



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

Beverly Eaves Perdue
Governor

Sheila Holman
Director

Dee Freeman
Secretary

Proposed for April ?, 2011

Mr. Richard L. Mann, Ph.D.
Vice Chancellor for Finance and Administration
University of North Carolina at Chapel Hill
302 South Building
Campus Box 1000
Chapel Hill, North Carolina 27599-1000

Dear Dr. Miller:

SUBJECT: Air Quality Permit No. 03069T28
Facility ID: 6800043
University of North Carolina at Chapel Hill
Chapel Hill, North Carolina
Orange County
Fee Class: Title V

In accordance with your Air Quality Permit Application for an administrative amendment received on December 28, 2010 we are forwarding herewith Air Quality Permit No. 03069T28 to the University of North Carolina at Chapel Hill, located at 1120 Estes Drive Extension, Chapel Hill, North Carolina authorizing the construction and operation of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 2Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

The Permittee shall file a Title V Air Quality Permit Application pursuant to 15A NCAC 2Q .0504 for the air emission source(s) (ID No(s). ES-001 and ES-002) on or before 12 months after commencing operation of the modified sources pursuant to application 6800043.10A.

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

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit,

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

One
North Carolina
Naturally

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 GS 143-215-108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of GS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in GS 143-215.114A and 143-215.114B.

This Air Quality Permit shall be effective from April ?, 2011 to March 31, 2016, 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 Ms. Jenny Kelvington, P.E., at (919) 715-6254.

Sincerely,

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

Enclosure

cc: Mary Beth Koza
Director
Environment, Health, and Safety
University of North Carolina at Chapel Hill
1120 Estes Drive Extension
Campus Box 1650
Chapel Hill, North Carolina 27599-1650
Raleigh Regional Office
EPA, Region IV
Central Files

ATTACHMENT I:

Summary of Changes to Title V Permit No. 03069T27:

Page(s)	Section	Description of Change(s)
N/A	Insignificant Activities List	Remove four emergency generators (IES-Gen-7, IES-Gen-43, IES-Gen-48, and IES-Gen82); Add one 35 kW diesel-fired emergency generator (IES-Gen-7); Add two 110 HP diesel-fired fire pumps (IES-FP-2 and IES-FB-3); Add fifteen water heaters (IES-SB-1 to IES-SB17, except SB6 and SB15); Add NSPS IIII designation for IES-Gen-2; Add MACT ZZZZ designation for all emergency generators; Remove footnote showing when MACT ZZZZ became effective; Correct Emission Source ID Numbers for IES-Gen-24 to IES-Gen-33; Change the location name for IES-Gen-28 from Kenan Field House to Kenan Football Center; and Correct the size listing for IES-Gen-10 from 200 kW to 25 kW.
1	Permit Cover Page	Amend permit revision numbers and issuance/effective dates.
3	Emission Source Table	Change 112(j) description to 2D .1100 CASE BY CASE MACT.
5	Table Footnote	Removed the requirement to submit a permit application within 12 months of firing wood in boilers #1 and 2.
10	2.1.A.4.a	Revise carbon monoxide limit for wood-firing from 508 to 834 ppmvd, at 7% O ₂
10	2.1.A.4.b	Specify when the limit for a particular fuel applies.
11	2.1.A.4.f	Delete detailed testing requirements.
11	2.1.A.4.h	Change annual testing every 10 to 12 months to every 11 to 13 months. Requirement for testing reduction changed from compliance to less than or equal to 80% of the emission limitation.
11, 12	2.1.A.4.i.	Delete detailed requirement in Site Specific Monitoring Plan.
13	2.1.A.4.l and m	Added boiler inspection and maintenance for boilers firing natural gas and No. 2 fuel oil only.
14	2.1.A.4.r	Add fuel recordkeeping.
18	2.1.B.4.b and c.	Add boiler inspection and maintenance requirements.
21	2.1.C.4.b and c.	Add boiler inspection and maintenance requirements.
22	2.1.D.1.a.	Add the allowable particulate emission rate for processes less than 30 tons per hour.
24	2.1.E.1.a.	Add the allowable particulate emission rate for processes less than 30 tons per hour.
34, 35	2.1.I	Add 112(j) requirements for emission sources (ID Nos. ES-SB6 and ES-SB15)
36	2.2.C.1	Specify CAM for particulate emissions for Boilers #6 and #7 apply only until February 3, 2013.
41-49	3.0	Update General Conditions to the latest version 3.3.

ATTACHMENT II:

Insignificant Activities Pursuant to 15A NCAC 2Q .0503(8)

