ROY COOPER
Governor
ELIZABETH S. BISER
Secretary
MICHAEL ABRACZINSKAS
Director

NORTH CAROLINA
Environmental Quality

August 24, 2021

Mr. Jeffrey Flanagan
General Manager III
Duke Energy Carolinas, LLC
253 Plant Allen Road
Belmont, NC 28012

SUBJECT: Air Quality Permit No. 03757T48
Facility ID: 3600039
Duke Energy Carolinas, LLC - Allen Steam Station
Belmont, Gaston County, North Carolina
Fee Class: Title V
PSD Class: Major

Dear Mr. Flanagan:

In accordance with your completed Air Quality Permit Application for a Significant modification of a Title V permit in accordance with 15A NCAC 02Q .0501(b)(2) received April 28, 2021, we are forwarding herewith Air Quality Permit No. 03757T48 to Duke Energy Carolinas, LLC - Allen Steam Station, 253 Plant Allen Road, Belmont, 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 02Q .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.

Pursuant to 15A NCAC 02Q .0203(e), the Permittee shall be assessed annually in addition to any otherwise applicable fee a non-attainment RACT fee effective April 1, 2008.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section, 1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of 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 NCGS 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 NCGS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in NCGS 143-215.114A and 143-215.114B.

Gaston County has triggered increment tracking under PSD for PM-10, SO_2 and NOx. This modification will result in an increase of 1.86 pounds per hour of PM-10, an increase of and 0.0003 pounds per hour of SO_2., and an increase of 0.19 pounds per hour of NOx.

This Air Quality Permit shall be effective from August 24, 2021 until February 28, 2023. This Air Quality Permit is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Edward L. Martin at 919-707-8739 or ed.martin@ncdenr.gov.

Sincerely yours,

Mark Cuilla, EIT, CPM, Chief, Permitting Section
Division of Air Quality, NCDEQ

Enclosure

cc: Michael Sparks, EPA Region 4
Mooresville Regional Office
Connie Horne (cover letter only)
Central Files

ATTACHMENT to Permit No. 03757T48
Duke Energy Carolinas, LLC - Allen Steam Station

Insignificant Activities under 15A NCAC 02Q .0503(8)

Emission Source I.D.	Emission Source Description
I-1	Coal pile and coal handling system - fugitive emissions. Includes coal pile, coal unloading operations, conveyors, crusher operations, feed systems, etc.
I-3	Ash and ash handling system - fugitive emissions. Includes ash removal system, ash loading system, leaks in ash collection pipes and hopper system, emission during maintenance, hauling of ash in trucks, duct vacuum truck unloading, and associated operations.
I-4	Non-stack emissions of hydrazine and ammonia from throughout the plant (blow down vents, overpressure vents, de-aerator vents, valve leakage, purge vents, etc.) Condensate and feed water systems have potential for fugitive emission of hydrazine and ammonia from boiler blow down of systems and steam jet air ejectors.
I-7	Gasoline and fuel oil pumps
I-8	Two welding shops, both vent directly to the outside atmosphere.
I-9	500-gallon above ground gasoline storage tank (old 550-gallon tank was removed from service)
I-11	Sandblasting room
I-15	Two turbine oil tanks for Units 1 & 2, 11,000 gallons total capacity, and associated unloading station (tanks installed before 1973).
I-16	Three turbine oil tanks for Units 3, 4, & 5, 25,500 gallons total capacity, and associated unloading station (tanks installed before 1973).
I-17	Turbine oil storage tank for maintenance of Units 1 & 2, 5,250 gallons capacity, and associated unloading station (normally empty, tank installed before 1973).
I-18	Turbine oil storage tank for maintenance of Units 3 & 4, 8,400 gallon capacity and associated unloading station (normally empty, tank installed before 1973).
I-19	Turbine oil storage tank for maintenance of Unit 5, 23,750 gallon capacity, and associated unloading station (normally empty, tank installed before 1973).
I-20	Vapor extractors which vent gases off of turbine lube oil tanks, one on each unit
I-21	Engine and gear lube oil storage barrels in tractor shed, 4,500 gallon total capacity
I-22	New oil storage area, 2,000 gallon total storage capacity in barrels, variety of engine, lube, and cutting oils
I-23	Used oil barrels at used oil staging area and groundwater remediation area, 770 gallon total capacity

Emission Source I.D.	Emission Source Description
I-24	Satellite accumulation areas for storage of used oil in barrels
I-25	Transformers containing oil, 107,685 gallons total capacity
I-26	Four transformers for yard drain/coal yard sump pump, containing 1,080 gallons of oil
I-27	Circuit breaker, 115 KvSY, containing 73,229 gallons of oil
I-29	Various equipment containing lubricating oil including: 5 boiler feed pumps, 500 gallons total, 13 hot well pumps, 104 gallons total, 34 pulverizer mills, 3,890 gallons total, 20 fans, 55 gallons total, 10 CCW pumps, 550 gallons total, and 10 heater drain pumps, 150 gallons total
I-30	Misc. oil trap tanks used for spill collection for oils in transformers and other yard drain locations
I-32	1,500 gallon above ground sulfuric acid storage tank (old 5,000 gallon tank was decommissioned)
I-33	250 gallon hydrazine storage tank and 75 gallon hydrazine mixing tank
I-34	250 gallon ammonium hydroxide storage tank and 125 gallon ammonia hydroxide mixing tank
I-35	Misc. cylinders containing SO_2, NOx, CO, CO_2, hydrogen, nitrogen, acetylene, argon, oxygen, helium, HeF, or any combination of these
I-36	Misc. CFC and HCFC refrigerant cylinders
I-37	Misc. non-CFC and HCFC refrigerant cylinders
I-38	Propane storage tanks for supplying fuel to microwave tower backup generator
I-40	Satellite accumulation area for used antifreeze
I-41	Storage of new antifreeze in sealed containers
I-42	Containers of Oil-Dri resulting from cleanup of oil spills
I-43	Containers for collection of oil contaminated materials
I-45	Chiller systems used for cooling of control equipment
I-47	Continuous Emissions Monitoring Systems (CEM) Equipment, which potentially emit ozone, CO_2, SO_2, and other pollutants.
I-48	Sewage treatment plant

Emission Source I.D.	Emission Source Description
I-49	Sewer system vents located throughout the plant
I-50	Vents from groundwater monitoring wells for areas contaminated with diesel fuel, gasoline, etc.
I-51	Laboratory for performing analyses of plant operating conditions
I-52	Use and storage of small amounts of pesticide and herbicide for pest and weed control.
I-53	Application of paints, solvents, degreasers, etc.
I-55	600-1,000 lbs elemental sulfur/year blended on coal pile (intermittently produced from occasional spillage, clogging, and leakage resulting from maintenance of SO3 injection system and storage). Only elemental sulfur generated on site may be burned
I-57	111,000 gallons capacity No. 2 fuel oil storage tank
I-58	1,600 gallon above ground diesel fuel oil storage tank
I-62	Limestone belt scale calibration/emergency backup reclaim front end loader process
I-63	Gypsum storage piles
I-64	Gypsum belt scale calibration
I-65	Gypsum emergency loading
I-66	Gypsum collection conveyor transfer to stacker conveyor at transfer tower (120 ton per hour)
I-67	Gypsum stacker conveyor transfer to storage pile
I-69	515 gallon diesel storage tank
I-70	Wastewater treatment facility lime silo with fabric filter
I-71	Liquid urea storage tank No. 1; 23,264 gallons
I-72	Liquid urea storage tank No. 2; 23,264 gallons
I-73	Liquid urea storage tank No. 3; 23,264 gallons
I-75	Sulfuric acid tank; 5,000 gallons
I-80	30,000 gallon fuel oil storage tank for coal handling
IES-EmQP **NSPS IIII; MACT ZZZZ**	Diesel-fired emergency quench pump (440 horsepower maximum engine power)
IES-EmFP	Diesel-fired emergency fire pump (288 horsepower maximum engine power)

Emission Source I.D.	Emission Source Description
NSPS IIII; MACT ZZZZ	
IES-EmGenMWT **NSPS JJJJ; MACT ZZZZ**	Propane-fired emergency generator for microwave tower (23.6 horsepower maximum engine power)
I-81 **NSPS IIII; MACT ZZZZ**	35 kW diesel-fired CAT seep pump engine as a primary power source to support ash basin activities
I-82	Coal tripper room for control of fugitive emissions
I-83 **NSPS IIII; MACT ZZZZ**	NSLF pump station diesel-fired emergency generator (137 bhp)
I-84 **NSPS IIII; MACT ZZZZ**	SSLF pump station diesel-fired emergency generator (137 bhp)
I-85 **NSPS IIII; MACT ZZZZ**	Leachate basin pump station diesel-fired emergency generator (244 bhp)
I-86	1000-gallon above ground diesel fuel tank (replaces the I-10 kerosene tank in that same location)
I-87	200-gallon sulfuric acid tank at the Secondary Retention Pond chemical treatment building
I-88	330-gallon hydrochloric acid tank at the Ultra Filtration building
I-89	330-gallon sodium hypochlorite tank at the Ultra Filtration building

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the Permittee is exempted from demonstrating compliance with any applicable requirement.

2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit".

3. For additional information regarding the applicability of MACT or GACT see the DAQ page titled "Specific Permit Conditions Regulatory Guide." The link to this site is as follows: http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide.

Summary of Changes to Permit 03757T47

The following changes were made to the Duke Energy Carolinas, LLC – Allen Steam Station Air Permit No. 03757T47:

Page No.	Section	Description of Change(s)
Cover	--	Amended permit numbers and dates.
--	Insignificant Activities list	Added I-83 through I-89. Removed I-10 and I-39. Modified I-9 and I-32.
8-9	1, table of permitted emission sources	Added LF, AD, AE, AAB and HAULRD. Added footnote 7.
21	2.1 A.7.a	Removed footnote ***. The %EE and %MD in this footnote when the operating hours are less than 2,200 hours during the quarter are addressed when DAQ reviews the quarterly EERs on a case-by-case basis.
24	2.1 A.9	Removed the sentence that references operating less than 2,200 hours during any calendar quarter in section B of the table. This is addressed when DAQ reviews the quarterly EERs on a case-by-case basis.
25	2.1 A.9.g	Corrected typo to reference Section 2.1 A.9 (not Section 2.1 A.10).
57-59	2.2 B.1.a	Added project toxic emission limits.
59	2.2 B.1.b	Added condition for the approved AQAB review memo.
60	2.2 C	Added 02Q .0504 condition for obtaining the Part II permit.

State of North Carolina
Department of Environmental Quality
Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
03757T48	03757T47	August 24, 2021	February 28, 2023

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 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, 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 - Allen Steam Station**

Facility ID: **3600039**

Facility Site Location: **253 Plant Allen Road**
City, County, State, Zip: **Belmont, Gaston County, NC 28012**

Mailing Address: **253 Plant Allen Road**
City, State, Zip: **Belmont, NC 28012**

Application Numbers: **3600039.21B**
Complete Application Date: **April 28, 2021**

Primary SIC Code: **4911**
Division of Air Quality, Regional Office Address: **Mooresville Regional Office**
610 East Center Avenue
Mooresville, NC 28115

Permit issued this the 24th day of August, 2021.

Mark Cuilla, EIT, CPM, Chief, Permitting Section
By Authority of the Environmental Management Commission

Table of Contents

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:

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
10-35 61 63-64 65-69	ES-1[1] (U1Boiler) **CAM;** **MACT 5U**	Coal[2]/No. 2 fuel oil-fired electric utility boiler (1,980 million Btu per hour heat input capacity) equipped with a modified fuel burner system (low NOx concentric firing system), separated overfire air, lowered-fire low NOx technologies, and alkaline-based fuel additive[3] (fuel additives at a nominal rate not to exceed 15 gallons per hour)[4]	CD-1b (U1-SNCR)	Selective non-catalytic reduction (SNCR) NOx control system
			CD-2 (U1ESP)	Cold-side electrostatic precipitator (280,477 square feet of plate area)
			CDU1/2/5 FGD	Flue Gas Desulfurization spray tower scrubber (32 to 182 gallons per minute limestone slurry injection)[5]
10-35 61 63-64 65-69	ES-2[1] (U2Boiler) **CAM;** **MACT 5U**	Coal[2]/No. 2 fuel oil-fired electric utility boiler (1,980 million Btu per hour maximum heat input) equipped with a modified fuel burner system (low NOx concentric firing system), separated overfire air low-NOx control equipment, and alkaline-based fuel additive[3] (fuel additives at a nominal rate not to exceed 15 gallons per hour)[4]	CD-3b (U2SCNR)	Selective non-catalytic reduction (SNCR) NOx control system
			CD-4 (U2ESP)	Cold-side electrostatic precipitator (280,477 square feet of plate area)
			CDU1/2/5 FGD	Flue Gas Desulfurization spray tower scrubber (32 to 182 gallons per minute limestone slurry injection)[5]
10-35 61 63-64 65-69	ES-3[1] (U3Boiler) **CAM;** **MACT 5U**	Coal[2]/No. 2 fuel oil-fired electric utility boiler (3,390 million Btu per hour heat input capacity) equipped with a modified fuel burner system (low NOx concentric firing system), separated overfire air, lowered-fire low-NOx equipment, and alkaline-based fuel additive[3] (fuel additives at a nominal rate not to exceed 15 gallons per hour)[4]	CD-5b (U3SNCR)	Selective non-catalytic reduction (SNCR) NOx control system[6]
			CD-6b (U3FGT)	Sulfur trioxide injection ash conditioner (190 pounds per hour maximum injection rate)[6]
			CD-7 (U3ESP)	Cold-side electrostatic precipitator (336,960 square feet of plate area)
			CDU3/4 FGD	Flue Gas Desulfurization spray tower scrubber (32 to 182 gallons per minute limestone slurry injection)

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
10-35 61 63-64	ES-4[1] (U4Boiler) **CAM;** **MACT 5U**	Coal[2]/No. 2 fuel oil-fired electric utility boiler (3,390 million Btu per hour heat input capacity) equipped with a modified fuel burner system (low NOx concentric firing system), separated overfire air low NOx equipment, and alkaline-based fuel additive[3] (fuel additives at a nominal rate not to exceed 15 gallons per hour) [4]	CD-8b (U4SNCR)	Selective non-catalytic reduction (SNCR) NOx control system[6]
			CD-9b (U4FGT)	Sulfur trioxide injection ash conditioner (190 pounds per hour maximum injection rate)[6]
			CD-U4/5ActC	System for injecting powdered activated carbon
			CD-9 (U4ESP)	Cold-side electrostatic precipitator (336,960 square feet of plate area)
			CDU3/4 FGD	Flue Gas Desulfurization spray tower scrubber (32 to 182 gallons per minute limestone slurry injection)
10-35 61 63-64	ES-5[1] (U5Boiler) **CAM;** **MACT 5U**	Coal[2]/No. 2 fuel oil-fired electric utility boiler (3,390 million Btu per hour heat input capacity) equipped with a modified fuel burner system (low NOx concentric firing system), separated overfire air, lowered-fire low-NOx equipment, and alkaline-based fuel additive[3] (fuel additives at a nominal rate not to exceed 15 gallons per hour) [4]	CD-10c (U5SNCR)	Selective non-catalytic reduction (SNCR) NOx control system[6]
			CD-11b (U5FGT)	Sulfur trioxide injection ash conditioner (190 pounds per hour maximum injection rate) [6]
			CD-U4/5ActC	System for injecting powdered activated carbon
			CD-11 (U5ESP)	Cold-side electrostatic precipitator (336,960 square feet of plate area)
			CDU1/2/5 FGD	Flue Gas Desulfurization spray tower scrubber (32 to 182 gallons per minute limestone slurry injection) [5]

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Limestone Receiving, Storage, Transfer, and Grinding				
44-48 55-57	ES-8-1 (RUL)	Railcar transfer to dual hopper	CDRULBF	Railcar unloading enclosure dust collection system with fabric filter; 48,000 acfm, collection area 9,600 to 12,000 square feet (to be determined)
44-46 55-57	ES-8-2A (LUBF1) **NSPS OOO**	Dual hopper transfer to hopper conveyor No.1		
44-46 55-57	ES-8-2B (LUBF3) **NSPS OOO**	Dual hopper transfer to hopper conveyor No. 2		
44-46 55-57	ES-8-3 (LUBF3) **NSPS OOO**	Hopper conveyors No.1 and No. 2 transfer to transfer tower stock pile conveyor		
44-46 55-57	ES-9 (LUCB) **NSPS OOO**	Transfer tower stock pile conveyor transfer to stockpile stack out conveyor in transfer tower	N/A	N/A
44-48 55-57	ES-10 (LSC)	Stock pile stack out conveyor to stock pile	N/A	N/A
44-48 55-57	ES-11A (LRGF)	Stock pile transfer to grate feed of stock pile reclaim conveyor	N/A	N/A
44-46 57-57	ES-11B (LRCB) **NSPS OOO**	Grate feeder transfer to stock pile reclaim conveyor	N/A	N/A
44-46 55-57	ES-12 (LFPCB) **NSPS OOO**	Stock pile reclaim conveyor transfer to preparation plant feed conveyor in transfer tower	N/A	N/A

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
44-46 55-57	ES-13 (LSFCB) **NSPS OOO**	Preparation plant feed conveyor with flop gate transfer to day bin No. 2 feed conveyor	CDLSBF	Preparation building dust collection system with fabric filter; 14,800 acfm, collection area 2,960 to 3,700 square feet (to be determined)
44-46 55-57	ES-14 (LS1) **NSPS OOO**	Preparation plant feed conveyor with flop gate transfer to day bin No. 1		
44-46	ES-15 (LS2) **NSPS OOO**	Day bin No. 2 feed conveyor to day bin No. 2		
44-46 55-57	ES-16 (LWFCB) **NSPS OOO**	Day bin No. 1 transfer to wet ball mill No. 1 in preparation building	N/A	N/A
44-46 55-57	ES-17 (LCWFCB) **NSPS OOO**	Day bin No. 2 transfer to wet ball mill No. 2 in preparation building	N/A	N/A
44-46 55-57	ES-18A (WBM1) **NSPS OOO**	Wet ball mill No. 1 and product classifier in preparation building	N/A	N/A
44-46 55-57	ES-18B (WBM2) **NSPS OOO**	Wet ball mill No. 2 and product classifier in preparation building	N/A	N/A
Miscellaneous				
36-41 62	ES-6 (AuxB) **NSPS Dc; RACT; Case-By-Case MACT; MACT 5D**	No. 2 fuel oil fired auxiliary utility boiler (14.6 million Btu per hour heat input capacity)	N/A	N/A

