFUR DIOXIDE EMISSIONS

1. The annual allocation of sulfur dioxide allowances shall be determined by EPA. The allocations for CAIR SO² units are listed in the table below (these allocations are from 40 CFR 73.10):

SOURCE	ALLOCATION FOR 2000-2009	ALLOCATION FOR 2010 AND LATER
ES-1 (Boiler 1)	898	1
ES-2 (Boiler 2)	872	1
ES-3 (Boiler 3)	1291	21
ES-4 (Boiler 4)	1305	17
ES-5 (Boiler 5)	14036	11861

2. The owner or operator of any unit or source covered under 15A NCAC 2D .2404 shall be subject to the provisions of 40 CFR 96.206(f).

Monitoring/Recordkeeping/Reporting [15A NCAC 2D .2404 and .2407(a)(2)]

3. The emissions of sulfur dioxides of a source described in Section 2.1.A.11(a) above shall not exceed the number of allowances that it has in its compliance account established and administered under Rule 15A NCAC 02D .2408.
4. The owner or operator of a unit covered under 15A NCAC 02D .2404 shall comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR 96.206(b) and (e) and in 40 CFR Part 96, Subpart HHH for each CAIR SO² unit.
5. The emissions measurements recorded and reported according to 40 CFR Part 96 Subpart HHH shall be used to determine compliance by each CAIR SO² source with its emissions limitation according to 40 CFR 96.206(c) including 96.206(c)(5) and (6).
6. The provisions of 40 CFR 96.206(d) shall be used for excess emissions

D. CAIR Permit Application

The permit application submitted for this facility, as approved by the Department of Environment and Natural Resources, Division of Air Quality, is part of this permit. The owner and operator of these CAIR NO_x and SO² sources must comply with the standard requirements and special provisions set forth in the following attached application:

CAIR Permit Application received June 28, 2007

SECTION 3 - GENERAL CONDITIONS

This section describes terms and conditions applicable to this Title V facility.

- A. **General Provisions** [NCGS 143-215 and 15A NCAC 2Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 2D and 2Q.
 2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
 3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
 4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
 5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
 6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.
- B. **Permit Availability** [15A NCAC 2Q .0507(k) and .0508(i)(9)(B)]
The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environment and Natural Resources upon request.
- C. **Severability Clause** [15A NCAC 2Q .0508(i)(2)]
In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.
- D. **Submissions** [15A NCAC 2Q .0507(e) and 2Q .0508(i)(16)]
Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641

E. **Duty to Comply** [15A NCAC 2Q .0508(i)(2)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and re-issuance, or modification, or for denial of a permit renewal application.

F. **Circumvention** - STATE ENFORCEABLE ONLY

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 pollution control device(s) and appurtenances.

G. **Permit Modifications**

1. Administrative Permit Amendments [15A NCAC 2Q .0514]

The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 2Q .0514.

2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 2Q .0524 and 2Q .0505]

The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 2Q.0524 and 2Q .0505.

3. Minor Permit Modifications [15A NCAC 2Q .0515]

The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 2Q .0515.

4. Significant Permit Modifications [15A NCAC 2Q .0516]

The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 2Q .0516.

5. Reopening for Cause [15A NCAC 2Q .0517]

The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 2Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements

Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:

- a. changes in the information submitted in the application;
- b. changes that modify equipment or processes; 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.

2. Section 502(b)(10) Changes [15A NCAC 2Q .0523(a)]

a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:

- i. the changes are not a modification under Title I of the Federal Clean Air Act;
- ii. the changes do not cause the allowable emissions under the permit to be exceeded;
- iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
- iv. the Permittee shall attach the notice to the relevant permit.

c. The written notification shall include:

- i. a description of the change;
- ii. the date on which the change will occur;
- iii. any change in emissions; and
- iv. any permit term or condition that is no longer applicable as a result of the change.

- d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 2Q .0523(b)]
The Permittee may make changes in the operation or emissions without revising the permit if:
 - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 2Q .0523(c)]
To the extent that emissions trading is allowed under 15A NCAC 2D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 2Q .0523(c).

I.A. Reporting Requirements for Excess Emissions and Permit Deviations

[15A NCAC 2D .0535(f) and 2Q .0508(f)(2)]

“Excess Emissions” - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 2D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 2Q .0700. (*Note: Definitions of excess emissions under 2D .1110 and 2D .1111 shall apply where defined by rule.*)

“Deviations” - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

1. If a source is required to report excess emissions under NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
2. If the source is not subject to NSPS (15A NCAC 2D .0524), NESHAPS (15A NCAC 2D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 2D .0535 as follows:
 - a. Pursuant to 15A NCAC 2D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
 - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
 - name and location of the facility;
 - nature and cause of the malfunction or breakdown;
 - time when the malfunction or breakdown is first observed;
 - expected duration; and
 - estimated rate of emissions;
 - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
 - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 2D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 2Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 2D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B. Other Requirements under 15A NCAC 2D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 2D .0535, including 15A NCAC 2D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 2D .0535(c)(1) through (7).
2. 15A NCAC 2D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. Emergency Provisions [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

1. An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the facility, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error.
2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
 - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
 - b. the permitted facility was at the time being properly operated;
 - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
 - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. Permit Renewal [15A NCAC 2Q .0508(e) and 2Q .0513(b)]

This permit is issued for a fixed term of five years for facilities subject to Title IV requirements and for a term not to exceed five years in the case of all other facilities. This permit shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete renewal application is submitted at least nine months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 2Q .0512(b)(1), this permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of this permit shall remain in effect until the renewal permit has been issued or denied.