ID No.	Source Description
IES-Gen-1 MACT ZZZZ	Emergency generator (25 kW, diesel-fired), located at Ackland Art Museum
IES-Gen-2 MACT ZZZZ NSPS IIII	Emergency generator (450 kW, diesel-fired), located at Ambulatory Care Center
IES-Gen-3 MACT ZZZZ	Emergency generator (30 kW, diesel-fired), located at Avery Dorm
IES-Gen-4 MACT ZZZZ	Emergency generator (20 kW, diesel-fired) located at the Cheek/Clark Building
IES-Gen-7 MACT ZZZZ	Emergency generator (35 kW, diesel-fired), located at Security Services Building
IES-Gen-8 MACT ZZZZ	Emergency generator (350 kW, diesel-fired), located at Carmichael Dorm
IES-Gen-9 MACT ZZZZ	Emergency generator (60 kW, diesel-fired), located at Carolina Inn
IES-Gen-10 MACT ZZZZ	Emergency generator (25 kW, diesel-fired), located at the Center for Dramatic Art
IES-Gen-11 MACT ZZZZ	Emergency generator (230 kW, diesel-fired), located at Craige Dorm
IES-Gen-12 MACT ZZZZ	Emergency generator (60 kW, diesel-fired), located at Craige Parking Deck
IES-Gen-13 MACT ZZZZ	Emergency generator (80 kW, propane-fired), located at the Davie Hall
IES-Gen-14 MACT ZZZZ	Emergency generator (210 kW, diesel-fired), located at the Davis Library
IES-Gen-15 MACT ZZZZ	Emergency generator (230 kW, diesel-fired), located at the Ehringhaus Dorm
IES-Gen-18 MACT ZZZZ	Emergency generator (150 kW, diesel-fired), located at Fetzer Gym
IES-Gen-19 MACT ZZZZ	Emergency generator (125 kW, diesel-fired), located at Fordham Hall
IES-Gen-20 MACT ZZZZ	Emergency generator (150 kW, diesel-fired), located at Cardinal Deck
IES-Gen-21 MACT ZZZZ	Emergency generator (40 kW, natural gas-fired), located at the Old Dental School Building
IES-Gen-22 MACT ZZZZ	Emergency generator (100 kW, diesel-fired), located at Hill Alumni Center

ID No.	Source Description
IES-Gen-23 MACT ZZZZ	Emergency generator (230 kW, diesel-fired), located at Hinton James Dorm
IES-Gen-24 MACT ZZZZ	Emergency generator (80 kW, diesel-fired), located at Kenan Center
IES-Gen-25 MACT ZZZZ	Emergency generator (25 kW, diesel-fired), located at Kenan Field (North)
IES-Gen-26 MACT ZZZZ	Emergency generator (30 kW, diesel-fired), located at the Kenan Field (North-new)
IES-Gen-27 MACT ZZZZ	Emergency generator (25 kW, diesel-fired), located at Kenan Field (South)
IES-Gen-28 MACT ZZZZ	Emergency generator (100 kW, diesel-fired), located at Kenan Football Center
IES-Gen-29 MACT ZZZZ	Emergency generator (45 kW, diesel-fired), located at the Kenan Chemistry Lab
IES-Gen-30 MACT ZZZZ	Emergency generator (535 kW, diesel-fired), located at the Lineberger Building Addition
IES-Gen-31 MACT ZZZZ	Emergency generator (250 kW, diesel-fired), located at the McGavran Greenberg Building
IES-Gen-32 MACT ZZZZ	Emergency generator (100 kW, diesel-fired), located at the MacNider Hall
IES-Gen-33 MACT ZZZZ	Emergency generator (175 kW, diesel-fired), located at the McColl Building
IES-Gen-35 MACT ZZZZ	Emergency generator (100 kW, diesel-fired), located at the Morehead Chemistry Lab
IES-Gen-36 MACT ZZZZ	Emergency generator (30 kW, natural gas-fired), located at the Morehead Planetarium
IES-Gen-37 MACT ZZZZ	Emergency generator (230 kW, diesel-fired), located at Morrison Dorm
IES-Gen-38 MACT ZZZZ	Emergency generator (400 kW, diesel-fired), located at the North Side Chiller
IES-Gen-39 MACT ZZZZ	Emergency generator (60 kW, diesel-fired), located at Parker Dorm
IES-Gen-40 MACT ZZZZ	Emergency generator (500 kW, diesel-fired), located at Phillips Hall
IES-Gen-41 MACT ZZZZ	Emergency generator (20 kW, diesel-fired), located at Security Services Building
IES-Gen-42 MACT ZZZZ	Emergency generator (125 kW, diesel-fired), located at the Dean Smith Center

ID No.	Source Description
IES-Gen-44 MACT ZZZZ	Emergency generator (275 kW, diesel-fired), located at Tarrson Hall
IES-Gen-45 MACT ZZZZ	Emergency generator (150 kW, diesel-fired), located at Tate-Turner-Kuralt Building
IES-Gen-46 MACT ZZZZ	Emergency generator (260 kW, diesel-fired), located at Taylor Student Health Services
IES-Gen-47 MACT ZZZZ	Emergency generator (50 kW, diesel-fired), located at Van Hecke-Wettach Hall
IES-Gen-49 MACT ZZZZ	Emergency generator (125 kW, diesel-fired), located at the Wilson Library Stacks
IES-Gen-50 MACT ZZZZ	Emergency generator (600 kW, diesel-fired), located at Beard Hall
IES-51 MACT ZZZZ	Sterilizers – Dental School
IES-53 MACT ZZZZ	Enclosed sorbent railcar dump pit, located in the Railcar Unloading Building (ID No. 020)
IES-Gen-57 MACT ZZZZ	Emergency generator (600 kW, diesel-fired), located at the Bioinformatics Building
IES-Gen-58 MACT ZZZZ	Emergency generator (154 kW, diesel-fired), located at the Carrington Building
IES-Gen-59 MACT ZZZZ	Emergency generator (500 kW, diesel-fired), located at the Glaxo Building
IES-Gen-60 MACT ZZZZ	Emergency generator (148 kW, diesel-fired), located at the Health Sciences Library
IES-Gen-61 MACT ZZZZ	Emergency generator (60 kW, diesel-fired), located at the Knapp Building
IES-Gen-62 MACT ZZZZ	Emergency generator (300 kW, diesel-fired), located at the RB House Library
IES-Gen-67 MACT ZZZZ	Emergency generator (125 kW, diesel-fired), located at Memorial Hall
IES-Gen-68 MACT ZZZZ	Emergency generator (105 kW, diesel-fired), located at the Dogwood Deck
IES-Gen-69 MACT ZZZZ	Emergency generator (20 kW, natural gas-fired), located at the New East Building
IES-Gen-71 MACT ZZZZ NSPS IIII	Emergency generator (250 kW, diesel-fired), located at the Global Education Building