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
42-43	ES-7 (EmGen)[1] **MACT ZZZZ**	No. 2 fuel oil-fired emergency/blackout protection diesel generator (2,000 kW)	N/A	N/A
59	WWTBR	Wastewater metals reduction bio-reactor	N/A	N/A
Dry Flyash System				
49-52	ES-FS1/2	Flyash transfer filter separator Units 1 and 2 (2,924.6 pounds per hour maximum process rate)	CD-U1/2FS	Unit 1 and 2 filter separator (baghouse) (853 square feet of filter area)
49-52	ES-FS1/2b	Flyash transfer filter separator Units 1 and 2 (redundant) (2,924.6 pounds per hour maximum process rate)	CD-U1/2FSa	Unit 1 and 2 filter separator (baghouse) (redundant) (853 square feet of filter area)
49-52	ES-FS3	Flyash transfer filter separator Unit 3 (2,924.6 pounds per hour maximum process rate)	CD-U3FS	Unit 3 filter separator (baghouse) (853 square feet of filter area)
49-52	ES-FS3b	Flyash transfer filter separator Unit 3 (redundant) (2,924.6 pounds per hour maximum process rate)	CD-U3FSb	Unit 3 filter separator (baghouse) (redundant) (853 square feet of filter area)
49-52	ES-FS4	Flyash transfer filter separator Unit 4 (2,924.6 pounds per hour maximum process rate)	CD-U4FS	Unit 4 filter separator (baghouse) (853 square feet of filter area)
49-52	ES-FS4b	Flyash transfer filter separator Unit 4 (redundant) (2,924.6 pounds per hour maximum process rate)	CD-U4FSb	Unit 4 filter separator (baghouse) (redundant) (853 square feet of filter area)
49-52	ES-FS5	Flyash transfer filter separator Unit 5 (2,924.6 pounds per hour maximum process rate)	CD-U5FS	Unit 5 filter separator (baghouse) (853 square feet of filter area)

Page No.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
49-52	ES-FS5b	Flyash transfer filter separator Unit 5 (redundant) (2,924.6 pounds per hour maximum process rate)	CD-U5FSb	Unit 5 filter separator (baghouse) (redundant) (853 square feet of filter area)
49-52	ES-AS1	Ash silo #1 (92,743 cubic feet capacity)	CD-S1Bf	Bin vent filter Ash silo #1 (8,398 square feet of filter area)
49-52	ES-FTLD1	Flyash truck loading equipment (dry) from silo #1 (102.7 tons per hour maximum process rate)		
49-52	ES-AS2	Ash silo #2 (92,743 cubic feet capacity)	CD-S2Bf	Bin vent filter Ash silo #2 (8,398 square feet of filter area)
49-52	ES-FTLD2	Flyash truck loading equipment (dry) from silo #2 (102.7 tons per hour maximum process rate)		
49-52	ES-FTLW1	Flyash truck loading equipment (wet) from silo #1 (102.7 tons per hour maximum process rate)	N/A	N/A
49-52	ES-FTLW2	Flyash truck loading equipment (wet) from silo #2 (102.7 tons per hour maximum process rate)	N/A	N/A
49-52	Fugitive 1	Truck transport	N/A	N/A
49-52	Fugitive 2	Truck unloading	N/A	N/A
49-52	Fugitive 3	Dry ash landfill management	N/A	N/A
52-54	ES-U4/5ACISilo	Units 4 and 5 DSI ACI storage silo (6,000 cubic feet capacity)	CD-U4/5ACISiloBf	Units 4 and 5 ACI storage silo bin vent filter baghouse (259 square feet of filter area)
60	LF[7]	Ash Landfill	N/A	N/A
60	AD[7]	Ash Deposition	N/A	N/A
60	AE[7]	Ash Excavation	N/A	N/A
60	AAB[7]	Active Ash Basin	N/A	N/A
60	HAULRD[7]	Ash Hauling	N/A	N/A

1 These emissions sources are subject to VOC RACT as potential emissions were determined to exceed 100 tons per year. Application 3600039.08A and Permit 03757T34 addressed the applicability of RACT as per 02D .0951. This case-by-case demonstration concluded that these sources already employ control equivalent to or better than RACT.

2 Incidental spills of oil, antifreeze, etc. from mobile equipment that might get on the coal are allowed to be burned in these boilers.

3 Alkaline-based fuel additive may be used on an as-needed basis not to exceed 7 pounds per ton of coal burned. Fuel additives shall not contain any toxic air pollutants listed in 15A NCAC 02Q .0711. Fuel additive products not equivalent to those specified in Application 3600039.13B are not allowed without permit modification.

4 None of the mercury control devices or techniques shall use halogen-containing compounds (e.g. bromide).

5 Emissions will discharge from the common flue at the exit of the Flue Gas Desulfurization (FGD) system for Units 1, 2, and 5 (CDU1/2/5FGD) during normal operation. Emissions will discharge from the bypass stack (formerly Unit 1 stack) during periods of startup on oil, periods of malfunction of the FGD system, or the boiler air and gas handling system.

6 The sulfur trioxide ash conditioning and NOx systems may be operated independently of each other or in combination. Each system may be operated intermittently as necessary, based on the boiler system requirements, to maintain compliance with the applicable emission standards.

7 The addition of these emission sources (LF, AD, AE, AAB and HAULRD) are listed as a 15A NCAC 02Q .0501(b)(2) modification. The Permittee shall file a Title V Air Quality Permit Application on or before 12 months after commencing operation in accordance with General Condition NN.1. 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. Five Coal/No. 2 Fuel Oil-fired Electric Utility Boilers (ID Nos. ES-1 through 5):

- **Boiler ES-1 equipped with a low NOx concentric firing system, separated overfire air (SOFA), lowered-fire (LOFIR) low-NOx technology, and alkaline-based fuel additive, and exhausting to the following control devices, operating in series:**
  - **selective non-catalytic NOx reduction system (ID No. CD 1b);**
  - **cold-side electrostatic precipitator (ID No. CD-2); and**
  - **flue gas desulfurization spray tower scrubber (ID No. CDU1/2/5FGD)**

- **Boiler ES-2 equipped with a low NOx concentric firing system, SOFA, and alkaline-based fuel additive, and exhausting to the following control devices, operating in series:**
  - **selective non-catalytic NOx reduction system (ID No. CD 3b);**
  - **cold-side electrostatic precipitator (ID No. CD-4); and**
  - **flue gas desulfurization spray tower scrubber (ID No. CDU1/2/5FGD)**

- **Boiler ES-3 equipped with a low NOx concentric firing system, separated overfire air (SOFA), lowered-fire (LOFIR) low-NOx technology, and alkaline-based fuel additive, and exhausting to the following control devices, operating in series:**
  - **selective non-catalytic NOx reduction system (ID No. CD 5b);**
  - **flue gas conditioning system with sulfur trioxide injection (ID No. CD-6b);**
  - **cold-side electrostatic precipitator (ID No. CD-7); and**
  - **flue gas desulfurization spray tower scrubber (ID No. CDU3/4FGD)**

- **Boiler ES-4 equipped with a low NOx concentric firing system, SOFA, and alkaline-based fuel additive, and exhausting to the following control devices, operating in series:**
  - **selective non-catalytic NOx reduction system (ID No. CD 8b);**
  - **flue gas conditioning system with sulfur trioxide injection (ID No. CD-9b);**
  - **powdered activated carbon system (ID No. CDU4/5/ActC)**
  - **cold-side electrostatic precipitator (ID No. CD-9); and**
  - **flue gas desulfurization spray tower scrubber (ID No. CDU3/4FGD)**

- **Boiler ES-5 equipped with a low NOx concentric firing system, separated overfire air (SOFA), lowered-fire (LOFIR) low-NOx technology, and alkaline-based fuel additive, and exhausting to the following control devices, operating in series::**
  - **selective non-catalytic NOx reduction system (ID No. CD 10c);**
  - **flue gas conditioning system with sulfur trioxide injection (ID No. CD-11b);**
  - **powdered activated carbon system (ID No. CDU4/5/ActC)**
  - **cold-side electrostatic precipitator (ID No. CD-11); and**
  - **flue gas desulfurization spray tower scrubber (ID No. CDU1/2/5FGD)**

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	**Applies to Units 1,2 and 5 equipped with an FGD system and emitting through a common stack;** **And applies to Units 3 and 4 equipped with an FGD system and emitting through a common stack** 1.0 pounds per million Btu heat input	15A NCAC 02D .0501(c)
	Phase II Acid Rain Permit Requirements (see Section 2.4)	15A NCAC 02Q .0402 (40 CFR Part 72)
	Federal-only requirement As defined in specific conditions (see Section 2.5)	15A NCAC 02Q .0508(i)(16) and (m) Consent Decree
Nitrogen Oxides	**When burning only coal** 1.8 pounds per million Btu heat input	15A NCAC 02D .0519
	When burning only oil 0.8 pounds per million Btu heat input	
	When burning coal and oil See Section 2.1 A.2.	
	Phase II Acid Rain Permit Requirements (see Section 2.3)	15A NCAC 02Q .0402 (40 CFR Part 72)
	Federal-only requirement As defined in specific conditions (see Section 2.5)	15A NCAC 02Q .0508(i)(16) and (m) Consent Decree
Visible Emissions	**For periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used:** See Section 2.1 A.3.a.i **For periods when the compliance option under Section 2.1.A.3.a.ii [PM CEMS] is used**: See Section 2.1 A.3.a.ii	15A NCAC 02D .0521*
Visible Emissions	**State-only requirements** Unit 1 Boiler - 20 percent annual average opacity Unit 2 Boiler - 20 percent annual average opacity Unit 3 Boiler - 13 percent annual average opacity Unit 4 Boiler - 14 percent annual average opacity Unit 5 Boiler - 17 percent annual average opacity	15A NCAC 02D .0536*

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	Unit 1 and 2 Boilers **As determined by stack test:** 0.25 pounds per million Btu heat input	15A NCAC 02D .0536*
	Unit 3, 4 and 5 Boilers **As determined by stack test:** 0.20 pounds per million Btu heat input	15A NCAC 02Q .0317 PSD avoidance
	As determined by PM CEMS: Units 1-5 boilers 0.030 pounds per million Btu heat input (or 0.30 pounds per MWh)	15A NCAC 02D .0536*
	Unit 1- 5 Boilers **For periods when the compliance option under Section 2.1.A.3.a.i [COMS] is used:** Monitoring for ESP control device -- See Section 2.1 A.9	15A NCAC 02D .0614 CAM (40 CFR 64)
Malfunction Abatement Plan	As defined in specific conditions	15A NCAC 02D .0535
Toxic Air Pollutants	As defined in specific conditions	15A NCAC 02D .1100
Excess Emissions/Good Operations and Maintenance Practices	As defined in specific conditions	15A NCAC 02D .0606*
HAPs	Varies - See Section 2.1 A.11	15A NCAC 02D .1111 (40 CFR Part 63, Subpart UUUUU)
PM2.5	See Section 2.1 A.10	15A NCAC 02Q .0317 [PSD AVOIDANCE]

* Rules 15A NCAC 02D .0521, 02D .0536 and 02D .0606 have two mutually exclusive options for monitoring, recordkeeping and reporting using either COMS or PM CEMS as defined in specific conditions.

1. 15A NCAC 02D .0501(c): COMPLIANCE WITH EMISSION CONTROL STANDARDS

a. In addition to any control or manner of operation necessary to meet emission standards in 15A NCAC 02D .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 02D .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 02D .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.

b. Emissions of sulfur dioxide from the boilers **(ID Nos. ES-1/ES-2/ES-5 and ES-3/ES-4)** shall not exceed 1.0 pounds per million Btu heat input, upon operation, in accordance with the permit application and modeling analyses received April 12, 2006, to demonstrate compliance with the annual, 24-hour, and 3-hour sulfur dioxide ambient standards. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard.

Testing [15A NCAC 02Q .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 A.1.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c).

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

d. The Permittee shall ensure compliance with 15A NCAC 02D .0501(c) 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 whenever the unit combusts any fuel). 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. If any 24-hour block average exceeds 1.0 pounds per million Btu heat input or records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c).

Reporting [15A NCAC 02Q .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 postmarked 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 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. *CEMS 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, postmarked 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 of each calendar year for the preceding three-month period between July and September.

2. 15A NCAC 02D .0519: CONTROL OF NITROGEN OXIDES EMISSIONS

a. Emissions of nitrogen oxides from these sources when burning coal and/or oil shall be calculated by the following equation:

$$E = \frac{(E_c)(Q_c) + (E_o)(Q_o)}{Q_t}$$

Where:
E = the emission limit for combination in pounds per million Btu,
Ec = 1.8 pounds per million Btu heat input from coal,
Eo = 0.8 pounds per million Btu heat input from oil,
Qc = coal heat input in Btu per hour,
Qo = oil heat input in Btu per hour,
Qt = Qc + Qo (and is the actual total heat input of the combination in BTU per hour)

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

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 A.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0519.

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

c. The Permittee shall ensure compliance with 15A NCAC 02D .0519 by determining nitrogen oxide emissions in pounds per million Btu using a continuous emissions monitoring system (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 whenever the unit combusts any fuel). 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 more than 70 percent of total heat 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 02D .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. The Permittee shall be deemed in noncompliance with NCAC 02D .0519 if these records are not maintained.

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

e. The Permittee shall submit the continuous emissions monitoring system data showing the 24-hour daily block values for periods of excess nitrogen oxide emissions postmarked 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 of each calendar year for the preceding three-month period between July and September. If no excess emissions were measured during a three-month period, the Permittee shall submit a summary report stating that there were no excess emissions for the period. All instances of deviations from the requirements of this permit must be clearly identified.

f. *CEMS 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, postmarked 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 of each calendar year for the preceding three-month period between July and September.

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. The Permittee shall either:

i. install, maintain, and operate a continuous opacity monitoring system (COMS) for measuring the opacity of emissions, or

ii. install, maintain, and operate a particulate matter continuous emission monitoring system (PM CEMS).

The Permittee shall submit a written notification to the NCDAQ of intent to demonstrate compliance using the option under Section 2.1 A.3.a.i [COMS] or Section 2.1 A.3.a.ii [PM CEMS] at least 30 calendar days before changing the compliance monitoring option.

b. For periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used, compliance with the 40 percent opacity limit shall be determined as follows:

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 02D .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 02D .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 02D .0535.

c. **For periods when the compliance option under Section 2.1 A.3.a.ii [PM CEMS] is used,** visible emissions shall not be more than **40 percent opacity** 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.

Testing [15A NCAC 02D .2601]

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 limit given in Sections 2.1 A.3.b. and c.. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

e. **For periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used,** 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 02D .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 02D .0521 if the monitoring is not performed, if the monitored values exceed the limitations given above, or if the records are not maintained.

f. For periods when the compliance option under Section 2.1 A.3.a.ii [PM CEMS] is used, no opacity monitoring is required.

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

g. **For periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used,** the Permittee shall submit excess emissions and monitoring system performance reports for the COMS data in accordance with the reporting requirements given in Section 2.1 A.7.d postmarked 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 of each calendar year for the preceding three-month period between July and September. The report shall include, at a minimum, the information required in 40 CFR 60.7(c) and shall include all six-minute periods of excess emissions including all six-minute periods exempted during startup, shutdown and malfunction.

h. For periods when the compliance option under Section 2.1 A.3.a.ii [PM CEMS] is used, no opacity reporting is required.

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

4. 15A NCAC 02D .0536: PARTICULATE EMISSIONS FROM ELECTRIC UTILITY BOILERS, AND 15A NCAC 02Q .0317: AVOIDANCE CONDITIONs for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. Particulate emissions from the utility boilers shall not exceed the following: [15A NCAC 02D .0536(b)]

i. Unit 1 Boiler - 0.25 pounds per million Btu heat input
ii. Unit 2 Boiler - 0.25 pounds per million Btu heat input

b. Particulate emissions from the utility boilers shall not exceed the following: [15A NCAC 02Q .0317]

i. Unit 3 Boiler - 0.20 pounds per million Btu heat input
ii. Unit 4 Boiler - 0.20 pounds per million Btu heat input
iii. Unit 5 Boiler - 0.20 pounds per million Btu heat input

c. The Permittee shall obtain an air permit before installing or enabling Energy Management System (EMS) capability.

Testing [15A NCAC 02Q .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 A.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0536. If the results of this test are above the limits given in Section 2.1 A.4.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

e. A stack test shall be conducted for particulate matter in accordance with either Method 5 at a sample temperature of 320° ± 25° F as described in §63.10010(i)(1) or Method 5B of Appendix A of 40 CFR Part 60 once per calendar year. In the event that a boiler 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 the limits given in Section 2.1 A.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0536. If the result of any test is greater than the limits given in Section 2.1 A.4.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

f. **For periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used,** compliance with the particulate limit in Section 2.1 A.4.a or b shall be demonstrated through the Compliance Assurance Monitoring (CAM) Plan given in Section 2.1 A.10. The Permittee shall ensure the continuous opacity monitor system (COMS) utilized in the CAM Plan meets the requirements of 15A NCAC 02D .0613. If the result of any stack test is greater than the limit given in Section 2.1 A.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0536. If the result of any stack test is greater than the limit given in Section 2.1 A.4.b above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

g. **For periods when the compliance option under Section 2.1 A.3.a.ii [PM CEMS] is used**, compliance with the particulate limit in Section 2.1 A.4.a or b shall be demonstrated using the PM CEMS. A measured exceedance of the pounds per million Btu heat input values below shall be a violation of the corresponding emission standards in Section 2.1 A.4.a or b.