L. Need to Halt or Reduce Activity Not a Defense [15A NCAC 2Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. Duty to Provide Information (submittal of information) [15A NCAC 2Q .0508(i)(9)]

1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
2. The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 2Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 2Q .0508(f) and 2Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. **Compliance Certification** [15A NCAC 2Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification

shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

1. the identification of each term or condition of the permit that is the basis of the certification;
2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
3. whether compliance was continuous or intermittent; and
4. the method(s) used for determining the compliance status of the source during the certification period.

Q. **Certification by Responsible Official** [15A NCAC 2Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. **Permit Shield for Applicable Requirements** [15A NCAC 2Q .0512]

1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
2. A permit shield shall not alter or affect:
 - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
 - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
 - c. the applicable requirements under Title IV; or
 - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 2Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 2Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 2Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;
3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or

5. the Director finds that termination, modification, or revocation and re-issuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 2Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 2Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. **Inspection and Entry** [15A NCAC 2Q .0508(l) and NCGS 143-215.3(a)(2)]

1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
 - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
 - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
 - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.

2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized 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.

W. **Annual Fee Payment** [15A NCAC 2Q .0508(i)(10)]

1. The Permittee shall pay all fees in accordance with 15A NCAC 2Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environment and Natural Resources. Annual permit fee payments shall refer to the permit number.
3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 2Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 2Q .0207]

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 a responsible official of the facility.

Y. **Confidential Information** [15A NCAC 2Q .0107 and 2Q. 0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 2Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 2Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 2Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 2Q .0100 and .0300.

AA. Standard Application Form and Required Information [15A NCAC 2Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 2Q .0505 and .0507.

BB. Financial Responsibility and Compliance History [15A NCAC 2Q .0507(d)(3)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. Refrigerant Requirements (Stratospheric Ozone and Climate Protection) [15A NCAC 2Q .0501(e)]

1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. Prevention of Accidental Releases - Section 112(r) [15A NCAC 2Q .0508(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. Prevention of Accidental Releases General Duty Clause - Section 112(r)(1) -
FEDERALLY-ENFORCEABLE ONLY

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.

FF. Title IV Allowances [15A NCAC 2Q .0508(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. Air Pollution Emergency Episode [15A NCAC 2D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 2D .0300.

HH. Registration of Air Pollution Sources [15A NCAC 2D .0200]

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 2D .0202(b).

II. Ambient Air Quality Standards [15A NCAC 2D .0501(c)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 2D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. General Emissions Testing and Reporting Requirements [15A NCAC 2Q .0508(i)(16)]

If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow the procedures outlined below:

1. The Permittee shall submit a completed Protocol Submittal Form to the DAQ Regional Supervisor at least 45 days prior to the scheduled test date. A copy of the Protocol Submittal Form may be obtained from the Regional Supervisor.
2. The Permittee shall notify the Regional Supervisor of the specific test dates at least 15 days prior to testing in order to afford the DAQ the opportunity to have an observer on-site during the sampling program.
3. During all sampling periods, the Permittee shall operate the emission source(s) under maximum normal operating conditions or alternative operating conditions as deemed appropriate by the Regional Supervisor or his delegate.
4. The Permittee shall submit **two** copies of the test report to the DAQ. The test report shall contain at a minimum the following information:
 - a. a description of the training and air testing experience of the person directing the test;
 - b. a certification of the test results by sampling team leader and facility representative;
 - c. a summary of emissions results and text detailing the objectives of the testing program, the applicable state and federal regulations, and conclusions about the testing and compliance status of the emission source(s);
 - d. a detailed description of the tested emission source(s) and sampling location(s) process flow diagrams, engineering drawings, and sampling location schematics should be included as necessary;
 - e. all field, analytical, and calibration data necessary to verify that the testing was performed as specified in the applicable test methods;
 - f. example calculations for at least one test run using equations in the applicable test methods and all test results including intermediate parameter calculations; and
 - g. documentation of facility operating conditions during all testing periods and an explanation relating these operating conditions to maximum normal operation. If necessary, provide historical process data to verify maximum normal operation.
5. The testing requirement(s) shall be considered satisfied only upon written approval of the test results by the DAQ.
6. The DAQ will review emission test results with respect exclusively to the specified testing objectives as proposed by the Permittee and approved by the DAQ.

KK. Reopening for Cause [15A NCAC 2Q .0517]

1. A permit shall be reopened and revised under the following circumstances:
 - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
 - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
 - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 2Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 2Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 2Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and re-issuance, as appropriate.

LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 2Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. During operation the monitoring recordkeeping and reporting requirements as prescribed by the permit shall be implemented within the monitoring period.

MM. Fugitive Dust Control Requirement [15A NCAC 2D .0540] - STATE ENFORCEABLE ONLY

As required by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 2D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. Specific Permit Modifications [15A NCAC 2Q .0501 and .0523]

1. For modifications made pursuant to 15A NCAC 2Q .0501(c)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
2. For modifications made pursuant to 15A NCAC 2Q .0501(d)(2), the Permittee shall not begin operation of the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit Application is filed and a construction and operation permit following the procedures of Section .0500 (except for Rule .0504 of this Section) is obtained.
3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 2Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth St., Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

ATTACHMENT
List of Acronyms

AOS	Alternate Operating Scenario
BACT	Best Available Control Technology
Btu	British thermal unit
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CAA	Clean Air Act
DAQ	Division of Air Quality
DENR	Department of Environment and Natural Resources
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
HAP	Hazardous Air Pollutant
MACT	Maximum Achievable Control Technology
NCAC	North Carolina Administrative Code
NCGS	North Carolina General Statutes
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO_x	Nitrogen Oxides
NSPS	New Source Performance Standard
OAH	Office of Administrative Hearings
PM	Particulate Matter
PM₁₀	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO₂	Sulfur Dioxide
tpy	Tons Per Year
VOC	Volatile Organic Compound.