ID No.	Source Description
IES-Gen-72 MACT ZZZZ NSPS IIII	Emergency generator (30 kW, diesel-fired), located at the Hamilton Hall
IES-Gen-74 MACT ZZZZ	Emergency generator (250 kW, diesel-fired), located at the Joyner, Alexander Dorms
IES-Gen-75 MACT ZZZZ	Emergency generator (250 kW, diesel-fired), located at the McIver, Kenan, Alderman Dorms
IES-Gen-76 MACT ZZZZ	Emergency generator (500 kW, diesel-fired), located at the Northeast Chiller
IES-Gen-77 MACT ZZZZ	Emergency generator (100 kW, diesel-fired), located at the Jackson Circle Parking Deck
IES-Gen-79 MACT ZZZZ, NSPS IIII	Emergency generator (400 kW, diesel-fired), located at the Carmichael Auditorium
IES-Gen-80 MACT ZZZZ, NSPS IIII	Emergency generator (350 kW, diesel-fired), located at the Hinton James Dorm
IES-Gen-81 MACT ZZZZ, NSPS IIII	Emergency generator (250 kW, diesel-fired), located at the Physicians Office Building
IES-Gen-83 MACT ZZZZ, NSPS JJJJ*	Emergency generator (15 kW, propane-fired), located at the Temporary Greenhouses
IES-Gen-84 MACT ZZZZ, NSPS IIII	Emergency generator (250 kW, diesel-fired), located at the Bell Tower Parking Deck
IES-FP-1 MACT ZZZZ, NSPS IIII	Fire water pump (77 Hp, diesel-fired), located at Kenan Stadium
IES-FP-2 MACT ZZZZ	Fire water pump (110 Hp, diesel-fired), located at McColl Building
IES-FP-3 MACT ZZZZ	Fire water pump (110 Hp, diesel-fired), located at Davis Library
IES-SB-1	Water heater (0.726 MMBtu/hr; natural gas-fired), located at Aycock Family Medical Center
IES-SB-2	Water heater (0.726 MMBtu/hr; natural gas-fired), located at Aycock Family Medical Center
IES-SB-3	Water heater (0.300 MMBtu/hr; natural gas-fired), located at Aycock Family Medical Center
IES-SB-4	Water heater (0.399 MMBtu/hr; natural gas-fired), located at Brooks Hall

ID No.	Source Description
IES-SB-5	Water heater (1.442 MMBtu/hr; natural gas-fired), located at Cheek Clark Building
IES-SB-7	Water heater (0.420 MMBtu/hr; natural gas-fired), located at Graham Memorial Building
IES-SB-8	Water heater (0.420 MMBtu/hr; natural gas-fired), located at Graham Memorial Building
IES-SB-9	Water heater (0.500 MMBtu/hr; natural gas-fired), located at Henry Stadium
IES-SB-10	Water heater (0.750 MMBtu/hr; natural gas-fired), located at Henry Stadium
IES-SB-11	Water heater (0.450 MMBtu/hr; natural gas-fired), located at Hickerson House
IES-SB-12	Water heater (0.595 MMBtu/hr; natural gas-fired), located at Hill Commercial
IES-SB-13	Water heater (0.270 MMBtu/hr; natural gas-fired), located at Hill Annex
IES-SB-14	Water heater (0.500 MMBtu/hr; natural gas-fired), located at Medical Research Building B
IES-SB-16	Water heater (0.900 MMBtu/hr; natural gas-fired), located at McCaskill Soccer
IES-SB-17	Water heater (0.900 MMBtu/hr; natural gas-fired), located at 135.5 East Franklin

* Initial Notification Requirements, Only

1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the owner or operator of the source 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 2D .1100 "Control of Toxic Air Pollutants" or 15A NCAC 2Q .0711 "Emission Rates Requiring a Permit".