Units 1/2/5 Boilers as combined stack CS1 -	0.030 pounds per million Btu heat input (30-boiler operating day rolling average) or 0.30 pounds per megawatt hour (30-boiler operating day rolling average)
Units 3/4 Boilers as combined stack CS2 -	0.030 pounds per million Btu heat input (30-boiler operating day rolling average) or 0.30 pounds per megawatt hour (30-boiler operating day rolling average)

i. The Permittee shall install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS according to the applicable Maximum Achievable Control Technology (MACT) standards in §63.10010(i) of 40 CFR Part 63 Subpart UUUUU, as specified in Section 2.1 A.11.dd. The PM CEMS shall meet the requirements of Performance Specification PS-11 of Appendix B of 40 CFR Part 60. The Permittee 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 to include the provisions of 40 CFR 60, Appendix F, Procedure 2 for the PM CEMS.

ii. The PM emission rate shall be determined based on a 30-boiler operating day rolling average of the hourly arithmetic average emissions concentrations using the CEMS outlet data for each boiler operating day (as defined below), except for data obtained during periods of startup or shutdown. Periods of malfunction shall be included in the emissions calculations.

A boiler operating day means a 24-hour period that begins at midnight and ends the following midnight during which any fuel is combusted at any time in the EGU, excluding startup periods or shutdown periods. It is not necessary for the fuel to be combusted the entire 24-hour period.

iii. Data from the PM CEMS shall be reduced to 1-hour averages computed from four or more data points equally spaced over each 1-hour period, except during periods when calibration, quality assurance, or maintenance activities pursuant to provisions of 40 CFR Part 63 are being performed. During these periods, a valid hourly average shall consist of at least two data points with each representing a 15-minute period. Alternatively, an arithmetic or integrated 1-hour average of CEMS data may be used. Time periods for averaging are defined in §63.2. [§63.8(g)(2)]

iv. PM CEMS monitor availability shall be calculated and reported.

v. The Permittee shall record the output of the PM CEMS as specified in Section 2.1 A.11.ff.

If the results of the arithmetic 30-boiler operating day rolling average PM CEMS concentration exceeds the limit in this section or any of the above requirements are not met, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0536 and/or 15A NCAC 02D .0530

h. The collected flyash shall not be injected into Unit 1 through Unit 5 boilers. If the collected flyash is reinjected, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0536 or 15A NCAC 02D .0530.

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

i. **For periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used,** the Permittee shall submit the results of all monitoring performed in Section 2.1 A.4.f above within 30 days of a written request by the DAQ.

j. **For periods when the compliance option under Section 2.1 A.3.a.ii [PM CEMS] is used,** the Permittee shall submit excess emissions and monitoring system performance reports for PM in accordance with the reporting requirements given in Section 2.1 A.7.d postmarked 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 of each calendar year for the preceding three-month period between July and September. The compliance report shall include, at a minimum, the information required in 40 CFR 63.10 and contain the information specified in Section 2.1 A.10.tt, along with all 30-boiler operating day rolling average excess emissions (pounds per million Btu or pounds per megawatt hour) using the CEMS outlet data, including periods exempted during periods of startup and shutdown.

k. 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.

l. All instances of excess emissions

State-Only Requirement

5. 15A NCAC 02D .0536(b): PARTICULATE EMISSIONS FROM ELECTRIC UTILITY BOILERS (ANNUAL AVERAGE OPACITY FOR ELECTRIC UTILITY BOILERS)

a. i. Visible emissions from the utility boiler units shall not exceed the following:

A. Unit 1 Boiler - 20 percent annual average opacity
B. Unit 2 Boiler - 20 percent annual average opacity
C. Unit 3 Boiler - 13 percent annual average opacity
D. Unit 4 Boiler - 14 percent annual average opacity
E. Unit 5 Boiler - 17 percent annual average opacity

ii. The annual average opacity (AAO) 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.

iii. Visible emissions monitoring when using the COMS or PM CEMS compliance options shall not be required whenever the FGD systems for the combined stack units (CDU1/2/5FGD, CDU3/4FGD) (and main stack COMS or PM CEMS) are bypassed and emissions exit the bypass (original) stacks. Bypass periods exempted from visible emission monitoring are restricted to malfunction events arising from a sudden failure of the scrubber system or boiler air and flue gas handling systems. Periods where there was no visible emission monitoring shall be included in percentage of monitor downtime (MD) calculation in Section 2.1 A.7.a for the COMS compliance option or Section 2.1 A.7.b for the PM CEMS compliance option.

b. **For periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used,** the Permittee shall calculate each day an annual average opacity value for the most recent 365-day period ending with the end of the previous day. The AAO 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.

c. **For periods when the compliance option under Section 2.1 A.3.a.ii [PM CEMS] is used,** the Permittee shall calculate each day an AAO value for the most recent 365-day period ending with the end of the previous day. The AAO is the sum of the measured non-overlapping one-hour averages of opacity determined only while the unit is in operation divided by the number of such measured non-overlapping

one-hour 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. The hourly opacity values shall be determined using the PM CEMS hourly average output values as follows:

$$\text{Opacity [average for each hour]} = (A)\frac{(Z)}{(Y)}$$

Where:
A = Actual PM CEMS output (average for each hour, in milligrams per cubic meter [mg/m^3]);
Y = The average PM CEMS output value (in mg/m^3) established during the initial PM CEMS PS-11 certification procedure at or near, but no greater than, the annual average opacity (AAO) limit. A concurrent Method 9 test shall be conducted during the PM CEMS measurements to determine opacity. At least 60 minutes of PM CEMS and Method 9 data shall be averaged.
Z = The average concurrent Method 9 opacity readings obtained during the initial PM CEMS PS-11 certification procedure corresponding to the PM CEMS measurements for Y above.

The ratio of Z/Y has been determined from the initial CEMS certification testing to be as follows:
Units 1/2/5 Boilers as combined stack CS01 - 0.24 % opacity/mg/m3
Units 3/4 Boilers as combined stack CS02 - 0.15 % opacity/mg/m3

d. i. **For periods of less than 365 days of operation using either option under Section 2.1 A.3.a.i [COMS] or Section 2.1 A.3.a.ii [PM CEMS]**, the AAO shall be calculated as follows:

$$\text{Average Annual Opacity} = \frac{\left(\sum_{i=1}^{Z} Ai\right)+\left(\sum_{j=1}^{Y} 10\times Bj\right)}{\left(Z+10\times Y\right)}$$

Where:
Z = number of six-minute COM blocks of data within the 365-day look-back period.
A = Opacity recorded during the six-minute COMS block *i*
Y = number of one-hour PM CEMS blocks of data the within 365-day look-back period.
B = Opacity calculated during the one-hour PM CEMS block *j*.

Note that the 1 hour PM CEMS block in the AAO equation above is its equivalent 1-hour block opacity as determined from the opacity equation in Section 2.1 A.5.c above. Variables Y and Z have different meanings in the two equations as defined above.

ii. Alternatively, the Permittee may calculate the AAO using valid certified 1 hour PM CEMS blocks of data for the entire 365-day look-back period in the above equation for both the period when using PM CEMS for compliance with the AAO standard (after the 30-day notification) and for the period when using COMS for compliance with the AAO standard (instead of 6-minute COMS blocks).

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

e. **For periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used,** 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.

f. **For periods when the compliance option under Section 2.1 A.3.a.ii [PM CEMS] is used,** the Permittee shall submit a report showing the calculated annual average opacity of each unit and the annual average opacity limit for each day during the reporting period postmarked 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 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.

6. 15A NCAC 02D .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 02D .0535(d).

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

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

c. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0535 if the above records are not maintained.

7. 15A NCAC 02D .0606: SOURCES COVERED BY APPENDIX P OF 40 CFR PART 51 (CONTINUOUS OPACITY MONITORING, CONTINUOUS EMISSIONS MONITORING FOR SO_2, AND EXCESS EMISSIONS)

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

a. **For periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used,** the Permittee shall use a continuous opacity monitoring system (COMS) to monitor and record opacity. 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. The monitoring systems shall meet the minimum specifications described in Paragraphs 3.3 through 3.8 of Appendix P of 40 CFR Part 51.

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. These sources shall be deemed to be properly operated and maintained if the percentage of time the opacity emissions, calculated on a 6-minute average, in excess of 40 percent (including startups, shutdowns, and malfunctions) 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 for any given calendar quarter as calculated below.

Calculations for %EE and %MD

Percent Excess Opacity Emission (%EE) Calculation:

$$\%EE = \frac{Total\ Excess\ Emission\ Time^{*}}{Total\ Source\ Operating\ Time^{***} - Monitor\ Downtime} x100$$

Percent Monitor Downtime (%MD) Calculation for COMS:

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

* Total Excess Emission Time contains any 6-minute period greater than 40% opacity 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.

b. **For periods when the compliance option under Section 2.1 A.3.a.ii [PM CEMS] is used,** the alternative monitoring and recordkeeping procedure in this section (Section 2.1 A.7.b) applies as allowed by Paragraph 3.9 of Appendix P of 40 CFR Part 51. The Permittee shall install, certify, operate, and maintain a PM CEMS to monitor and record PM emissions according to the applicable Maximum Achievable Control Technology (MACT) standards in §63.10010(i) of 40 CFR Part 63 Subpart UUUUU, as specified in Section 2.1 A.10.dd.

The quarterly excess emissions (EE) reports shall be used as an indication of good operation and maintenance of the electrostatic precipitators. The sources shall be deemed to be properly operated and maintained if the percentage of time the PM emissions, calculated on a one-hour average, greater than 0.030 pounds per million Btu heat input* for CS1 (Units 1/2/5) and for CS2 (Units 3/4) does not exceed 3.0 percent of the total operating time for any given calendar quarter, adjusted for monitor downtime (MD) as calculated in Section 2.1 A.7.a above, except that Total Excess Emission Time contains all one-hour periods greater than 0.030 pounds per million Btu heat input*. In addition, this source shall be deemed to be properly operated and maintained if the %MD does not exceed 2 percent for any given calendar quarter as calculated in Section 2.1 A.7.a above.

* The PM monitored value subject to the 0.030 pounds per million Btu limit may have a 5% CO_2 diluent cap, or a 14% O_2 diluent cap, substituted in the emission rate calculation for a startup or shutdown hour (as defined in §63.10042) in which the measured CO_2 concentration is below 5% or whenever the measured O_2 concentration is above 14%.

c. The Permittee shall use a continuous emissions monitoring system (CEMS) to monitor and record sulfur dioxide emissions. Continuous emissions monitoring and recordkeeping of sulfur dioxide emissions shall be performed as described in Paragraphs 2 and 3.1.1 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. 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 flue gas desulfurization scrubbers. These sources shall be deemed to be properly operated and maintained if sulfur dioxide emissions do not exceed 1.0 pounds per million Btu calculated on a 24-hour basis. 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 is determined by 40 CFR Part 75. In addition, the flue gas desulfurization scrubbers shall be deemed to be properly operated and maintained if the %MD does not exceed 2 percent for any given calendar quarter as calculated in Section 2.1 A.7.a above.

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 postmarked 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 of each calendar year for the preceding three-month period between July and September as shown below. Reporting shall be in accordance with Paragraphs 4 and 5.1 of Appendix P of 40 CFR Part 51.

i. **For periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used,** periods of excess emissions are defined as each six-minute period average greater than 40 percent opacity, the opacity 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 periods when the compliance option under Section 2.1 A.3.a.ii [PM CEMS] is used,** excess PM emissions are defined as any one-hour average greater than 0.030 pounds per million Btu heat input for CS1 (Units 1/2/5) and for CS2 (Units 3/4). The quarterly report shall include the number of hours each day and the percent of operating hours during the quarter with average PM emissions recorded by the PM CEMS greater than 0.030 pounds per million Btu.

iii. Monitor downtime includes periods where there was no visible emission (COMS) or particulate (PM CEMS) monitoring during monitor bypass as described in Section 2.1 A.5.a.i.

iv. For sulfur dioxide, excess emissions are defined as greater than 1.0 pounds per million Btu calculated on a 24-hour block average basis.

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

State-Only Requirement

8. 15A NCAC 02D .1100: TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENTS

a. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration (received May 1, 2006, approved with the T30 permit issued June 30, 2006), the following permit limits shall not be exceeded:

Emission Sources	Toxic Air Pollutants	Emission Limits
Boiler Units 3, 4 and 5, combined (ES-3, ES-4 and ES-5)	Sulfuric Acid	418.8 lb/hr and 10,051.2 lb/day
Boiler Unit 3	Ammonia	22.4 lb/hr
Boiler Unit 4	Ammonia	22.4 lb/hr
Boiler Unit 5	Ammonia	22.4 lb/hr

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

b. To ensure compliance with the above limits, the following restrictions shall apply:

i. Sulfur trioxide ash conditioning systems are limited to Unit Nos. 3, 4, and 5.

ii. Operation of the sulfur trioxide injection ash conditioning systems shall be operated as follows:

(A) The maximum sulfur trioxide flue gas injection rate shall not exceed 190 pounds per hour each for Units Nos. 3, 4, and 5.

(B) The sulfur trioxide injection ash conditioning systems may be operated intermittently based on boiler system requirements necessary to maintain compliance with applicable emissions regulatory requirements.

Reporting [15A NCAC 02D .0611]

c. No reporting is required to demonstrate compliance with 15A NCAC 02D .1100 for these sources **(ID Nos. ES-3, ES-4, and ES-5)**.

9. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING*

* Applies only during periods when the compliance option under Section 2.1 A.3.a.i [COMS] is used

a. In order to assure continuous compliance with 15A NCAC 02D .0536, the five coal/No. 2 fuel oil-fired electric utility boilers **(ID Nos. ES-1, ES-2, ES-3, ES-4, and ES-5)** shall comply with all applicable requirements of 15A NCAC 02D .0614 "Compliance Assurance Monitoring".

b. The Electrostatic Precipitators shall be properly operated and maintained to control PM emissions from each Boiler **(ID Nos. ES-1, ES-2, ES-3, ES-4, and ES-5)**

Monitoring/Recordkeeping [15A NCAC 02Q .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	An excursion is defined as an opacity value (based on a 3-hour block average) greater than: **19 Percent – Unit 1** **20 Percent – Unit 2** **18 Percent – Unit 3** **19 Percent – Unit 4** **17 Percent – Unit 5** Excursions trigger an inspection of the control system and corrective action If five (5) percent or greater of COMS data (averaged over a three-hour block period and excluding any excused data) 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.5.e. 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 Mooresville 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.
C. Performance Criteria	
1. Data Representativeness	The COMS location meets the specifications of 40 CFR Part 75 and 40 CFR 60, Appendix B.
2. Verification of Operational Status	Not applicable, use of monitoring equipment is proposed.
3. QA/QC Practices and Criteria	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.
4. Monitoring Frequency	Continuous
5. Data Averaging Period	3-hour block average of 6-minute averages starting at midnight each day. (Total of eight 3-hour block periods)
6. Data Collection	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.

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. Proceed to shutdown or confirm malfunction conditions exist if emissions cannot be controlled appropriately
4. Initiate work order for ESP inspection and repair as needed
5. Improve preventative maintenance procedures

ii. Nature and cause of excursion shall be documented in operations log.
iii. Provide notification to DAQ as necessary.

Reporting [15A NCAC 02Q .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. The Permittee shall submit the quarterly reports as required under §64.9 of 40 CFR Part 64 postmarked 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 of each calendar year for the preceding three-month period between July and September. The following information shall be included:

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)

g. If the monitoring, recordkeeping, and reporting requirements listed above as part of Section 2.1 A.9 are not met then the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614.

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

10. 15A NCAC 02Q .0317: AVOIDANCE CONDITIONS for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid applicability of 15A NCAC 02D .0530(g), PM/PM10/PM2.5 emissions from the Unit 4 and 5 boilers (**ID Nos. ES-4 and ES-5**) shall be less than 10 tons per consecutive 12-month period attributable to injecting powdered activated carbon.

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

b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.10.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

c. The amount of injected powdered activated carbon in the Unit 4 and 5 boilers (**ID Nos. ES-4 and ES-5**) shall not exceed 12,000,000 pounds per year.

d. The Permittee shall keep monthly records of the amount of powered activated carbon injected.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the amount of powdered activated carbon injected in the Unit 4 and 5 boilers (**ID Nos. ES-4 and ES-5**) is not monitored or the amount of powdered activated carbon injected exceeds the limit above.

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

e. 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 monthly amount of powdered activated carbon injected in the Unit 4 and 5 boilers for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months. All instances of deviations from the requirements of this permit must be clearly identified.

11. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR PART 63 SUBPART UUUUU)

a. The Permittee shall comply with all applicable provisions, including the requirements for emission limitations, work practice standards, operating limits, testing and initial compliance, continuous compliance, monitoring, recordkeeping, notification, and reporting, contained in Environmental Management Commission Standard 15A NCAC 02D .1111 Maximum Achievable Control Technology (MACT) as promulgated in the most current version of 40 CFR Part 63 Subpart UUUUU, "National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units" and Subpart A "General Provisions".