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



AIR QUALITY PERMIT

Permit No.	Replaces Permit No.(s)	Effective Date	Expiration Date
03069T28	03069T27	April ?, 2011	March 31, 2016

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

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

Permittee: **University Of North Carolina at Chapel Hill**

Facility ID: **6800043**

Facility Site Location: **1120 Estes Drive Extension**
City, County, State, Zip: **Chapel Hill, Orange County, North Carolina 27599-1650**

Mailing Address: **Campus Box 1650**
City, State, Zip: **Chapel Hill, North Carolina 27599-1650**

Application Number: **6800043.10B**
Complete Application Date: **November 18, 2010**

Primary SIC Code: **8221**
Division of Air Quality, **Raleigh Regional Office**
Regional Office Address: **3800 Barrett Drive**
Raleigh, North Carolina 27609

Permit issued this the Xth day of April, 2011

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

SECTION 2: SPECIFIC LIMITATIONS AND CONDITIONS

2.1- Emission Source(s) Specific Limitations and Conditions
(Including specific requirements, testing, monitoring, recordkeeping, and
reporting requirements)

2.2- Multiple Emission Source(s) Specific Limitations and Conditions
(Including specific requirements, testing, monitoring, recordkeeping, and
reporting requirements)

SECTION 3: GENERAL PERMIT CONDITIONS

ATTACHMENTS

Insignificant Activities

List of Acronyms

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

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

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
Boilers and Heaters			
ES-001-Boiler #6 NSPS, Subpart Db 2D .1100 Case by Case MACT	One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI) ^a -fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity	CD-004.2 CD-004.1	One bagfilter with 36,614 square feet of filter surface area Calcium carbonate injection system
ES-002-Boiler #7 NSPS, Subpart Db 2D .1100 Case by Case MACT	One coal/natural gas/No. 2 fuel oil/wood (non-CISWI)/torrified wood (non-CISWI) ^a -fired, circulating fluidized combustion boiler, 323.17 million Btu per hour heat input capacity	CD-005.2 CD-005.1	One bagfilter with 36,614 square feet of filter surface area Calcium carbonate injection system
ES-003-Boiler #8 NSPS, Subpart Db 2D .1100 Case by Case MACT PSD [40 CFR 51.166 (a) through (i) and (s)]	One natural gas/No. 2 fuel oil-fired boiler, 338 million Btu per hour heat input capacity	None	None
ES-004-Boiler #9 NSPS, Subpart Db 2D .1100 Case by Case MACT PSD [40 CFR 51.166 (a) through (i) and (s)]	One natural gas/No. 2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity	None	None
ES-005-Boiler #10 NSPS, Subpart Db 2D .1100 Case by Case MACT PSD [40 CFR 51.166 (a) through (i) and (s)]	One natural gas/No. 2 fuel oil-fired boiler, 249 million Btu per hour heat input capacity	None	None
ES-SB-6 2D .1100 Case by Case MACT	One natural gas-fired boiler; 2.52 million Btu per hour heat capacity	None	None
ES-SB-15 2D .1100 Case by Case MACT	One natural gas-fired water heater; 0.950 million Btu per hour heat capacity	None	None
One coal handling, conveying, crushing, and storage system consisting of: NSPS, Subpart Y			
ES-010.1 NSPS	One enclosed railcar dump pit,	CD-018	Wet spray dust suppression systems (100 gal per min. injection rate in each hopper)
ES-010.2 NSPS	One enclosed railcar dump pit,		
ES-010.3 NSPS	One enclosed railcar dump pit,		
ES-1 NSPS	One coal silo,	CD-011	One bagfilter with 533 square feet of filter surface area

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-2 NSPS	One coal silo	CD-012	One bagfilter with 533 square feet of filter surface area
ES-3.1 NSPS	One silo feed conveyor	CD-019	One bagfilter with 1598 square feet of filter surface area
ES-3.2 NSPS	One silo feed conveyor		
ES-3.3 NSPS	One silo feed conveyor		
ES-3.4 NSPS	One silo feed conveyor		
ES-3.5 NSPS	One silo feed conveyor		
ES-010A NSPS	One coal crusher building,	CD-013	One bagfilter with 1330 square feet of filter surface area
One ash handling, storage, and loading system consisting of:			
ES-030	One ash storage silo equipped with dry loadout system,	CD-031	One bagfilter with 577 square feet of filter surface area
ES-030A	Enclosed wet ash loadout system,	CD-032	Water injection system (8.64 gal per min. injection rate)
Storage Tanks			
ES-T-001	One No. 2 fuel oil storage tank (500,000 gallons capacity),	None	None
ES-T-002	One No. 2 fuel oil storage tank (500,000 gallon capacity),	None	None
ES-T-003	One No. 2 fuel oil storage tank (184,200 gallon capacity) located at the Manning Drive Steam Plant	None	None
ES-T-004	One No. 2 fuel oil storage tank (184,200 gallon capacity) located at the Manning Drive Steam Plant	None	None
Emergency Generators			
ES-EG#1 MACT **	One diesel-fired emergency generator (900 kW), located at the EPA Building,	None	None
ES-EG#2 MACT **	One diesel-fired emergency generator (1600 kW), located at the Thurston Bowles Building,	None	None
ES-EG#3 MACT **	One diesel-fired emergency generator (728 kW), located at the Lineberger Cancer Research Building,	None	None
ES-EG#4 MACT **	One diesel-fired emergency generator (1000 kW) located at Taylor Hall,	None	None
ES-EG#5 MACT **	One diesel-fired emergency generator (910 kW) located at the Neuroscience Research Building,	None	None
ES-EG#6 MACT **	One diesel-fired emergency generator (1500 kW) located at the Medical Biomolecular Research Building,	None	None
ES-EG#7 MACT * PSD {40 CFR 51.166 (a) through (i) and (s)}	One diesel-fired emergency generator (1,250 kW) located at the Michael Hooker Research Center,	None	None

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
ES-EG#8 MACT * PSD {40 CFR 51.166 (a) through (i) and (s)}	One diesel-fired emergency generator (800 kW) located at Chapman Hall,	None	None
ES-EG#9 MACT * PSD {40 CFR 51.166 (a) through (i) and (s)}	One diesel-fired emergency generator (1,000 kW) located at the Caudill Labs,	None	None
ES-EG#10 MACT * PSD {40 CFR 51.166 (a) through (i) and (s)}	One diesel-fired emergency generator (800 kW) located at Bondurant Hall,	None	None
ES-EG#11 MACT * PSD {40 CFR 51.166 (a) through (i) and (s)}	One diesel-fired emergency generator (1,750 kW) located at the Burnett-Womack Building	None	None
ES-EG#12 MACT * PSD {40 CFR 51.166 (a) through (i) and (s)}	One diesel-fired emergency generator (1,250 kW) located at the Mary Ellen Jones Building	None	None
ES-EG#13 MACT *, NSPS PSD {40 CFR 51.166 (a) through (i) and (s)}	One diesel-fired emergency generator (2,000 kW) located at the Genetic Medicine Building	None	None
ES-EG#14 MACT * PSD {40 CFR 51.166 (a) through (i) and (s)}	One diesel-fired emergency generator (900 kW) located at the 440 West Franklin Building	None	None
ES-EG#15 MACT * PSD {40 CFR 51.166 (a) through (i) and (s)}	One diesel-fired emergency generator (2,000 kW) located at the Rams Head Center	None	None
ES-EG#16 MACT * PSD {40 CFR 51.166 (a) through (i) and (s)}	One diesel-fired emergency generator (2,000 kW) located at the ITS Building	None	None
ES-EG#17 * MACT, NSPS	One diesel-fired emergency generator (1000 kW) located at the Brinkhous-Bullitt Building	None	None
ES-EG#18 * MACT, NSPS	One diesel-fired emergency generator (1000 kW) located at Venable Hall	None	None
ES-EG#19 * MACT, NSPS	One diesel-fired emergency generator (2500 kW) located at the Imaging Research Bldg.	None	None
ES-EG#20 * MACT, NSPS	One diesel-fired emergency generator (2000 kW) located at the Genomic Science Bldg.	None	None
Non-emergency generators (operated 8,760 hours per year)			
ES-006 PSD, MACT * {40 CFR 51.166 (a) through (i) and (s)}	One No. 2 fuel oil-fired, compression ignition, generator (2,000 kW) located at the Cogeneration Facility.	None	None
ES-007 PSD, MACT * {40 CFR 51.166 (a) through (i) and (s)}	One No. 2 fuel oil-fired, compression ignition, generator (2,000 kW) located at the Cogeneration Facility.	None	None

* MACT, Subpart ZZZZ, (new classification) ; ** MACT, Subpart ZZZZ, (existing classification)

Additionally, as per the application and for the purpose of NC Toxics applicability, the Permittee is allowed to only combust unadulterated wood/wood pellets and torrefied wood generated from unadulterated wood with no process additives.

Finally, as per the application and for the purpose of CISWI NSPS applicability, the Permittee is allowed to only combust wood and torrefied wood that is not "solid waste".

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

2.1 - Emission Source(s) and Control Device(s) Specific Limitations and Conditions

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

- A. Two coal/natural gas/No. 2 fuel oil/wood (non-CISWI)^a/torrefied wood (non-CISWI)^a-fired, circulating fluidized combustion boilers (323.17 million Btu per hour heat input capacity each, ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7, NSPS-Subpart Db) with associated bagfilters (ID Nos. CD-004 and 005)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	$E_c = [(0.276)(Q_w) + (0.174)(Q_o)]/Q_t$ <p> E_c = emission limit (lbs/million Btu); Q_w = actual wood heat input; Q_o = actual heat input other than wood heat input; and $Q_t = Q_w + Q_o$ </p>	15A NCAC 2D .0503
Particulate matter	<p>Coal alone or in combination with No. 2 fuel, wood, or torrefied wood: 0.051 lbs/million Btu heat input each boiler</p> <p>Wood and/or Torrefied Wood alone or in combination with No. 2 fuel or natural gas: 0.10 lbs/million Btu heat input each boiler</p>	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db §60.43b (a)(1) and (c)
Particulate matter	Operation standards See Multiple Emission Section 2.2	15A NCAC 2D .0614 Compliance Assurance Monitoring
Sulfur dioxide	<p>Firing of coal and fuel oil, alone or in combination 0.2 lbs sulfur dioxide per million Btu heat input -or-</p> <p>Sulfur dioxide emissions shall not be in excess of ten percent of the potential sulfur dioxide emission rate (90 percent reduction) and shall not contain sulfur dioxide in excess of the rate calculated by the following formula</p> $E_s = \frac{(K_a H_a + K_b H_b)}{(H_a + H_b)}$ <p> E_s = sulfur dioxide emission limit (lbs/million Btu) K_a = 1.20 lbs/million Btu K_b = 0.80 lbs/million Btu H_a = heat input from the combustion of coal H_b = heat input from the combustion of oil </p>	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db §60.42b (a)
Sulfur dioxide	<p>Natural gas firing only 2.3 lbs/million Btu per heat input</p>	15A NCAC 2D .0516