Emission Limitations and Work Practice Standards [15A NCAC 02Q .0508(b)]

b. The Permittee shall:

i. 1. limit the emissions of filterable particulate matter (PM) to 3.0E-2 pounds per million Btu (lb/MMBtu) or 3.0E-1 pounds per megawatt-hour (lb/MWh); or
2. limit the emissions of total non-Hg HAP metals to 5.0E-5 lb/MMBtu or 5.0E-1 pounds per gigawatt-hour (lb/GWh); or
3. limit the emissions of individual HAP metals to:

Constituent	Allowable Level	
Antimony (Sb)	8.0E-1 lb/TBtu*	or 8.0E-3 lb/GWh
Arsenic (As)	1.1E+0 lb/TBtu	or 2.0E-2 lb/GWh
Beryllium (Be)	2.0E-1 lb/TBtu	or 2.0E-3 lb/GWh
Cadmium (Cd)	3.0E-1 lb/TBtu	or 3.0E-3 lb/GWh
Chromium (Cr)	2.8E+0 lb/TBtu	or 3.0E-2 lb/GWh
Cobalt (Co)	8.0E-1 lb/TBtu	or 8.0E-3 lb/GWh
Lead (Pb)	1.2E+0 lb/TBtu	or 2.0E-2 lb/GWh

Constituent	Allowable Level
Manganese (Mn)	4.0E+0 lb/TBtu or 5.0E-2 lb/GWh
Nickel (Ni)	3.5E+0 lb/TBtu or 4.0E-2 lb/GWh
Selenium (Se)	5.0E+0 lb/TBtu or 6.0E-2 lb/GWh

* "lb/TBtu" means "pounds per trillion Btu"

ii. limit the emissions of sulfur dioxide (SO_2) to 2.0E-1 lb/MMBtu;

iii. limit the emissions of mercury (Hg) to 1.2E0 lb/TBtu or 1.3E-2 lb/GWh.

[§63.9991(a)(1) and Table 2 to Subpart UUUUU]

c. i. As an alternative to meeting the requirements of §63.9991(a)(1) for filterable PM, SO_2, hydrogen fluoride (HF), hydrogen chloride (HCl), non-Hg HAP metals, or Hg on an EGU-specific basis as described in Section 2.1 A.11.b above, the Permittee may choose to demonstrate compliance by using emissions averaging as described in §63.10009(a)(2) among existing EGUs in the same subcategory. If this option is selected for mercury, the Permittee shall limit the concentration of mercury to 1.0 lb/TBtu or 1.1E-2 lb/GWh. [§63.9991(a)(1), §63.10009 and §63.10022]

ii. As an alternative to meeting the emission limit listed in Section 2.1 A.11.b.ii., the Permittee may comply with one of the emission limits in paragraphs 1 through 3, below, provided that the Permittee complies with the requirements of Section 2.1 A.11.c.iii.

1. limit the emissions of HCl to 2.0E-3 lb/MMBtu; or
2. limit the emissions of HCl to 2.0E-2 lb/MWh; or
3. limit the emissions of SO_2 to 1.5E+0 lb/MWh

iii. The Permittee may demonstrate compliance with the emission limits in Sections 2.1 A.11.b. and 2.1 A.11.c.ii., provided that:

1. The Permittee shall submit a request that identifies for each EGU or EGU emissions averaging group involved in the proposed switch both the current and proposed emission limit;
2. The above request arrives to the Administrator at least 30 calendar days prior to the date that the switch is proposed to occur;
3. The request demonstrates through performance stack test results completed within 30 days prior to your submission, compliance for each EGU or EGU emissions averaging group with both the mass per heat input and mass per gross output limits;
4. The Permittee revises and submits all other applicable plans, e.g., monitoring and emissions averaging, with the request; and
5. The Permittee maintains records of all information regarding the choice of emission limits.

[§63.10030(e)(7)(iii)]

d. During periods of startup of an EGU:

i. The Permittee has chosen to comply using the following work practice standards, by choosing to comply using paragraph (1) of the definition of “startup” in §63.10042, defined as follows.

"Startup means either the first-ever firing of fuel in a boiler for the purpose of producing electricity, or the firing of fuel in a boiler after a shutdown event for any purpose. Startup ends when any of the steam from the boiler is used to generate electricity for sale over the grid or for any other purpose (including on site use). Any fraction of an hour in which startup occurs constitutes a full hour of startup."

The Permittee shall operate all CMS during startup, except during periods of bypass of the main stack as provided in §63.10010(a)(4). For startup of a unit, clean fuels must be used as defined in §63.10042 for ignition. Once the unit converts to firing coal, the Permittee shall engage all of the applicable control technologies except the SCR. The Permittee shall start the SCR system appropriately to comply with relevant standards applicable during normal operation. The Permittee shall comply with all applicable emissions limits at all times except for periods that meet the applicable definitions of startup and shutdown in Subpart UUUUU. The Permittee shall keep records during startup periods.

ii. If the Permittee chooses to use just one set of sorbent traps to demonstrate compliance with the applicable Hg emission limit, the Permittee shall comply with the limit at all times; otherwise, the Permittee shall comply with the applicable emission limit at all times except for startup and shutdown periods.
iii. The Permittee shall collect monitoring data during startup periods, as specified in §63.10020(a) and (e). The Permittee shall keep records during startup periods, as provided in §§63.10032 and 63.10021(h). The Permittee shall provide reports concerning activities and startup periods, as specified in §63.10011(g) and §63.10021(h) and (i). All periods of bypass of the main stack shall be reported as deviations as provided in §63.10010(a)(4)(ii).

[§63.9991(a)(1) and Table 3 to Subpart UUUUU]

e. During periods of shutdown of an EGU:

"*Shutdown means the period in which cessation of operation of an EGU is initiated for any purpose. Shutdown begins when the EGU no longer generates electricity or makes useful thermal energy (such as heat or steam) for industrial, commercial, heating, or cooling purposes or when no coal, liquid oil, syngas, or solid oil-derived fuel is being fired in the EGU, whichever is earlier. Shutdown ends when the EGU no longer generates electricity or makes useful thermal energy (such as steam or heat) for industrial, commercial, heating, or cooling purposes, and no fuel is being fired in the EGU. Any fraction of an hour in which shutdown occurs constitutes a full hour of shutdown."*

i. The Permittee shall operate all CMS during shutdown, except during periods of bypass of the main stack as provided in §63.10010(a)(4). The Permittee shall also collect appropriate data, and shall calculate the pollutant emission rate for each hour of shutdown for those pollutants for which a CMS is used. While firing coal during shutdown, the Permittee shall vent emissions to the main stack(s) and operate all applicable control devices and continue to operate those control devices after the cessation of coal being fed into the EGU and for as long as possible thereafter considering operational and safety concerns as provided for bypass of the main stack in §63.10010(a)(4). In any case, the permittee shall operate the controls when necessary to comply with other standards made applicable to the EGU by a permit limit or a rule other than Subpart UUUUU and that require operation of the control devices. All periods of bypass of the main stack shall be reported as deviations as provided in §63.10010(a)(4)(ii).
ii. If, in addition to the fuel used prior to initiation of shutdown, another fuel must be used to support the shutdown process, that additional fuel shall be one or a combination of the clean fuels defined in §63.10042 and shall be used to the maximum extent possible taking into account considerations such as not compromising boiler or control device integrity.
iii. The Permittee shall comply with all applicable emission limits at all times except during startup periods and shutdown periods at which time the Permittee shall meet the work practice standards. The Permittee shall collect monitoring data during shutdown periods, as specified in §63.10020(a). The

Permittee shall keep records during shutdown periods, as provided in §§63.10032 and 63.10021(h). The Permittee shall provide reports concerning activities and shutdown periods, as specified in §§63.10011(g), 63.10021(i), and 63.10031.

[§63.9991(a)(1), §63.10042, and Table 3 to Subpart UUUUU]

General Compliance Requirements [15A NCAC 02Q .0508(f)]

f. The Permittee shall comply with the General Provisions as applicable pursuant to Table 9 to Subpart UUUUU. [§63.10040]

g. The Permittee shall be in compliance with the emission limits and operating limits in Subpart UUUUU. These limits shall apply at all times except during periods of startup and shutdown; however, for coal-fired EGUs, the Permittee shall be required to meet the work practice requirements in Table 3 to Subpart UUUUU during periods of startup or shutdown. [§63.10000(a)]

h. At all times, the Permittee shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the EPA Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. [§63.10000(b)]

i. For coal-fired units, initial performance testing is required for all pollutants for the affected EGUs to demonstrate compliance with the applicable emission limits. [§63.10000(c)(1)]

j. The Permittee shall demonstrate compliance with the filterable particulate matter (PM) emission limit through an initial performance test and shall monitor continuous performance through use of a PM continuous emissions monitoring system (PM CEMS). [§63.10000(c)(1)(iv)]

k. The Permittee may demonstrate initial and continuous compliance by installing and operating a sulfur dioxide (SO_2) CEMS installed and operated in accordance with 40 CFR Part 75 to demonstrate compliance with the applicable SO_2 emissions limit. [§63.10000(c)(1)(v)]

l. The Permittee shall demonstrate initial and continuous compliance through use of a Hg CEMS or a sorbent trap monitoring system in accordance with Appendix A to the Subpart. [§63.10000(c)(1)(vi)]

m. As part of demonstration of continuous compliance, the Permittee shall perform periodic tune-ups of the affected EGUs, according to §63.10021(e). [§63.10000(e)]

n. On or before the date an EGU is subject to Subpart UUUUU, the Permittee shall install, certify, operate, maintain, and quality-assure each monitoring system necessary for demonstrating compliance with the work practice standards for PM during startup periods and shutdown periods. The Permittee shall collect, record, report, and maintain data obtained from these monitoring systems during startup periods and shutdown periods. [§63.10000(l)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the general compliance requirements in Sections 2.1 A.11.f through n above are not met.

Continuous Compliance Requirements [15A NCAC 02Q .0508(f)]

o. The Permittee shall monitor and collect data according to §63.10020. [§63.10020(a)]

p. The Permittee shall operate the monitoring system and collect data at all required intervals at all times that the affected EGU is operating, except for periods of monitoring system malfunctions or out-of-control

periods (see §63.8(c)(7)), and required monitoring system quality assurance or quality control activities, including, as applicable, calibration checks and required zero and span adjustments. The Permittee is required to affect monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable. [§63.10020(b)]

q. Except for periods of monitoring system malfunctions or monitoring system out-of-control periods, repairs associated with monitoring system malfunctions or monitoring system out-of-control periods, and required monitoring system quality assurance or quality control activities including, as applicable, calibration checks and required zero and span adjustments, failure to collect required data is a deviation from the monitoring requirements. [§63.10020(d)]

r The Permittee shall demonstrate continuous compliance with each emissions limit, operating limit, and work practice standard in Tables 2 and 3 to Subpart UUUUU that applies to the affected EGU, according to the monitoring specified in Table 7 to Subpart UUUUU and paragraphs (b) through (g) of §63.10021(a). [§63.10021(a)]

s. Except as otherwise provided in §63.10020(c), if the Permittee uses a CEMS to measure SO_2, PM, HCl, HF, or Hg emissions, or uses a sorbent trap monitoring system to measure Hg emissions, the Permittee shall demonstrate continuous compliance by using all quality-assured hourly data recorded by the CEMS (or sorbent trap monitoring system) and the other required monitoring systems (e.g., flow rate, CO_2, O_2, or moisture systems) to calculate the arithmetic average emissions rate in units of the standard on a continuous 30-boiler operating day (or, if alternate emissions averaging is used for Hg, 90-boiler operating day) rolling average basis, updated at the end of each new boiler operating day. The Permittee shall use Equation 8 to Subpart UUUUU to determine the 30- (or, if applicable, 90-) boiler operating day rolling average.

$$Boiler\ operating\ day\ average = \frac{\sum_{=1}^{n} Her_i}{n} \quad (Eq. 8)$$

Where Her_i is the hourly emissions rate for hour *i* and *n* is the number of hourly emissions rate values collected over 30- (or, if applicable, 90-) boiler operating days.
[§63.10021(b)]

t. Conduct periodic performance tune-ups of the EGUs, as specified in paragraphs (e)(1) through (9) of §63.10021. For the first tune-up, the Permittee may perform the burner inspection any time prior to the tune-up or delay the first burner inspection until the next scheduled EGU outage provided the requirements of §63.10005 are met. Subsequently, the Permittee shall perform an inspection of the burner at least once every 36 calendar months unless the EGU employs neural network combustion optimization during normal operations in which case an inspection of the burner and combustion controls shall be performed at least once every 48 calendar months. If the EGU is offline when a deadline to perform the tune-up passes, the tune-up work practice requirements shall be performed within 30 days after the re-start of the affected unit. [§63.10021(e)]

u. The Permittee shall follow the startup or shutdown requirements as given in Table 3 to the Subpart for each coal-fired EGU and comply with all applicable requirements in §63.10011(g). [§§63.10005(j), 63.10011(g) and §63.10021(h)]

v If the Permittee elects to average emissions consistent with §63.10009 for any constituent, following the compliance date, the Permittee must demonstrate compliance on a continuous basis by meeting the requirements of paragraphs (a)(1) through (4) of §63.10022. Any instance where the Permittee fails to comply with the continuous monitoring requirements in paragraphs (a)(1) through (3) of §63.10022 is a deviation. [§63.10022]

w. The Permittee shall determine the fuel whose combustion produces the least uncontrolled emissions, taking safety considerations into account, *i.e.*, the cleanest fuel, either natural gas or distillate oil, that is available on site or accessible nearby for use during periods of startup or shutdown. The cleanest fuel, either natural gas or distillate oil, for use during periods of startup or shutdown determination may take safety considerations into account. [§§63.10011(f)(1) and (2)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the continuous compliance requirements in Sections 2.1 A.11.o through w above are not met.

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

x. For an affected unit that exhausts to the atmosphere through a single, dedicated stack, the Permittee shall either install the required CEMS and sorbent trap monitoring systems in the stack or at a location in the ductwork downstream of all emissions control devices, where the pollutant and diluents concentrations are representative of the emissions that exit to the atmosphere. [§63.10010(a)(1)]

y. If the Permittee uses an oxygen (O_2) or carbon dioxide (CO_2) CEMS to convert measured pollutant concentrations to the units of the applicable emissions limit, the O_2 or CO_2 concentrations shall be monitored at a location that represents emissions to the atmosphere, *i.e.,* at the outlet of the EGU, downstream of all emission control devices. The Permittee shall install, certify, maintain, and operate the CEMS according to 40 CFR Part 75. Use only quality-assured O_2 or CO_2 data in the emissions calculations; do not use Part 75 substitute data values. [§63.10010(b)]

z. If the Permittee is required to use a stack gas flow rate monitor, either for routine operation of a sorbent trap monitoring system or to convert pollutant concentrations to units of an electrical output-based emission standard in Table 2 to Subpart UUUUU, the Permittee shall install, certify, operate, and maintain the monitoring system and conduct on-going quality-assurance testing of the system according to 40 CFR Part 75. Use only unadjusted, quality-assured flow rate data in the emissions calculations. Do not apply bias adjustment factors to the flow rate data and do not use substitute flow rate data in the calculations. [§63.10010(c)]

aa. If the Permittee is required to make corrections for stack gas moisture content when converting pollutant concentrations to the units of an emission standard in Table 2 to Subpart UUUUU, the Permittee shall install, certify, operate, and maintain a moisture monitoring system in accordance with 40 CFR Part 75. Alternatively, for coal-fired units, the Permittee may use appropriate fuel-specific default moisture values from §75.11(b) to estimate the moisture content of the stack gas. If the Permittee installs and operates a moisture monitoring system, the Permittee shall not use substitute moisture data in the emissions calculations. [§63.10010(d)]

bb. The Permittee shall use an SO_2 CEMS and must install the monitor at the outlet of the EGU, downstream of all emission control devices, and must certify, operate, and maintain the CEMS according to 40 CFR Part 75 as specified in paragraphs (f)(1) through (4) of §63.10010. [§63.10010(f)]

cc. The Permittee shall use a Hg CEMS or a sorbent trap monitoring system, the Permittee shall install, certify, operate, maintain and quality-assure the data from the monitoring system in accordance with Appendix A to Subpart UUUUU and as specified in §63.10010(g). [§63.10010(g)]

dd. The Permittee shall install, certify, operate, and maintain a PM CEMS and record the output of the PM CEMS as specified in paragraphs (i)(1) through (5) of §63.10010 (shown below). The compliance limit shall be expressed as a 30-boiler operating day rolling average of the applicable numerical emissions limit value in Table 2 to Subpart UUUUU. [§63.10010(i)]

i. Install and certify the PM CEMS according to the procedures and requirements in Performance Specification 11—Specifications and Test Procedures for Particulate Matter Continuous Emission

Monitoring Systems at Stationary Sources in Appendix B to 40 CFR Part 60, using Method 5 at Appendix A-3 to 40 CFR Part 60 and ensuring that the front half filter temperature shall be 160° ±14°C (320° ±25 °F). The reportable measurement output from the PM CEMS must be expressed in units of the applicable emissions limit (e.g., lb/MMBtu, lb/MWh).

ii. Operate and maintain the PM CEMS according to the procedures and requirements in Procedure 2—Quality Assurance Requirements for Particulate Matter Continuous Emission Monitoring Systems at Stationary Sources in Appendix F to 40 CFR Part 60.

(A) Conduct the relative response audit (RRA) for the PM CEMS at least once annually (once per 12 month period).
(B) Conduct the relative correlation audit (RCA) for the PM CEMS at least once every 3 (calendar) years.

iii. Collect PM CEMS hourly average output data for all boiler operating hours except as indicated in §63.10010(i).
iv. Calculate the arithmetic 30-boiler operating day rolling average of all of the hourly average PM CEMS output data collected during all nonexempt boiler operating hours.
v. Collect data using the PM CEMS at all times the process unit is operating and at the intervals specified in §63.10010(a), except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities.

(A) Use all the data collected during all boiler operating hours in assessing the compliance with the operating limit except:

(I) Any data collected during periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or quality control activities that temporarily interrupt the measurement of emissions (e.g., calibrations, certain audits). Report any monitoring system malfunctions or out of control periods in the annual deviation reports. Report any monitoring system quality assurance or quality control activities per the requirements of §63.10031(b);
(II) Any data collected during periods when the monitoring system is out of control as specified in the site-specific monitoring plan, repairs associated with periods when the monitoring system is out of control, or required monitoring system quality assurance or quality control activities conducted during out-of-control periods. Report any such periods in the annual deviation report;
(III) Any data recorded during periods of startup or shutdown.