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	See Multiple Emissions Section 2.2	15A NCAC 2D .0501(e)
Nitrogen dioxide	Coal-firing only 0.60 lbs/million Btu heat input	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db §60.44b (a)
Nitrogen dioxide	Natural gas/No. 2 fuel oil-firing only 0.10 lbs/million Btu heat input	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db, §60.44b (a)
Nitrogen dioxide	Combined fuel firing $E_n = \frac{[(EL_{go} H_{go}) + (EL_c H_c)]}{H_{go} + H_c}$ E _n = nitrogen oxides emission limit (lbs/million Btu) EL _{go} = 0.10 lbs/million Btu H _{go} = heat input from the combustion of natural gas or distillate fuel (lbs/million Btu) EL _c = 0.60 lbs/million Btu H _c = heat input from the combustion of coal	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db, §60.44b (b)
Nitrogen dioxide	See Multiple Emissions Section 2.2	15A NCAC 2D .2400 (CAIR)
Opacity	Coal/No. 2 fuel oil/natural gas firing/wood/torried wood Less than or equal to 20 percent opacity	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db, §60.43b (f) & (g)
HAPs	From coal firing: <ul style="list-style-type: none"> Filterable PM: 0.08 lbs/MMBtu Mercury (Hg): 3.0e-06 lbs/MMBtu Hydrogen Chloride-Equivalent (HCl): 435.5 lbs/hr CO: 133 ppmvd, corrected to 7% O₂ From No. 2 fuel oil firing: <ul style="list-style-type: none"> Filterable PM: 0.014 lbs/MMBtu Mercury (Hg): 3.0e-06 lbs/MMBtu CO: 30 ppmvd, corrected to 7% O₂ From natural gas firing: <ul style="list-style-type: none"> CO: 66 ppmvd, corrected to 7% O₂ From wood or torried wood firing: <ul style="list-style-type: none"> Filterable PM: 0.39 lbs/MMBtu Mercury (Hg): 5.0e-06 lbs/MMBtu Hydrogen Chloride-Equivalent (HCl): 435.5 lbs/hr CO: 834 ppmvd, corrected to 7% O₂ 	15A NCAC 2D .1109 [CAA § 112(j)]

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

- a. Emissions of particulate matter from these boilers (ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7) shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 2D .0503 and 15A NCAC 2D .0504]

$$E_c = [(0.276)(Q_w) + (0.174)(Q_o)]/Q_t$$

Where;

Ec = emission limit for combined firing (pound per mmBtu);

Qw = actual wood heat input (including torrefied wood);

Qo = actual heat input other than wood heat input; and

Qt = Qw + Qo

Testing [15A NCAC 2D .0501(c)(3)]

- 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. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

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

- c. To assure compliance, the Permittee shall follow the NSPS monitoring, recordkeeping, and reporting requirements per Specific Conditions 2.1 A. 2. f through e. In addition to any other recordkeeping required by 40 CFR § 60.48b or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of natural gas fired during **each month**.
- d. The Permittee shall submit a summary report of the fuel records by January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

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

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

Emission Limitations [15A NCAC 2D .0524]

- b. **Particulate Matter** - The maximum particulate emissions from the firing of coal alone or in combination with No. 2 fuel oil, wood and/or torrefied wood shall not exceed **0.051 pounds per million Btu heat input**.
The maximum particulate emissions from the firing of wood and/or torrefied wood alone or in combination with No. 2 fuel oil and/or natural gas shall not exceed **0.10 pounds per million Btu heat input**.
- c. **Sulfur Dioxide** - The maximum sulfur dioxide emissions from the firing of coal and fuel oil, alone or in combination with wood and/or torrefied shall not be in excess of **0.2 pounds per million Btu heat input or** ten percent of the potential sulfur dioxide emission rate (ninety percent reduction) and shall not contain sulfur dioxide in excess of the rate calculated by the following formula:

$$E_s = \frac{(K_a H_a + K_b H_b)}{(H_a + H_b)}$$

E_s = sulfur dioxide emission limit (lbs/million Btu heat input)

K_a = 1.20 lbs/million Btu heat input

K_b = 0.80 lbs/million Btu heat input

H_a = heat input from the combustion of coal in million Btu

H_b = heat input from the combustion of oil in million Btu

- d. **Nitrogen Dioxide** -
 - i. The maximum nitrogen dioxide emissions when firing coal shall not exceed **0.60 pounds per million Btu heat input** for boilers with a low heat release rate.
 - ii. The maximum nitrogen dioxide emissions when firing natural gas or No. 2 fuel oil shall not exceed **0.10 pounds per million Btu heat input** for boilers with a low heat release rate.

- iii. When firing combined fuels in boilers (ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7), compliance is achieved in accordance with the formula listed in 40 CFR 60.44b (b).
- e. **Opacity** - When firing coal, No. 2 fuel oil, or natural gas, each boiler shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (six-minute average), except for one six-minute period per hour of not more than 27 percent opacity.

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

- f. A continuous emissions monitor for sulfur dioxide, nitrogen dioxide, and opacity emissions shall be installed, calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60, Appendix B "Performance Specifications", and Appendix F "Quality Assurance Procedures."

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

- g. In addition to any other recordkeeping required by 40 CFR § 60.49b or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of each fuel fired during **each day** when firing coal or No. 2 fuel oil.

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

- h. In addition to any other reporting required by 40 CFR § 60.49b or notification requirements to the EPA, the Permittee is required to **NOTIFY** the DAQ in **writing** of the following:
 - i. Any excess opacity emission reports as measured by the continuous emission monitor (CEM), by January 30, April 30, July 30, and October 30 of each calendar year for the preceding three-month period. If there are no excess emissions during the calendar quarter, the Permittee shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.
 - ii. All records required under this section shall be maintained by the owner or operator of an affected facility for a period of two years following the date of such record.

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

- a. Emissions of sulfur dioxide from each boiler (ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7) 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 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. If the results of this test are above the limit provided in Section 2.1 A.3.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

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

- c. In addition to any other recordkeeping required by 40 CFR § 60.49b or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of natural gas fired during **each month** in boilers (ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7).

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

- d. The Permittee shall submit a summary report of the fuel records by January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 2D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters

- a. Emissions of the following regulated pollutants shall not exceed the emissions limits listed below for the affected boilers (**ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7**):

Pollutant	Emission Limits For Each Fuel Fired In Boilers #6 and #7 ²			
	Coal	Wood/Torrified Wood	No. 2 Fuel Oil	Natural Gas
Filterable PM	0.08 lb/MMBtu	0.39 lb/MMBtu	0.014 lb/MMBtu	
Mercury (Hg):	3.0e-06 lb/MMBtu	3.0e-06 lb/MMBtu	5.0e-06 lb/MMBtu	
Hydrogen Chloride-equivalent (HCl) ¹ :	435.5 lbs/hr	435.5 lbs/hr		
Carbon Monoxide (CO): 30-day average corrected to 7% oxygen	133 ppmvd,	834 ppmvd,	30 ppmvd,	66 ppmvd,

- HCl-equivalent is defined by the following equation:

$$E = E_{HCl} + E_{Cl_2} * (RfC_{HCl} / RfC_{Cl_2})$$

Where:

- E = HCl-equivalent emission rate (in lbs/hr);**
- E_{HCl} = Hydrogen chloride emission rate (in lbs/hr);**
- E_{Cl₂} = Chlorine emission rate (in lbs/hr);**
- RfC_{HCl} = Reference concentration for HCl (20 µg/m³); and**
- RfC_{Cl₂} = Reference concentration for Cl₂ (0.20 µg/m³)**

- Weighted Emission Limit Based on Heat Input of Fuel

When two or more fuels are fired in the boiler and each represent at least 10% of the heat input to the boiler, the emission limit shall be proportional to heat input of each fuel. For example, the CO emission limitation, in ppmvd, corrected to 7% O₂, measured on a 30-day average, is calculated as follows:

$$E_{CO} = [(834)(W) + (133)(C) + 30(DFO) + 66(NG)] / (W + C + DFO + NG)$$

Where:

- E_{CO} = CO emission limitation in ppmvd, corrected to 7% oxygen
- W = heat input of wood and torrefied wood in million Btus per hour;
- C = heat input of coal in million Btus per hour,
- DFO = heat input of distillate No. 2 fuel oil in million Btu per hour; and
- NG = heat input of natural gas in million Btus per hour.

- The emissions limitations for a specific fuel type in Section 2.1. A.4. a above shall only apply when the Permittee fires at least 10% of that fuel in the boiler on a 12-month rolling average heat input basis. If the Permittee fires less than 10% of a specific fuel in the boiler, the respective emissions limitations and the associated testing, monitoring, and recordkeeping for that particular fuel shall not apply. However, the Permittee shall retain records of the fuels fired in the boiler in accordance with Section 2.1.A.4.r. below. **The initial compliance date for these emission limitations and associated monitoring, recordkeeping, and reporting requirements is February 3, 2013.** These conditions need not be included on the annual compliance certification until after the initial compliance date.

Operating Standards

- To assure compliance with the filterable PM and mercury limitations, while firing coal/wood the exhaust from the boiler stack shall not be greater than 20 percent opacity (six-minute average), except for one six-minute period per hour of not more than 27 percent opacity.
- To assure compliance with the mercury and HCl-equivalent limitations, while firing coal the Permittee shall maintain the sorbent injection rate at or above the operating limit (on a lbs coal(and/or wood)/lbs

sorbent injection basis) set in accordance with Section 2.1.A.4.f. below.