(B) Record and make available upon request results of PM CEMS system performance audits, dates and duration of periods when the PM CEMS is out of control to completion of the corrective actions necessary to return the PM CEMS to operation consistent with the site-specific monitoring plan.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the monitoring requirements in Sections 2.1 A.11.x through dd above are not met.

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

ee. The Permittee shall keep records of the following:

i. Records required under appendix A and/or appendix B to Subpart UUUUU for continuous monitoring of Hg emissions.

ii. Each notification and report that is submitted to comply with Subpart UUUUU, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that was submitted, according to the requirements in §63.10(b)(2)(xiv).
iii. Records of performance stack tests, fuel analyses, or other compliance demonstrations and performance evaluations, as required in §63.10(b)(2)(viii). [§63.10032(a)]

ff. For each CEMS, the Permittee shall keep records as follows:

i. Records described in §63.10(b)(2)(vi) through (xi).
ii. Previous (i.e., superseded) versions of the performance evaluation plan as required in §63.8(d)(3).
iii. Request for alternatives to relative accuracy test for CEMS as required in §63.8(f)(6)(i).
iv. Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period. [§63.10032(b)]

gg. For each EGU subject to an emission limit, the Permittee shall keep records of monthly fuel use by each EGU, including the type(s) of fuel and amount(s) used. [§63.10032(d)(1)]

hh. If the Permittee elects to average emissions consistent with §63.10009 for any constituent, the Permittee must additionally keep a copy of the emissions averaging implementation plan required in §63.10009(f) and(j), all calculations required under §63.10009, including daily records of heat input or steam generation, as applicable, and monitoring records consistent with §63.10022. [§63.10032(e)]

ii. If the Permittee chooses to rely on paragraph (1) of the definition of "startup" in §63.10042 for any EGU, records must be kept of the occurrence and duration of each startup or shutdown. [§63.10032(f)(1)]

jj. The Permittee shall keep records of the occurrence and duration of each malfunction of an operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment. [§63.10032(g)]

kk. The Permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with §63.10000(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. [§63.10032(h)]

ll. The Permittee shall keep records of the type(s) and amount(s) of fuel used during each startup or shutdown. [§63.10032(i)]

mm. The Permittee shall keep records in a form suitable and readily available for expeditious review, according to §63.10(b)(1). The Permittee shall keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee shall keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records off site for the remaining 3 years. [§63.10033(a) through (c)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the recordkeeping requirements in Sections 2.1 A.11.ee through mm above are not met.

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

nn. The Permittee shall submit the reports required under §63.10031 and, if applicable, the reports required under appendices A and B to the Subpart. The electronic reports required by appendices A and B to the Subpart shall be sent to the Administrator electronically in a format prescribed by the Administrator, as provided in §63.10031. CEMS data (except for PM CEMS and any approved alternative monitoring using a HAP metals CEMS) shall be submitted using EPA's Emissions Collection and Monitoring Plan System (ECMPS) Client Tool. Other data, including PM CEMS data, HAP metals CEMS data, and CEMS performance test detail reports, shall be submitted in the file format generated through use of EPA's

Electronic Reporting Tool, the Compliance and Emissions Data Reporting Interface, or alternate electronic file format, all as provided for under §63.10031. [§63.10021(f)]

oo. The Permittee shall report each instance in which the Permittee did not meet an applicable emissions limit or operating limit in Tables 1 through 4 to 40 CFR 63 Subpart UUUUU or failed to conduct a required tune-up. These instances are deemed violations from the requirements of 40 CFR 63 Subpart UUUUU and shall be reported according to §63.10031. [§63.10021(g)]

pp. The Permittee shall submit all of the notifications in §§63.7(b) and (c), 63.8 (e), (f)(4) and (6), and 63.9 (b) through (h), as applicable, by the dates specified, or according to an agreed upon schedule by NCDAQ [§63.9(i)(2)]. [§63.10030(a)]

qq. When the Permittee is required to conduct a performance test, the Permittee shall submit a Notification of Intent to conduct a performance test at least 30 days before the performance test is scheduled to begin. [§63.10030(d)]

rr. The Permittee shall submit each report in Table 8 to 40 CFR 63 Subpart UUUUU, as applicable. If the Permittee is required to (or elect to) continuously monitor Hg and/or HCl and/or HF emissions, the Permittee shall also submit the electronic reports required under appendix A and/or appendix B to the Subpart, at the specified frequency. [§63.10031(a)]

ss. The Permittee shall submit each report in Table 8 to 40 CFR 63 Subpart UUUUU, as applicable 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. [§63.10031(b)]

tt. The compliance report shall contain the following:

i. The information required by the summary report located in 63.10(e)(3)(vi).
ii. The total fuel use by each affected source subject to an emission limit, for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel, whether the fuel has received a non-waste determination by EPA or the basis for concluding that the fuel is not a waste, and the total fuel usage amount with units of measure.
iii. Indicate whether the Permittee burned new types of fuel during the reporting period. If the Permittee did burn new types of fuel the Permittee must include the date of the performance test where that fuel was in use.
iv. Include the date of the most recent tune-up for each EGU. The date of the tune-up is the date the tune-up provisions specified in §63.10021(e)(6) and (7) were completed.
v. A certification.
vi. If there is a deviation from any emission limit, work practice standard, or operating limit, the Permittee must also submit a brief description of the deviation, the duration of the deviation, emissions point identification, and the cause of the deviation.
vii. For each excess emissions occurring at an affected source where the Permittee is using a CMS to comply with that emission limit or operating limit, the Permittee shall include the information required in §63.10(e)(3)(v) in the compliance report specified in §63.10031(c). [§63.10031(c) and §63.10031(d)]

uu. Each affected source that has obtained a Title V operating permit pursuant to 40 CFR Part 70 or Part 71 shall report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a compliance report pursuant to Table 8 of Subpart UUUUU along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement

in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. Submission of a compliance report does not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. [§63.10031(e)]

vv. On or after July 1, 2018, within 60 days after the date of completing each performance test, the Permittee shall submit the performance test reports required by the Subpart to EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). The Permittee shall comply with all applicable requirements in §63.10031(f). [§63.10031(f)]

ww. If the Permittee had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. [§63.10031(g)]

Federal-Enforceable Only

12. Cross State Air Pollution Rule Requirements
(40 CFR Part 97, Subparts AAAAA, BBBBB, and CCCCC)

For the five boilers **(ID Nos. ES-1 through ES-5)**, the Permittee shall comply with all applicable requirements of 40 CFR Part 97, Subpart AAAAA "TR NOx Annual Trading Program", Subpart BBBBB "TR NOx Ozone Season Trading Program", and Subpart CCCCC "TR SO_2 Group 1 Trading Program".

B. No. 2 fuel oil-fired auxiliary boiler (ID No. ES-6 (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	0.09 pounds per million Btu heat input	15A NCAC 02D .0503
Sulfur Dioxide	0.5 weight percent sulfur content fuel oil	15A NCAC 02D .0524 (40 CFR Part 60 Subpart Dc)
Visible Emissions	See Section 2.1 B.2.	15A NCAC 02D .0521
Nitrogen Oxides	Annual Boiler Tune-up requirement	15A NCAC 02D .1407
N/A	Recordkeeping only; monthly fuel records	15A NCAC 02D .0524 (40 CFR Part 60 Subpart Dc)
Hazardous Air Pollutants	Best Combustion Practices	15A NCAC 02D .1109
Hazardous Air Pollutants	See Section 2.1 B.6	15A NCAC 02D .1111 (40 CFR Part 63, DDDDD)

1. 15A NCAC 02D .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 **0.09 pounds per million Btu heat input**.

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

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 limits given in Section 2.1 B.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

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

c. No monitoring/recordkeeping/reporting is required for visible emissions from these sources **(ID No. ES-6 (AuxB))** to ensure compliance with 15A NCAC 02D .0503.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60, SUBPART Dc)

a. The Permittee shall comply with all applicable provisions, including the notification, testing, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Dc, including Subpart A "General Provisions."

b. The maximum sulfur content of any fuel oil received and burned in the auxiliary boiler (**ID No. ES-6 AuxB)** shall not exceed 0.5 percent by weight. [40 CFR 60.42c(d)]

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

c. In addition to any other recordkeeping required by 40 CFR 60.48c or recordkeeping requirements of the EPA, the Permittee shall record and maintain monthly records of the amounts of each fuel fired during each month. Records must be maintained for a minimum of two years. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

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

d. In addition to any other reporting required by 40 CFR 60.48c or notification requirements to the EPA, the Permittee is required to NOTIFY the DAQ in **writing** of the following:

   i. A summary report, acceptable to the Regional Air Quality Supervisor, of the sulfur content of the distillate fuel oil fired, 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 as follows:
   ii. Distillate Oil - Fuel supplier certification shall include the following information:

      (1) The name of the oil supplier;
      (2) A statement from the oil supplier that the oil complies with the specification under the definition of distillate oil in 40 CFR § 60.41c; and
      (3) A certified statement signed by the owner or operator of an affected facility that the records of fuel supplier certification submitted represents all of the fuel fired during the semi-annual period.

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

3. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this source **(ID No. ES-6 AuxB)** 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.

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

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 limits given in Section 2.1 B.3.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. No monitoring/recordkeeping/reporting is required for visible emissions from this source (**ID No. ES-6 (AuxB)**).

4. 15A NCAC 02D .1407: BOILERS AND INDIRECT PROCESS HEATERS

a. Facilities with boilers with maximum heat input rate of less than or equal to 50 million Btu per hour shall comply with the annual tune-up requirements of 15A NCAC 02D .1414.

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

b. If emission testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this testing are above the limits given in Section 2.1 B.4.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .1407.

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

c. To ensure compliance the Permittee shall conduct annual boiler tune-ups and any required recordkeeping and reporting requirements on or by December 31st of each calendar year. Boiler tune-ups shall be in accordance with the manufacturer's recommendations including the following:

   i. Inspect each burner and clean or replace any component of the burner as required;
   ii. Inspect the flame pattern and make any adjustments to the burner, or burners, necessary to optimize the flame pattern to minimize total emissions of NOx and carbon monoxide;

iii. Inspect the combustion control system to ensure proper operation and correct calibration of components that control the air to fuel ratio and adjust components to meet the manufacturer's established operating parameters; and
iv. Inspect any other component of the boilers and make adjustments or repairs as necessary to improve combustion efficiency. The Permittee shall perform the tune-up according to a unit specific protocol approved by the Director. The Director (or designee) shall approve the protocol if it meets the requirements of this Rule. The protocol shall be submitted to the Regional Office for approval.

If boiler tune-ups and inspections are not conducted (as per Section 2.1 B.4.c.i through iv above) the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .1407.

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

d. The owner or operator shall maintain records of tune-ups performed. The following information shall be included for each source:

i. Identification of the source;
ii. The date and time the tune-up started and ended;
iii. The person responsible for performing the tune-up; and
iv. For boilers the checklist for inspection of the burner, flame pattern, combustion control system, and all other components of the boiler identified in the protocol, noting any repairs or replacements made;
v. Any stack gas analyses performed after the completion of all adjustments to show that the operating parameters of the boiler, have been optimized with respect to fuel consumption and output; at a minimum these parameters shall be within the range established by the equipment manufacturer to ensure that the emission limitation for nitrogen oxides has not been exceeded; and
vi. Any other information requested by the Director (or designee) to show that the boiler is being operated and maintained in a manner to minimize the emissions of nitrogen oxides.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1407 if these records are not maintained.

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 annual tune-up and inspection along with any corrective actions taken; and
iii. The results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1407 if these records are not maintained.

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

f. The Permittee shall submit a summary report 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.

5. 15A NCAC 02D .1109: 112(J) CASE-BY-CASE MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (Case-by-Case MACT for Boilers and Process Heaters)

a. The Permittee shall use best combustion practices when operating the affected boiler (**ID No. ES-6, AuxB**).

b. The Permittee shall comply with this CAA §112(j) standard until May 19, 2019. The initial compliance date for the applicable CAA §112(d) standard for "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters" is May 20, 2019.

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

c. To ensure compliance, the Permittee shall perform an annual (no more than 12 months since the previous) boiler inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:

i. Inspect the burner, and clean or replace any components of the burner as necessary;
ii. Inspect the flame pattern and make any adjustments to the burner necessary to optimize the flame pattern; and,
iii. Inspect the system controlling the air-to-fuel ratio, and ensure that it is correctly calibrated and functioning properly.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if the affected boilers are not inspected and maintained as required above.

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

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 of each recorded action;
ii. The results of each inspection; and,
iii. The results of any maintenance performed on the boilers.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1109 if these records are not maintained.

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

e. No reporting is required for this boiler **(ID No. ES-6 (AuxB))** is required to demonstrate compliance with 15A NCAC 02D .1109.

6. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR Part 63, Subpart DDDDD)

Applicability [40 CFR 63.7485, §63.7490(d), §63.7499(q, u)]

a. i. For this boiler (**ID No. ES-6 (AuxB),** existing source designed to burn light liquid fuel with a heat input capacity 10 million Btu per hour or greater), the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart 5D) and Subpart A "General Provisions."
ii. The Permittee shall comply with the CAA §112(j) standard in Section 2.1 B.5 through May 19, 2019. The Permittee shall be subject to the requirements of this standard starting May 20, 2019. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.

b. This boiler (**ID No. ES-6 (AuxB)**) qualifies as a limited-use boiler as defined in §63.7575, and is limited to an annual capacity factor of no more than 10 percent.

Definitions and Nomenclature [§63.7575]

c. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

Subpart A General Provisions [§63.7565]

d. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart 5D.

Compliance Date [§63.7510(e), §63.56(b)]

e. The Permittee shall complete the initial tune up (see Sections 2.1 B.6.k through m) no later than May 20, 2019.

General Compliance Requirements [§63.7505(a), §63.7500(a)(3)]

f. The Permittee shall be in compliance with the applicable work practice standards of Subpart 5D.

g. At all times, the Permittee shall operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Emission Limits [§63.7500(c)]

h. This limited-use boiler must complete a tune-up every five years as specified in §63.7540. It is not subject to the emission limits in Tables 1 and 2 or 11 through 13, the annual tune-up, or the energy assessment requirements in Table 3, or the operating limits in Table 4 of Subpart 5D.

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

i. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ

Notifications [§63.7545]

j. The Permittee shall submit the Notification of Compliance Status report before the close of business on the 60th day following the compliance date and it must contain all the information in §63.7545(e)(1) and (e)(8).

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if this notification requirement is not met.

Work Practice Standards [15A NCAC 02Q .0508(f)]

k. The Permittee shall conduct a tune-up of the source every five years as specified below. The Permittee shall conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up.
   i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary. The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled unit shutdown, but each burner must be inspected at least once every 72 months.;
   ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
   iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the Permittee may delay the inspection until the next scheduled unit shutdown);
   iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; and

v. Measure the concentrations in the exhaust stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[§63.7500(c), §63.7540(a)(10), §63.7540(a)(12)]

l. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. [§63.7515(d)]

m. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [§63.7540(a)(13)]

n. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 B.5.k through m are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), §63.7555]

o. The Permittee shall:
   i. Keep a copy of each notification and report submitted to comply with Subpart 5D, including all documentation supporting any Initial Notification or Notification of Compliance Status, or compliance report that has been submitted. [§§63.7555(a)(1), 63.10(b)(2)(xiv)]
   ii. Maintain on-site and submit, if requested by the Administrator, the tune-up report containing the information in paragraphs (A) through (C) below:
      A. The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
      B. A description of any corrective actions taken as a part of the tune-up; and
      C. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

      [§63.7540(a)(10)(vi)]
   iii. Keep a copy of the federally enforceable permit that limits the annual capacity factor to less than or equal to 10 percent and fuel use records for the days the boiler was operating. [§63.7555(a)(3), §63.7525(k)]

p. The Permittee shall:
   i. Maintain records in a form suitable and readily available for expeditious review;
   ii. Keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
   iii. Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years.

   [§63.7560, §63.10(b)(1)]

   The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 B.6.o through p are not met.

Reporting Requirements [15A NCAC 02Q .0508(f), §63.7550]

q. The Permittee shall submit a compliance report to the DAQ every five years.
   i. The first compliance report shall be postmarked on or before January 30, 2024 and cover the period from May 20, 2019 through December 31, 2023.
   ii. The compliance reports shall also be submitted electronically to the EPA via the procedures in §63.7550(h).

r. The compliance report shall contain the information as applicable per §63.7550(c)(1).

C. Emergency/blackout protection diesel generator (ID No. ES-7 (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 02D .0516
Visible Emissions	See Section 2.1 C.2	15A NCAC 02D .0521
HAPs	Notification Requirement only	15A NCAC 02D .1111 40 CFR Part 63, Subpart ZZZZ

1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from this source **(ID No. ES-7(EmGen))** 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.

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

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 limits given in Section 2.1 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0503.

c. No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from the firing of No. 2 fuel oil in this source **(ID No. ES-7(EmGen))**.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this source **(ID No. ES-7(EmGen))** 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.

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

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 limits given in Section 2.1 C.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. To ensure compliance, the Permittee shall perform a Method 9 test for 1 hour using a preapproved protocol to be submitted in accordance with General Condition JJ before the sources operate more than 1,100 hours using No. 2 fuel oil. This monitoring protocol shall be repeated before each subsequent 1,100 hours of operation using No. 2 fuel oil from the last test for each source. If the required monitoring is not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521

Recordkeeping [15A NCAC 02Q .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. If the required records are not kept, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521

Reporting [15A NCAC 02Q .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.3.g and 2.1 A.4.j, above. All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY (40 CFR PART 63, SUBPART ZZZZ)

Notification and Recordkeeping [15A NCAC 02Q .0508(f)]

a. The Permittee has met the initial notification requirements of §63.6645(d). This notification was submitted not later than 120 days after the source becomes subject to Subpart ZZZZ and included 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 40 CFR 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.

D. Limestone, Receiving, Storage, Transfer, and Grinding

- Railcar unloading enclosure dust collection system with fabric filter (**ID No. CDRULBF**) installed on:
  - Railcar transfer to dual hopper (**ID No. ES-8-1**) not subject to NSPS OOO notification or opacity requirements,
  - Hopper No. 1 transfer to hopper conveyor No.1 (**ID No. ES-8-2A**),
  - Hopper No. 2 transfer to hopper conveyor No. 2 (**ID No. ES-8-2B**), and
  - Hopper conveyors No.1 and No. 2 transfer-to-transfer tower stockpile conveyor (**ID No. ES-8-3**).

- Preparation building dust collection system with fabric filter (**ID No. CDLSBF**) installed on:
  - Preparation plant feed conveyor with flop gate transfer to day bin No. 2 feed conveyor (**ID No. ES-13**),
  - Preparation plant feed conveyor with flop gate transfer to day bin No. 1 (**ID No. ES-14**), and
  - Day bin No. 2 feed conveyor to day bin No. 2 (**ID No. ES-15**).

- Day bin No. 1 transfer to wet ball mill No. 1 in preparation building (**ID No. ES-16**).
- Day bin No. 2 transfer to wet ball mill No. 2 in preparation building (**ID No. ES-17**).
- Wet ball mill No. 1 and product classifier in preparation building (**ID No. ES-18A**).
- Wet ball mill No. 2 and product classifier in preparation building (**ID No. ES-18B**).
- Transfer tower stockpile conveyor transfer to stockpile stack out conveyor in transfer tower (**ID No. ES-9**).
- Grate feeder transfer to stock pile reclaim conveyor (**ID No. ES-11B**).
- Stockpile reclaim conveyor transfer to preparation plant feed conveyor in transfer tower (**ID No. ES-12**).

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, opacity, and control requirements for non-process fugitive dust pursuant to 15A NCAC 02D .0540 [See Facility Wide Requirements - Section 2.2 A.1]	15A NCAC 02D .0510
Particulate Matter	0.022 grains per dry standard cubic foot for stack emissions and building vents	15A NCAC 02D .0524 [40 CFR 60.672(a)(1)]
Visible Emissions	Seven percent opacity for stack emissions and building vents	15A NCAC 02D .0524 [40 CFR 60.672(a)(2)]
Visible Emissions	10 percent opacity for fugitive emissions (Excludes conveyor to storage pile transfer point and truck, front end loader, railcar dumping into feed bin)	15A NCAC 02D .0524 [40 CFR 60.672(b)]
Visible Emissions	No visible emissions from buildings, excluding building vents	15A NCAC 02D .0524 [40 CFR 60.672(e)(1)]
Particulate Matter	Control requirements for non-process fugitive dust [See Facility Wide Requirements - Section 2.2 A.2]	15A NCAC 02D .0540

1. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS (40 CFR PART 60, SUBPART OOO)

a. On and after the date on which the performance test is completed, the Permittee shall not allow to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any stack emissions that:

i. Contain particulate matter in excess of 0.05 g/dscm (0.022 gr/dscf) [40 CFR 60.672(a)(1)]; and
ii Exhibit greater than 7 percent opacity [40 CFR 60.672(a)(2)].
iii. Emission sources with stack emissions affected by these requirements include:

(A) Railcar unloading enclosure dust collection system with fabric filter (**ID No. CDRULBF**) installed on: dual hopper transfer to hopper conveyor No.1 (**ID No. ES-8A**), dual hopper transfer to hopper conveyor No. 2 (**ID No. ES-8B**), and hopper conveyors No. 1 and No. 2 transfer to transfer tower stock pile conveyor (**ID No. ES-8-3**);
(B) Preparation building dust collection system with fabric filter (**ID No. CDLSBF**) installed on: preparation plant feed conveyor with flop gate transfer to day bin No. 2 feed conveyor (**ID No. ES-13**), preparation plant feed conveyor with flop gate transfer to day bin No. 1 (**ID No. ES-14**), and day bin No. 2 feed conveyor to day bin No. 2 (**ID No. ES-15**); and
(C) Any vent of any building enclosing any affected emission source including; the railcar unloading enclosure, transfer tower for **ID No. ES-9**, transfer tower for **ID No. ES-12**, and the reagent preparation building.

b. The Permittee shall not allow to be discharged into the atmosphere from any transfer point on belt conveyors or from any other affected facility any fugitive emissions that exhibit greater than 10 percent opacity.

c. The Permittee shall not allow to be discharged into the atmosphere from any building enclosing any transfer point on a conveyor belt or any other affected facility any visible fugitive emissions. Affected buildings include the railcar unloading enclosure, transfer tower for ES-9, transfer tower for ES-12, and the reagent preparation building.

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

d. The Permittee completed initial testing on June 10, 2009 (test reference number 2009-095ST).

e. If additional 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 D.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

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

f. Particulate matter emissions from sources **ID Nos. ES-8-1, ES-8-2A, ES-8-2B, and ES-8-3** shall be controlled by fabric filter **ID No. CDRULBF**, and particulate matter emissions from sources **ID Nos. ES 13, ES-14, and ES-15** shall be controlled by fabric filter **ID No. CDLSBF**. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

i. A monthly visual inspection of the system ductwork and bag house for leaks; and
ii. An annual internal inspection of the bag house and ducting for structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the ductwork, baghouse, and fabric filters are not inspected and maintained.

g. For each emission sources, as listed above in Section 2.1 D, subject to an opacity standard listed, including building enclosures, once a month the Permittee shall observe the emissions point(s) for any visible emissions above normal to ensure compliance. If visible emissions from this source are observed to be above normal, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0524; unless, an approved Method 9 opacity determination meeting the requirements of 15A NCAC 02D .0501(c)(8) is performed and visible emissions are demonstrated to comply with the applicable limit given above in

Section 2.1 D.1.a.ii, b, and c. If compliance with the applicable limit cannot be demonstrated, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0524.

Recordkeeping [15A NCAC 02Q .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 fabric filters, duct work, or baghouse; and
   iv. Any variance from manufacturer's recommendations, if any, and corrections made.

i. 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.

j. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if these records are not maintained.

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

k. The Permittee shall submit written reports of the results of all performance tests conducted to demonstrate compliance with the standards set forth in this permit, including reports of opacity observations made using Method 9 and Method 22 to demonstrate compliance. [40 CFR 60.676(f)]

l. The Permittee shall submit a summary report of the 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.

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

E. Limestone, Receiving, Storage, Transfer, and Grinding

- Railcar transfer to dual hopper (**ID No. ES-8-1**).
- Stockpile stack out conveyor to stockpile and stockpile (**ID No. ES-10**).
- Stockpile transfer to grate feed of stockpile reclaim conveyor (**ID No. ES-11A**).

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, opacity, and control requirements for non-process fugitive dust pursuant to 15A NCAC 02D .0540 [See Multiple Emission Sources - Section 2.2 A.1]	15A NCAC 02D .0510
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Particulate Matter	Control requirements for non-process fugitive dust [See Multiple Emissions Sources - Section 2.2 A.2]	15A NCAC 02D .0540

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources **(ID Nos. ES-8-1, ES-10, and ES-11A)** 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 02Q .0508(f)]

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 limits given in Section 2.1 E.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. To ensure compliance, once a month the Permittee shall observe the emission points (**ID Nos. ES-8-1, ES-10 and ES 11A**) for any visible emissions above normal. 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 02D .0521 or
(c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 E.1.a above.

If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .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 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .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. Dry Flyash System

- Eight flyash transfer filter separators (**ID Nos. ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5 and ES-FS5b**) and associated baghouses (**ID Nos. CD-U1/2FS, CD-U1/2FSa, CD-U3FS, CD-U3FSb, CD-U4FS, CD-U4FSb, CD-U5FS and CD-U5FSb**)
- Two ash silos (**ID Nos. ES-AS1 and ES-AS2**) and two (dry) flyash truck loading equipment (**ID Nos. ES-FTLD1 and ES-FTLD2**) and associated baghouses (**ID Nos. CD-S1Bf and CD-S2Bf**)
- Two (wet) flyash truck loading equipment (**ID Nos. ES-FTLW1 and ES-FTLW2**)
- Truck transport (**ID No. Fugitive 1**), truck unloading (**ID No. Fugitive 2**), and dry ash landfill management (**ID No. Fugitive 3**)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Affected emission sources: ID Nos. ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5, ES-FS5b, ES-AS1, ES-AS2, ES-FTLD1 and ES-FTLD2		
Particulate Matter	*For P ≤ 30,* $E = 4.10 \times P^{0.67}$ *For P > 30,* $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible Emissions	20 percent opacity	15A NCAC 02D .0521
Affected Emission Source: ID No. Fugitive 3		
PM-10	no observation of visible dust emissions without taking corrective action.	15A NCAC 02Q.0317 (PSD avoidance)

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from these sources (**ID Nos. ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5, ES-FS5b, ES-AS1, ES-AS2, ES-FTLD1 and ES-FTLD2)** shall not exceed an allowable emission rate as calculated by the following equations:

$$\textit{For } P \leq 30, \; E = 4.10 \times P^{0.67}$$
$$\textit{For } P > 30, \; E = 55.0 \times P^{0.11} - 40$$

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 02Q .0508(f)]

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.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

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

c. Particulate matter emissions from the eight flyash transfer filter separators **(ID Nos. ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5 and ES-FS5b)** shall be controlled by the bagfilters (**ID Nos. CD-U1/2FS, CD-U1/2FSa, CD-U3FS, CD-U3FSb, CD-U4FS, CD-U4FSb, CD-U5FS and CD-**

U5FSb), and particulate matter emissions from the two ash silos (**ID Nos. ES-AS1 and ES-AS2**) and two (dry) flyash truck loading equipment (**ID Nos. ES-FTLD1 and ES-FTLD2**) shall be controlled by the bagfilters (**ID Nos. CD-S1Bf and CD-S2Bf**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

i. A monthly visual inspection of the system ductwork and material collection unit for leaks; and
ii. An annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilters are not inspected and maintained.

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

d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:

i. The date and time of each recorded action;
ii. The results of each inspection;
iii. The results of any maintenance performed on the bagfilters; and
iv. Any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .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 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources **(ID Nos. ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5, ES-FS5b, ES-AS1, ES-AS2, ES-FTLD1 and ES-FTLD2)** 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 02Q .0508(f)]

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 02D .0521.

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. 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 02D .0521 or
(c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 F.2.a above.

If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .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 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .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 02Q .0317: AVOIDANCE CONDITION for 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. In order to avoid applicability of 15A NCAC 02D .0530, fugitive dust emissions from dryash landfill management **(ID No. Fugitive 3)** shall be controlled by mixing water with the dry flyash when loading into trucks prior to transporting to the landfill for spreading and compacting.

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

b. The Permittee shall ensure that, when loading flyash into trucks from the silos, sufficient water is mixed with the flyash to avoid any visible fugitive dust emissions beyond the immediate loading area. The Permittee shall maintain daily records indicating whether any visible emissions are observed from truck loading beyond the immediate loading area. If dust emissions are observed, the operator shall take corrective action to adjust the amount of water being mixed with the flyash, or call for manual watering of the trucks as filled if the system is malfunctioning, or discontinue operation until repairs are made. The following shall be recorded:

i. The date and time of each recorded action;
ii. Whether any visible emissions are observed; and
iii. Any corrective action taken.

These records shall be maintained in a logbook (written or electronic format) on-site and be made available to an authorized DAQ representative upon request. The Permittee shall be deemed in noncompliance with

15A NCAC 02D .0530 if no corrective action is taken after visible dust emissions are observed or if these records are not maintained.

G. One Units 4 and 5 DSI ACI storage silo (ID No. ES-U4/5ACISilo) and associated Units 4 and 5 ACI storage silo bin vent filter baghouse (ID No. CD-U4/5ACISiloBf)

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	*For P ≤ 30,* $E = 4.10 \times P^{0.67}$ *For P > 30,* $E = 55.0 \times P^{0.11} - 40$ Where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible Emissions	20 percent opacity	15A NCAC 02D .0521

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from this source **(ID No. ES-U4/5ACISilo)** shall not exceed an allowable emission rate as calculated by the following equation:

$$\text{For } P \leq 30, \quad E = 4.10 \times P^{0.67}$$
$$\text{For } P > 30, \quad E = 55.0 \times P^{0.11} - 40$$

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 02D .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 02D .0515.

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

c. Particulate matter emissions from the Units 4 and 5 DSI ACI storage silo **(ID No. ES-U4/5ACISilo)** shall be controlled by the bagfilter **(ID No. CD-U4/5ACISiloBf)**. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

i. A monthly visual inspection of the system ductwork and material collection unit for leaks; and
ii. An annual (for each 12-month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilter is not inspected and maintained.

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

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 bagfilter; and
iv. Any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

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

e. The Permittee shall submit the results of any maintenance performed on the bagfilter 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 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this source **(ID No. ES-U4/5ACISilo)** 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 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 02D .2601 and General Condition JJ. If the results of this test are above the limit given in Section 2.1 G.2.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

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

c. To ensure compliance, once a month the Permittee shall observe the emission points of these sources for any visible emissions above normal. 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 02D .0521 or (c) demonstrate that the percent opacity from the emission points of the emission sources in accordance with 15A NCAC 02D .2601 for 30 minutes is below the limit given in Section 2.1 G.2.a above. If the demonstration in (c) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .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 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .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.

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

A. Limestone, Receiving, Storage, Transfer, and Grinding

- Day bin No. 1 transfer to wet ball mill No. 1 in preparation building (**ID No. ES-16**),
- Day bin No. 2 transfer to wet ball mill No. 2 in preparation building (**ID No. ES-17**),
- Wet ball mill No. 1 and product classifier in preparation building (**ID No. ES-18A**),
- Wet ball mill No. 2 and product classifier in preparation building (**ID No. ES-18B**),
- Transfer tower stockpile conveyor transfer to stockpile stack out conveyor in transfer tower (**ID No. ES-9**),
- Grate feeder transfer to stock pile reclaim conveyor (**ID No. ES-11B**),
- Stockpile reclaim conveyor transfer to preparation plant feed conveyor in transfer tower (**ID No. ES-12**),
- Railcar unloading enclosure dust collection system with fabric filter (**ID No. CDRULBF**) installed on:
  - Railcar transfer to dual hopper (**ID No. ES-8-1**),
  - Hopper No. 1 transfer to hopper conveyor No.1 (**ID No. ES-8-2A**),
  - Hopper No. 2 transfer to hopper conveyor No. 2 (**ID No. ES-8-2B**), and
  - Hopper conveyors No.1 and No. 2 transfer-to-transfer tower stockpile conveyor (**ID No. ES-8-3**).
- Preparation building dust collection system with fabric filter (**ID No. CDLSBF**) installed on:
  - Preparation plant feed conveyor with flop gate transfer to day bin No. 2 feed conveyor (**ID No. ES-13**),
  - Preparation plant feed conveyor with flop gate transfer to day bin No. 1 (**ID No. ES-14**), and
  - Day bin No. 2 feed conveyor to day bin No. 2 (**ID No. ES-15**).

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate Matter	Ambient air quality standards, opacity, and control requirements for non-process fugitive dust pursuant to 15A NCAC 02D .0540	15A NCAC 02D .0510
Particulate Matter	Control requirements for non-process fugitive dust	15A NCAC 02D .0540

1. 15A NCAC 02D .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 regulated by Section 2.2 A.2. (15A NCAC 02D .0540).

c. The Permittee shall control process-generated emissions from conveyors, screens, and transfer points, such that the applicable opacity standards in Section 2.1 D (15A NCAC 02D .0524 - 40 CFR 60, Subpart OOO) and 2.1 E.1. (15 A NCAC 02D .0521) are not exceeded.

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

d. If emissions tests are required, the testing shall be performed in accordance with the applicable permit limit. If the results of this test are above the applicable limit, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0510.

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

e. The Permittee shall comply with the monitoring/recordkeeping/reporting required in the applicable requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0510 if monitoring, recordkeeping, and recordkeeping are not conducted in accordance with the applicable permit condition

2. 15A NCAC 02D .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 02D .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.

B. Facility Wide

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Toxic Air Pollutant Emissions	Emissions rates modeled to demonstrate compliance with acceptable ambient levels. **State Only Requirement**	15A NCAC 02D .1100

State-Only Requirement

1. 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

a. Pursuant to 15A NCAC 02D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

Emission Source	Toxic Air Pollutant	Emissions Limit	
		(lb/yr)	(lb/day)
CDRULBF (ES-8-1, ES-8-2A, ES-8-2B, ES-8-3)	arsenic and inorganic arsenic compounds beryllium (7440-41-7) cadmium (7440-43-9) manganese and compounds mercury, vapor (7439-97-6) nickel metal (7440-02-0)	1.39E-01 1.77E-01 6.86E-01	 6.68E-01 9.49E-04 1.48E-02
EPLSBF (ES-13, ES-14, ES-15)	arsenic and inorganic arsenic compounds beryllium (7440-41-7) cadmium (7440-43-9) manganese and compounds mercury, vapor (7439-97-6) nickel metal (7440-02-0)	4.32E-02 5.49E-02 2.13E-01	 2.07E-01 2.95E-04 4.61E-03
FILTSEP (ES-FS1/2, ES-FS1/2b, ES-FS3, ES-FS3b, ES-FS4, ES-FS4b, ES-FS5, ES-FS5b)	arsenic and inorganic arsenic compounds beryllium (7440-41-7) cadmium (7440-43-9) chromium VI (soluble chromate compounds) manganese and compounds mercury, vapor (7439-97-6) nickel metal (7440-02-0)	1.53E+00 2.68E+00 6.73E-01	 9.06E-03 3.67E-01 1.59E-03 8.36E-02
BINVENT1 (ES-AS1)	arsenic and inorganic arsenic compounds beryllium (7440-41-7) cadmium (7440-43-9)	7.58E-01 1.32E+00 3.32E-01	

Emission Source	Toxic Air Pollutant	Emissions Limit	
		(lb/yr)	(lb/day)
	chromium VI (soluble chromate compounds)		4.48E-03
	manganese and compounds		1.81E-01
	mercury, vapor (7439-97-6)		7.84E-04
	nickel metal (7440-02-0)		4.13E-02
BINVENT2 (ES-AS2)	arsenic and inorganic arsenic compounds	7.58E-01	
	beryllium (7440-41-7)	1.32E+00	
	cadmium (7440-43-9)	3.32E-01	
	chromium VI (soluble chromate compounds)		4.48E-03
	manganese and compounds		1.81E-01
	mercury, vapor (7439-97-6)		7.84E-04
	nickel metal (7440-02-0)		4.13E-02
NSLF_AL Ash Loading at NSLF	arsenic and inorganic arsenic compounds	2.29E-01	
	beryllium (7440-41-7)	4.43E-01	
	cadmium (7440-43-9)	1.09E-01	
	chromium VI (soluble chromate compounds)		2.21E-03
	manganese and compounds		1.11E-01
	mercury, vapor (7439-97-6)		4.81E-04
	nickel metal (7440-02-0)		2.14E-02
AAB_AUL Ash Unloading at Active Ash Basin	arsenic and inorganic arsenic compounds	5.72E-02	
	beryllium (7440-41-7)	1.11E-01	
	cadmium (7440-43-9)	2.72E-02	
	chromium VI (soluble chromate compounds)		5.52E-04
	manganese and compounds		2.76E-02
	mercury, vapor (7439-97-6)		1.20E-04
	nickel metal (7440-02-0)		5.35E-03
LANDFILL (Fugitive 2, Fugitive 3, I-3)	arsenic and inorganic arsenic compounds	7.38E-02	
	beryllium (7440-41-7)	1.43E-01	
	cadmium (7440-43-9)	3.51E-02	
	chromium VI (soluble chromate compounds)		5.07E-04
	manganese and compounds		2.54E-02
	mercury, vapor (7439-97-6)		1.11E-04
	nickel metal (7440-02-0)		4.92E-03
FLS (F-LS, ES-10, ES-11A, ES-11B, ES-12)	arsenic and inorganic arsenic compounds	5.23E-02	
	beryllium (7440-41-7)	6.65E-02	
	cadmium (7440-43-9)	2.58E-01	
	manganese and compounds		2.97E+00
	mercury, vapor (7439-97-6)		4.23E-03
	nickel metal (7440-02-0)		6.61E-02
GYPSPILE (I-63, I-64, I-65, I-66, I-67)	arsenic and inorganic arsenic compounds	3.86E-02	
	cadmium (7440-43-9)	2.29E-01	
	manganese and compounds		3.86E+00
	mercury, vapor (7439-97-6)		4.30E-02
	nickel metal (7440-02-0)		3.36E-02
COALP (I-1)	arsenic and inorganic arsenic compounds	3.46E-01	
	beryllium (7440-41-7)	1.06E+00	

Emission Source	Toxic Air Pollutant	Emissions Limit	
		(lb/yr)	(lb/day)
	cadmium (7440-43-9)	2.39E-01	
	chromium VI (soluble chromate compounds)		3.19E-02
	manganese and compounds		9.89E-01
	mercury, vapor (7439-97-6)		6.62E-02
	nickel metal (7440-02-0)		4.02E-01
NSLF_WA NSLF Wind Erosion - Active Area	arsenic and inorganic arsenic compounds	2.35E+00	
	beryllium (7440-41-7)	4.55E+00	
	cadmium (7440-43-9)	1.12E+00	
	chromium VI (soluble chromate compounds)		2.52E-01
	manganese and compounds		1.26E+01
	mercury, vapor (7439-97-6)		5.50E-02
	nickel metal (7440-02-0)		2.44E+00
NSLF_WIA NSLF Wind Erosion - Inactive Area	arsenic and inorganic arsenic compounds	2.53E-01	
	beryllium (7440-41-7)	4.91E-01	
	cadmium (7440-43-9)	1.21E-01	
	chromium VI (soluble chromate compounds)		2.72E-02
	manganese and compounds		1.36E+00
	mercury, vapor (7439-97-6)		5.94E-03
	nickel metal (7440-02-0)		2.64E-01
AAB_WA Active Ash Basin Wind Erosion - Active Area	arsenic and inorganic arsenic compounds	4.69E+00	
	beryllium (7440-41-7)	9.09E+00	
	cadmium (7440-43-9)	2.24E+00	
	chromium VI (soluble chromate compounds)		5.04E-01
	manganese and compounds		2.53E+01
	mercury, vapor (7439-97-6)		1.10E-01
	nickel metal (7440-02-0)		4.89E+00
AAB_WIA Active Ash Basin Wind Erosion - Inactive Area	arsenic and inorganic arsenic compounds	1.08E+00	
	beryllium (7440-41-7)	2.09E+00	
	cadmium (7440-43-9)	5.13E-01	
	chromium VI (soluble chromate compounds)		1.16E-01
	manganese and compounds		5.80E+00
	mercury, vapor (7439-97-6)		2.53E-02
	nickel metal (7440-02-0)		1.12E+00
Wastewater Bioreactor (**ID No. WWTBR**)	hydrogen sulfide		5.1E+01

b. The Permittee has submitted a toxic air pollutant dispersion modeling analysis dated April 28, 2021 for the facility's toxic air pollutant emissions as listed in the above table. The modeling analysis was reviewed and approved by the AQAB on June 14, 2021. Placement of the emission sources, configuration of the emission points, and operation of the sources shall be in accordance with the submitted dispersion modeling analysis and should reflect any changes from the original analysis submittal as outlined in the AQAB review memo.

Monitoring/Recordkeeping/Reporting [15A NCAC 02D .0611]

c. No monitoring, recordkeeping, or reporting shall apply to any emission sources included in Section 2.2

B.1.a above.

C.

- **Ash Landfill (ID No. LF)**
- **Ash Deposition (ID No. AD)**
- **Ash Excavation (ID No. AE)**
- **Active Ash Basin (ID No. AAB)**
- **Ash Hauling (ID No. HAULRD)**

1. 15A NCAC 02Q .0504: OPTION FOR OBTAINING CONSTRUCTION AND OPERATION PERMIT

Permitting [15A NCAC 02Q .0504(d)]

a. Pursuant to 15A NCAC 02Q .0501(b)(2) or (c)(2), for completion of the two-step significant modification process initiated by Application No. (3600039.21B), the Permittee shall file an amended application following the procedures of Section 15A NCAC 02Q .0500 within one year from the date of beginning operation of any of these sources (**ID Nos. LF, AD, AE, AAB and HAULRD**).

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

b. The Permittee shall notify the Regional Office in writing of the date of the first excavation of ash from the Active Ash Basin (**ID No. AAB**), postmarked no later than 30 days after such date.

2.3- 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.

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 02Q .0512(a)(1)(B)]

A. The following requirements are not applicable to Unit 1 - 5 boilers (ID Nos. ES-1, ES-2, ES-3, ES-4, and ES-5)

1. 15A NCAC 02D .0501(c)(11), testing for mercury emissions, is not applicable because 15A NCAC 02D .0537, "Control of Mercury Emissions", does not apply to fuel combustion.
2. 15A NCAC 02D .0501(c)(14), 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 02D .0521(d), visible emissions shall not exceed 20% opacity, is not applicable because these sources were manufactured as of July 1, 197l.
4. 15A NCAC 02D .0607, calibration and maintenance requirements do not apply as these sources do not combust wood and wood-fossil fuels.
5. 15A NCAC 02D .1110, NESHAP promulgated in 40 CFR Part 61, is not applicable because no NESHAP evaluation has been triggered.
6. 15A NCAC 02D .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 02D .0900.
7. 15A NCAC 02D .0902(f)(1), exemptions from VOC rules in 15A NCAC 02D .0900, are not applicable because there are no rules applicable to these sources in 02D .0900.
8. 15A NCAC 02D .0903(b) and (c), recordkeeping on VOC emissions and control equipment, is not applicable because there are no rules applicable to these sources in 02D .0900.
9. 15A NCAC 02D .0903(d)(2), recordkeeping on VOC source compliance, is not applicable because there are no rules applicable to these sources in 02D .0900.
10. 15A NCAC 02D .0903(e), recordkeeping on VOCs, is not applicable because there are not rules applicable to these sources in 02D .0900.
11. 15A NCAC 02D .0912(c), testing on VOCs, is not applicable because there are no rules applicable to these sources in 02D .0900.
12. 15A NCAC 02D .0912(d), reporting on VOCs and corrective actions, is not applicable because there are no rules applicable to these sources in 02D .0900.
13. 15A NCAC 02D .0912(e), testing on VOCs, is not applicable because there are no rules applicable to these sources in 02D .0900.
14. 15A NCAC 02D .0939(a), testing for VOCs for sources subject to 02D .0912, is not applicable because there are no rules applicable to these sources in 02D .0900.
15. 15A NCAC 02D .0939(b), testing for VOCs for sources subject to 02D .0912, is not applicable because there are no rules applicable to these sources in 02D .0900.
16. 15A NCAC 02Q .0508(p)(1), recordkeeping on alternative operating scenarios, is not applicable because there are no alternative operating scenarios.
17. 15A NCAC 02Q .0508(g), option to only reference Accidental Release Risk Management Plan in the Title V application, is not applicable because the facility does not exceed the threshold limit for Section 112(r) applicability for accidental releases.
18. 15A NCAC 02D .0503(a), particulates from fuel burning indirect heat exchangers, is not applicable since the boilers are covered under 15A NCAC 02D .0536 for particulate emissions.

B. The following requirements are not applicable to auxiliary boiler (ID No. ES-6AuxB):

1. 15A NCAC 02D .0519, nitrogen oxide emission limits, is not applicable because the auxiliary boiler is a non-NSPS applicable boiler with a heat input rating of less than 250 million Btu per hour.
2. 15A NCAC 02D .0535(d) and (e), malfunction abatement plan requirements and submittal, is not applicable because the plan is only required for electric utility boilers.
3. 15A NCAC 02D .0536, emission limits for particulate matter from utility boilers, is not applicable because this boiler is not a utility boiler.
4. 15A NCAC 02D .0606, monitoring of fossil-fired steam generators in accordance with Appendix P of 40 CFR Part 51, is not applicable because the auxiliary boiler has a heat input of less than 250 million Btu per hour.
5. 15A NCAC 02D .0608, sulfur dioxide emissions from other coal or residual oil burners, is not applicable because this boiler does not burn coal or residual oil.
6. 15A NCAC 02Q .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 this boiler is not a utility unit.

C. The following requirements are not applicable to the No. 2 fuel oil storage tank ID No. I-57.

1. 15A NCAC 02D .0925 “Petroleum Liquid Storage in Fixed Roof Tanks” is not applicable to the No. 2 Fuel Oil Storage Tank, because the vapor pressure of the No. 2 fuel oil is less than 1.52 psia.
2. The NSPS for Storage Vessels of VOC including Petroleum Liquid (40 CFR Part 60, Subpart Kb) is not applicable to the No. 2 Fuel Oil Storage Tank, because it was constructed before June 23, 1984.
3. The NSPS for Storage Vessels of Petroleum Liquid (40 CFR Part 60, Subpart K and Ka) is not applicable to the No. 2 Fuel Oil Storage Tank, because fuel oil is not included in the definition of petroleum liquid.

2.4- Phase II Acid Rain Permit Requirements

ORIS code: 2718

Effective dates: March 12, 2018 until February 28, 2023

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 Environmental Quality, Division of Air Quality issues this permit pursuant to Title 15A North Carolina Administrative Codes, Subchapter 02Q .0400 and 02Q .0500, and other applicable Laws.

B. SO_2 Allowance Allocations and NO_x Requirements for each affected unit

1. For each boiler **(ID Nos. ES-1 through ES-5),** the number of allowances of sulfur dioxide is allocated to Phase II-affected units by U.S. EPA under Tables 2, 3, or 4 of 40 CFR Part 73 and may change. 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 SO_2 allowance allocations identified in this permit (See 40 CFR 72.84).

2. Pursuant to 40 CFR 76.11, the Division of Air Quality approves a NO_X emissions averaging plan for these boilers **(ID Nos. ES-1 through ES-5).**

   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.

   If the designated representative cannot make the above demonstration (as set forth in 40 CFR 76.11(d)(1)(ii)(A)) for a plan year, and if any unit(s) fails to meet the annual average Alternative Contemporaneous Emission Limitation (ACEL) listed below or has an annual heat input less than the amount listed below, 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.

Boiler (ID Number)	ACEL (lb_{NOx} / MMBtu)	Annual Heat Input (MMBtu / yr)
U1Boiler (**ID No. ES-1**)	0.450	18,755,160
U2Boiler (**ID No. ES-2**)	0.450	21,094,080
U3Boiler (**ID No. ES-3**)	0.450	29,048,160
U4Boiler (**ID No. ES-4**)	0.450	36,362,760
U5Boiler (**ID No. ES-5**)	0.450	35,013,720

C. Comments, Notes and Justifications
None.

D. Phase II Permit Applications (attached)
The permit applications submitted for this facility, as approved by the Department of Environmental Quality, 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 Renewal Application, dated February 1, 2016
Phase II NOx Compliance Plan and Averaging Plan, dated June 23, 2015

Federal-only Requirement:

2.5- Consent Decree – Applicable Requirements

Allen Units 1, 2 and 3 (**ID Nos. ES-1, ES-2 and ES-3**) are subject to the compliance schedule described below. This compliance schedule is a federally-enforceable sequence of actions with milestones leading to compliance with applicable requirements for which the source has agreed to under the October 20, 2015 Consent Decree described below. [15A NCAC 02Q .0508(i)(16) and (m)].

The United States District Court for the Middle District of North Carolina entered a consent decree in United States et al. v. Duke Energy Corporation, No. 1:00 cv 1262 (M.D.N.C.), on October 20, 2015, resolving certain PSD claims related to Duke Energy's Plant Modernization Program and ordered, adjudged, and decreed the following.

A. Retirement of Plant Modernization Program Units

1. By no later than December 31, 2024, Duke Energy shall permanently retire Allen Unit 1 and Allen Unit 2. [Consent Decree ¶49]

B. Interim NOx Emission Reductions and Controls

1. Operation and Performance NO_x Requirements at Allen Units 1 and 2
   a. Commencing no later than February 17, 2016, and continuing until the unit is retired, Duke Energy shall continuously operate the existing selective non-catalytic reduction (SNCR) at Allen Unit 1. Commencing no later than February 16, 2017, and continuing until the unit is retired, Duke Energy shall achieve and maintain a 365-day rolling average NOx emission rate no greater than 0.250 lb/mmBtu. [Consent Decree ¶50]
   b. Commencing no later than February 17, 2016, and continuing until the unit is retired, Duke Energy shall continuously operate the existing SNCR at Allen Unit 2. Commencing no later than February 16, 2017, and continuing until the unit is retired, Duke Energy shall achieve and maintain a 365-day rolling average NOx emission rate no greater than 0.250 lb/mmBtu. [Consent Decree ¶51]
2. Allen Unit 1 and 2 Annual NOx Tonnage Limitations
   a. Beginning in calendar year 2016 and continuing each calendar year thereafter until the unit is retired, Duke Energy shall not exceed an annual NOx tonnage limitation of 600 tons per year at Allen Unit 1. [Consent Decree ¶52]
   b. Beginning in calendar year 2016 and continuing each calendar year thereafter until the unit is retired, Duke Energy shall not exceed an annual NOx tonnage limitation of 600 tons per year at Allen Unit 2. [Consent Decree ¶53]
3. Monitoring of NO_x Emissions
   a. In determining a 365-day rolling average NO_x emission rate, Duke Energy shall use NO_x emission data obtained from a CEMS in accordance with the procedures of 40 CFR Part 75, except that the missing data substitution procedures of 40 CFR Part 75 shall not apply to such determinations. Diluent capping (*i.e.*, 5% CO2) will be applied to the NOx emission rate for any hours where the measured CO2 concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1. [Consent Decree ¶54]
   b. For purposes of determining compliance with the annual NOx tonnage limitations at Allen Unit 1 and Allen Unit 2, Duke Energy shall use NOx emission data obtained from a CEMS in accordance with the procedures specified in 40 CFR Part 75. [Consent Decree ¶55]

C. Interim SO_2 Emission Reductions and Controls

1. Operation and Performance SO_2 Requirements at Allen Units 1 and 2
   a. Commencing no later than February 17, 2016, and continuing until the unit is retired, Duke Energy shall continuously operate the existing FGD at Allen Unit 1. Commencing no later than February 16, 2017, and continuing until the unit is Retired, Duke Energy shall achieve and maintain a 365-day rolling average SO_2 emission rate of no greater than 0.120 lb/mmBtu. [Consent Decree ¶56]
   b. Commencing no later than February 17, 2016, and continuing until the unit is retired, Duke Energy

shall continuously operate the existing FGD at Allen Unit 2. Commencing no later than February 16, 2017[1], and continuing until the unit is retired, Duke Energy shall achieve and maintain a 365-day rolling average SO_2 emission rate of no greater than 0.120 lb/mmBtu. [Consent Decree ¶57]

2. Monitoring of SO_2 Emissions
   a. In determining a 365-day rolling average SO_2 emission rate, Duke Energy shall use SO_2 emission data obtained from a CEMS and certified FGD inlet duct SO_2 monitors in accordance with the procedures of 40 CFR Part 75, except that the missing data substitution procedures of 40 CFR Part 75 shall not apply to such determinations. Diluent capping (i.e., 5% CO_2) will be applied to the SO_2 emission rate for any hours where the measured CO_2 concentration is less than 5% following the procedures in 40 CFR Part 75, Appendix F, Section 3.3.4.1. [Consent Decree ¶58]

D. Allowance Surrender Requirements

1. Use and Surrender of NOx and SO_2 Allowances
   a. Except as may be necessary to comply with Section XIV (Stipulated Penalties) of the Consent Decree, Duke Energy shall not use NOx or SO_2 allowances to comply with any requirement of the Consent Decree, including by claiming compliance with any emission limitation by using, tendering, or otherwise applying NOx or SO_2 allowances to offset any excess emissions. [Consent Decree ¶59]
   b. Except as otherwise provided, beginning in calendar year 2016 and continuing each calendar year thereafter, Duke Energy shall not sell, bank, trade, or transfer its interest in any NOx or SO_2 allowances allocated to Allen Unit 1, Allen Unit 2, Buck Unit 3, Buck Unit 4, Buck Unit 5, Cliffside Unit 1, Cliffside Unit 2, Cliffside Unit 3, Cliffside Unit 4, Dan River Unit 3, Riverbend Unit 4, Riverbend Unit 6, and Riverbend Unit 7. [Consent Decree ¶60]
   c. Beginning in calendar year 2016, and continuing each calendar year thereafter, Duke Energy shall surrender all NOx and SO_2 allowances allocated to Allen Unit 1, Allen Unit 2, Buck Unit 3, Buck Unit 4, Buck Unit 5, Cliffside Unit 1, Cliffside Unit 2, Cliffside Unit 3, Cliffside Unit 4, Dan River Unit 3, Riverbend Unit 4, Riverbend Unit 6, and Riverbend Unit 7 for that calendar year that Duke Energy does not need to meet federal and/or state CAA regulatory requirements for those Units[2]. [Consent Decree ¶61]
   d. Nothing in the Consent Decree shall prevent Duke Energy from purchasing or otherwise obtaining NOx or SO_2 Allowances from another source for purposes of complying with federal and/or state CAA regulatory requirements to the extent otherwise allowed by law. [Consent Decree ¶62]
   e. The requirements of the Consent Decree pertaining to Duke Energy's use and Surrender of NOx Allowances are permanent and are not subject to any termination provision of the Consent Decree. [Consent Decree ¶63]
2. Method for Surrender of NOx and SO_2 Allowances
   a. Duke Energy shall Surrender, or transfer to a non-profit third-party selected by Duke Energy for Surrender, all NOx and SO_2 Allowances required to be Surrendered pursuant to Section VII.A of the Consent Decree (Section 2.5.D.1 above) by June 30 of the immediately following calendar year. [Consent Decree ¶64]
   b. If any Allowances required to be Surrendered under the Consent Decree are transferred directly to a non-profit third-party, Duke Energy shall include a description of such transfer in the next report submitted to EPA pursuant to Section XII (Periodic Reporting) of the Consent Decree (Section 2.5.G below). Such report shall: (a) identify the non-profit third-party recipient(s) of the Allowances and list the serial numbers of the transferred Allowances; and (b) include a certification by the third-party recipient(s) stating that the recipient(s) will not sell, trade, or otherwise exchange any of the Allowances and will not use any of the Allowances to meet any obligation imposed by any environmental law. No later than the third periodic report due after the transfer of any Allowances, Duke Energy shall include

[1] The start date by which operating days are included in the 365-day rolling average was February 17, 2016.

[2] Allowances allocated under the Cross-State Air Pollution Rule (CSAPR) for NOx and SO_2 are required to be surrendered only for control periods starting on or after the fourth anniversary of the Date of Entry of the Consent Decree (Date of Entry is October 20, 2015).

a statement that the third-party recipient(s) Surrendered the Allowances for permanent Surrender to EPA in accordance with the provisions of Paragraph 66 of the Consent Decree (Section 2.5.D.2.c below) within one year after Duke Energy transferred the Allowances to them. Duke Energy shall not have complied with the Allowance Surrender requirements of this Paragraph until all third-party recipient(s) have actually Surrendered the transferred Allowances to EPA. [Consent Decree ¶65]

c. For all Allowances required to be Surrendered, Duke Energy shall, with respect to the Allowances that Duke Energy is to Surrender, ensure that an Allowance transfer request form is first submitted to EPA's Office of Air and Radiation's Clean Air Markets Division directing the transfer of such Allowances to the EPA Enforcement Surrender Account or to any other EPA account that EPA may direct in writing. Such Allowance transfer requests may be made in an electronic manner using the EPA's Clean Air Markets Division Business System, or similar system provided by EPA. As part of submitting these transfer requests, Duke Energy shall ensure that the transfer of its Allowances are irrevocably authorized and that the source and location of the Allowances being Surrendered are identified by name of account and any applicable serial or other identification numbers or station names. [Consent Decree ¶66]

E. Prohibition on Netting Credits or Offsets

1. Emission reductions that result from actions to be taken by Duke Energy after October 20, 2015 to comply with the requirements of the Consent Decree shall not be considered as a creditable contemporaneous emission decrease for the purpose of obtaining a netting credit or offset under the CAA's nonattainment NSR and PSD programs. Notwithstanding the preceding sentence, to the extent otherwise allowed by law, Duke Energy may use any creditable contemporaneous emission decreases resulting solely from retiring Allen Unit 3 for the purposes of permitting combined cycle or simple cycle natural gas-fired combustion turbine(s) where the Allen Station is located, subject to the following additional requirements:
   a. The emission reductions must be contemporaneous and otherwise creditable within the meaning of the CAA and the North Carolina SIP, and Duke Energy must comply with, and be subject to, all requirements and criteria for creating contemporaneous creditable decreases as set forth in 40 CFR §52.21(b) and the North Carolina SIP, subject to the limitations in this Section 2.5.E.1.
   b. Duke Energy must apply for, and obtain, minor NSR permits for the construction and operation of such new combined cycle natural gas-fired combustion turbine(s), and must provide notice and a copy of the permit application to the United States and the Environmental Defense, the North Carolina Sierra Club, and the North Carolina Public Interest Research Group (Plaintiff-Intervenors) collectively (Plaintiffs) in accordance with Section XIX (Notices) of the Consent Decree, concurrent with its permit application submission to the Division of Air Quality. Duke Energy's request for such minor NSR permit must include federally-enforceable emission limitations that reflect either Best Available Control Technology or Lowest Achievable Emission Rate, as appropriate, depending upon the attainment classification for the relevant regulated pollutants for which Duke Energy is utilizing emission reductions as provided in Paragraph 67 of the Consent Decree (this Section 2.5.E.1).
   c. At a minimum, such new combined and/or simple cycle natural gas-fired combustion turbine(s) must include low NOx burners and in the case of combined cycle natural gas-fired turbine(s), must also include Selective Catalytic Reduction pollution control(s).
   d. The emission reductions that Duke Energy intends to utilize for netting shall not be available under Section VIII of the Consent Decree (this Section 2.5.E.1) if such use would result in an exceedance of a PSD increment, or an interference with "reasonable further progress" toward attainment of a NAAQS in accordance with Part D of Title I of the CAA.
   e. Duke Energy must be and remain in full compliance with the provisions of the Consent Decree establishing performance, operational, and control technology including, but not limited to, (a) the interim NOx emission reductions and controls specified in Section V of the Consent Decree (Section 2.5.B above), (b) the interim SO_2 emission reductions and controls specified in Section VI of the Consent Decree (Section 2.5.C above), (c) requirements pertaining to the surrender of SO_2 and NOx Allowances (Section 2.5.D above), and (d) the Retirement of Allen Units 1, 2, and 3 as required under the Consent Decree (Sections 2.5.A.1 and 2.5.F.1). [Consent Decree ¶67]

F. Additional Injunctive Relief

1. By no later than December 31, 2024 Duke Energy shall permanently retire Allen Unit 3. [Consent Decree ¶69]

G. Periodic Reporting

1. Duke Energy shall submit to Plaintiffs a periodic report, within 60 days after the end of each half of the calendar year (January through June and July through December. The report shall include the following information:
   a. All information necessary to determine compliance during the reporting period with: all applicable 365-day rolling average emission rates and annual NOx tonnage limitations; the obligation to monitor NOx and SO_2 emissions; and the obligation to surrender NOx allowances and SO_2 allowances.
   b. An identification of all periods when any pollution control device required by the Consent Decree to continuously operate was not operating, the reason(s) for the equipment not operating, and the basis for Duke Energy's compliance or non-compliance with the continuous operation requirements of the Consent Decree.
   c. A summary of Duke Energy's actions implemented and expenditures (cumulative and in the current reporting period) made pursuant to implementation of the Additional Injunctive Relief required pursuant to Section IX of the Consent Decree.

   If the initial periodic report covers a period of time of less than 60 days, Duke Energy shall not be required to submit a periodic report for that period, but shall include all of the above information and data for that period in its next periodic report. [Consent Decree ¶82]
2. In any periodic report submitted pursuant to Section XII of the Consent Decree (this Section 2.5.G), Duke Energy may incorporate by reference information previously submitted under its Title V permitting requirements, provided that Duke Energy attaches the Title V permit report (or the pertinent portions of such report) and provides a specific reference to the provisions of the Title V permit report that are responsive to the information required in the periodic report. [Consent Decree ¶83]
3. Duke Energy shall submit to Plaintiffs a report of any violation or deviation from any provision of the Consent Decree within 15 working days after Duke Energy knew or should have known of the event. In the report, Duke Energy shall explain the cause or causes of the violation or deviation and all measures taken or to be taken by Duke Energy to cure the reported violation or deviation or to prevent such violations or deviations in the future. If at any time the provisions of the Consent Decree are included in Title V permits, consistent with the requirements for such inclusion in the Consent Decree, then the deviation reports required under applicable Title V regulations shall be deemed to satisfy all the requirements of this paragraph. [Consent Decree ¶84]
4. Each report required by the Consent Decree shall be signed by the Responsible Official as defined in Title V of the CAA for the appropriate unit, and shall contain the following certification: [Consent Decree ¶85]

> *This information was prepared either by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my evaluation, or the direction and my inquiry of the person(s) who manage the system, or the person(s) directly responsible for gathering the information, I hereby certify under penalty of law that, to the best of my knowledge and belief, this information is true, accurate, and complete. I understand that there are significant penalties for submitting false, inaccurate, or incomplete information to the United States.*

H. Termination

1. Once Duke Energy has:
   a. completed the requirements of Section IV of the Consent Decree (Retirement of Units Allegedly Modified Pursuant to the Plant Modernization Program), Section IX of the Consent Decree (Additional Injunctive Relief), and Section XVII of the Consent Decree (Permits);
   b. maintained continuous compliance with the Consent Decree, including the interim requirements of Section V of the Consent Decree (Interim NOx Emission Reductions and Controls) and Section VI of

the Consent Decree (Interim SO_2 Emission Reductions and Controls), and Section VII of the Consent Decree (Allowance Surrender Requirements); and

c. paid the civil penalty and any accrued stipulated penalties as required by the Consent Decree; and
d. certified that the date is later than December 31, 2025,

Duke Energy may serve upon the Plaintiffs a Request for Termination of this Consent Decree as a whole, stating that Duke Energy has satisfied all the requirements of this Paragraph (this Section 2.5.H.1), together with all necessary supporting documentation. [Consent Decree ¶151]

2. Notwithstanding the provisions of Paragraph 151 of the Consent Decree (Section 2.1.H.1 above), Duke Energy may serve upon Plaintiffs a Request for Termination as to Completed Tasks. As soon as Duke Energy completes a Retirement or any other requirement of this Consent Decree that is not ongoing or recurring, Duke Energy may serve upon Plaintiffs a Request for Termination of the provision or provisions of the Consent Decree that imposed the requirement. [Consent Decree ¶152]
3. Following receipt by the Plaintiffs of Duke Energy's Request for Termination, the Parties shall confer informally concerning the Request and any disagreement that the Parties may have as to whether the Duke Energy has satisfactorily complied with the requirements for termination of this Consent Decree. If the United States, after consultation with the other Plaintiffs, agrees that the Decree may be termination, the Parties shall submit, for the Court's approval, a joint stipulation terminating the Decree. [Consent Decree ¶153]
4. If the United States, after consultation with the other Plaintiffs, does not agree that the Decree may be termination, Duke Energy may invoke Dispute Resolution under Section XVI of this Decree. However, Duke Energy shall not seek Dispute Resolution of any dispute regarding termination, under Paragraph 107 of Section XVI of the Consent Decree, until 60 days after service of its Request for Termination or receipt of an adverse decision from the Plaintiffs, whichever is earlier. [Consent Decree ¶154]

SECTION 3 - GENERAL CONDITIONS (version 5.5, 08/25/2020)

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

A. **General Provisions** [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]
1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
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 02Q .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 Environmental Quality upon request.

C. **Severability Clause** [15A NCAC 02Q .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 02Q .0507(e) and 02Q .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

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]
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 reissuance, 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 02Q .0514]
   The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
   The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
3. Minor Permit Modifications [15A NCAC 02Q .0515]
   The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
4. Significant Permit Modifications [15A NCAC 02Q .0516]
   The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02Q .0516.
5. Reopening for Cause [15A NCAC 02Q .0517]
   The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .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 02Q .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 02Q .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 02Q .0523(c)]
To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A **Reporting Requirements for Excess Emissions and Permit Deviations** [15A NCAC 02D .0535(f) and 02Q .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 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. *(Note: Definitions of excess emissions under 02D .1110 and 02D .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 02D .0524), NESHAPS (15A NCAC 02D .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 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
   a. Pursuant to 15A NCAC 02D .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 02D .0535(f)(3).

Permit Deviations

3. Pursuant to 15A NCAC 02Q .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 02D .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 02D .0535**

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .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 02D .0535(c)(1) through (7).
2. 15A NCAC 02D .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 02Q .0508(e) and 02Q .0513(b)]

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least six months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. **Need to Halt or Reduce Activity Not a Defense** [15A NCAC 02Q .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 02Q .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 02Q .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 02Q .0508(f) and 02Q .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 02Q .0508(n)]
The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, 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 02Q .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 02Q .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 02Q .0523.
4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. **Termination, Modification, and Revocation of the Permit** [15A NCAC 02Q .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 reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. **Insignificant Activities** [15A NCAC 02Q .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 02Q .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 02Q .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 02Q .0508(i)(10)]
1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. 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 02Q .0519.

X. **Annual Emission Inventory Requirements** [15A NCAC 02Q .0207]
The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .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 02Q .0107 and 02Q .0508(i)(9)]
Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .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 02Q .0107.

Z. **Construction and Operation Permits** [15A NCAC 02Q .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 02Q .0100 and .0300.

AA. **Standard Application Form and Required Information** [15A NCAC 02Q .0505 and .0507]
The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. **Financial Responsibility and Compliance History [**15A NCAC 02Q .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 02Q .0501(d)]
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 02Q .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 02Q .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 02D .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 02D .0300.

HH. **Registration of Air Pollution Sources** [15A NCAC 02D .0202]
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 02D .0202(b).

II. **Ambient Air Quality Standards** [15A NCAC 02D .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 02D .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 02Q .0508(i)(16)]
Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .1110, or .1111 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance for emission sources subject to Rules .0524, .1110, or .1111, the Permittee shall provide and submit all notifications, conduct all testing, and submit all test reports in accordance with the requirements of 15A NCAC 02D .0524, .1110, or ,1111, as applicable. Otherwise, if emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.
2. Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least **15 days** before beginning the test so that the Director may at his option observe the test.
3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
    a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
        i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
        ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
        iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
    b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. **Reopening for Cause** [15A NCAC 02Q .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 02Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .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 02Q .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 reissuance, as appropriate.

LL. **Reporting Requirements for Non-Operating Equipment** [15A NCAC 02Q .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. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

MM. **Fugitive Dust Control Requirement** [15A NCAC 02D .0540]

As required by 15A NCAC 02D .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 02D .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 02Q .0501 and .0523]

1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(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 02Q .0501(c)(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 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA - Air Planning Branch, 61 Forsyth Street SW, 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.

OO. **Third Party Participation and EPA Review** [15A NCAC 02Q .0521, .0522 and .0525(7)]
For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

List of Acronyms

AOS	Alternative Operating Scenario
BACT	Best Available Control Technology
BAE	Baseline Actual Emissions
Btu	British thermal unit
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEM	Continuous Emission Monitor
CFR	Code of Federal Regulations
CSAPR	Cross-State Air Pollution Rule
DAQ	Division of Air Quality
DEQ	Department of Environmental Quality
EMC	Environmental Management Commission
EPA	Environmental Protection Agency
FR	Federal Register
GACT	Generally Available Control Technology
GHGs	Greenhouse Gases
HAP	Hazardous Air Pollutant
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
NAA	Non-Attainment Area
NAAQS	National Ambient Air Quality Standards
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
NSR	New Source Review
OAH	Office of Administrative Hearings
PAE	Projected Actual Emissions
PAL	Plantwide Applicability Limitation
PM	Particulate Matter
$PM_{2.5}$	Particulate Matter with Nominal Aerodynamic Diameter of 2.5 Micrometers or Less
PM_{10}	Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less
POS	Primary Operating Scenario
PSD	Prevention of Significant Deterioration
PTE	Potential to Emit
RACT	Reasonably Available Control Technology
SIC	Standard Industrial Classification
SIP	State Implementation Plan
SO_2	Sulfur Dioxide
TAP	Toxic Air Pollutant
tpy	Tons Per Year
VOC	Volatile Organic Compound

Attachment 2 to Air Quality Permit No. 03757T48

Acid Rain Permit Renewal Application

(Dated January 27, 2016)
(Five pages)

Attachment 3 to Air Quality Permit No. 03757T48

Acid Rain Permit NOx Compliance Plan and Averaging Plan

(Dated June 23, 2015)
(Five pages)