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

- e. No testing is required to demonstrate compliance with the emissions limitations associated with natural gas and No. 2 fuel oil firing.
- f. **Initial Testing Requirement.** The Permittee shall conduct an initial compliance test while firing coal within 180 days of the initial compliance date, unless the NC DAQ – SSCB approves a previously conducted performance test as an equivalent compliance demonstration. Testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. In addition, the tests shall be consistent with the following test methods, unless otherwise approved by the NC DAQ – SSCB:
The Permittee shall be deemed in non-compliance with 15A NCAC 2D .1109 if the required tests are not conducted, or if the results of the emissions tests exceed the limits in Section 2.1.A.4.a. above.
- g. The Permittee shall establish the minimum sorbent injection rate (in lbs coal(and/or wood) fired/lb sorbent injection) during the initial performance test. During the test, the Permittee shall collect sorbent injection rate data every 15 minutes during the entire period of the performance test. The average sorbent injection rate shall be determined for each individual test run in the 3-run test by computing the average of all 15-minute readings taken during each test run.
 - i. Except as provided in ii. below, the Permittee shall submit an application for a permit modification within 60 days of approval of the stack test to incorporate the minimum sorbent injection rate into the permit. This modification may be made by administrative amendment.
 - ii. If the SSCB approves a prior performance test to establish the sorbent injection rate, the Permittee shall submit an application for a permit modification prior to the initial compliance date for this standard. This modification may be made by administrative amendment.
- h. **Annual Testing.** The Permittee must conduct **all applicable performance tests** on an annual basis, unless it meets the requirements listed in i. through iii. below. Annual performance tests, if required, must be completed between 11 and 13 months after the previous performance test.
 - i. The Permittee may conduct performance tests less often for a given pollutant if the performance tests for at least 3 consecutive years show the emission rate is less than or equal to 80 percent of the allowable emission limit. In this case, the Permittee need not conduct a performance test for that pollutant for the next 2 years, but must conduct a performance test during each third year and no more than 36 months after the previous performance test.
 - ii. If the affected boiler or process heater continues to remain at or below 80 percent of the allowable emission rate, the Permittee may conduct performance tests every third year, but each such performance test must be conducted no more than 36 months after the previous performance test.
 - iii. If a performance test shows emissions at greater than 80% of the allowable limit, the Permittee must conduct annual performance tests for that pollutant until all performance tests over a consecutive 3-year period show compliance.

The Permittee must report the results of performance test within 60 days after the completion of the performance tests or fuel analyses. This report should also verify that the operating limits for the affected sources have not changed or provide documentation of revised operating parameters.

- i. **Site-Specific Monitoring Plan** [15A NCAC 2Q .0508(f)]

The Permittee must develop a site-specific monitoring plan for each required continuous monitoring system (CMS). The plan shall be submitted to the NC DAQ-SSCB at least 60 days before the initial performance evaluation of the CMS.

Monitoring [15A NCAC 2Q .0508(f)] **For limits associated with Coal and Wood-Firing, Only.**

- j. The Permittee must install, operate, and maintain a continuous emission monitoring system (CEMS) for carbon monoxide and oxygen according to the procedures listed in i. through viii. below. The carbon monoxide and oxygen shall be monitored at the same location at the outlet of the boilers.
 - i. The CEMS must be installed, operated, and maintained according to the applicable procedures under Performance Specification (PS) 3 or 4A of 40 CFR 60, Appendix B, and according to the site-specific monitoring plan required in Section 2.1.A.4.h. above.
 - ii. Conduct a performance evaluation of each CEMS according to the requirements in 40 CFR 63.8 and

- according to PS 4A of 40 CFR 60, Appendix B.
- iii. The CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.
 - iv. The CEMS data must be reduced as specified in 40 CFR 63.8(g)(2).
 - v. The Permittee must calculate and record a 30-day rolling average emission rate on a daily basis. A new 30-day rolling average emission rate is calculated as the average of all of the hourly CO emission data for the preceding 30 operating days.
 - vi. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.
 - vii. For purposes of calculating data averages, the Permittee may not use data recorded during periods of monitoring malfunctions, associated repairs, out-of-control periods, required quality assurance or control activities, or when the boiler or process heater is operating at less than 50 percent of its rated capacity. The Permittee must use all the data collected during all other periods in assessing compliance. Any period for which the monitoring system is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.
 - viii. A 30-day rolling average emission rate above the applicable emission limitation shall constitute a violation of the standard.
- k. The Permittee must install, operate, certify and maintain the continuous opacity monitoring system (COMS) according to the procedures listed below.
- i. The COMS must be installed, operated, and maintained according to PS 1 of 40 CFR 60, Appendix B.
 - ii. Conduct a performance evaluation of the COMS according to the requirements in 40 CFR 63.8 and according to PS 1 of 40 CFR 60, Appendix B.
 - iii. As specified in 40 CFR 63.8(c)(4)(i), the COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.
 - iv. The COMS data must be reduced as specified in 40 CFR 63.8(g)(2).
 - v. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), monitor continuously (or collect data at all required intervals) at all times that the affected source is operating.
 - vi. Include in the site-specific monitoring plan, required pursuant to Section 2.1.A.4.h. above, procedures and acceptance criteria for operating and maintaining the COMS according to the requirements in 40 CFR 63.8(d). At a minimum, the monitoring plan must include a daily calibration drift assessment, a quarterly performance audit, and an annual zero alignment audit of each COMS.
 - vii. Operate and maintain the COMS according to the requirements in the monitoring plan and the requirements of 40 CFR 63.8(e). Identify periods the COMS is out-of-control including any periods that the COMS fails to pass a daily calibration drift assessment, a quarterly performance audit, or an annual zero alignment audit.
 - viii. Determine and record all the 6-minute averages (and 1-hour block averages as applicable) collected for periods during which the COMS is not out of control.
- l. The Permittee must install, operate, and maintain continuous parameter monitoring systems (CPMS) to monitor sorbent injection rate at the limestone injection systems according to the procedures listed below.
- i. Locate the devices in a position that provide a representative measurement of the total sorbent injection rate.
 - ii. Install and calibrate the devices in accordance with manufacturer's procedures and specifications.
 - iii. At least annually, calibrate the device in accordance with the manufacturer's procedures and specifications.
 - iv. The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. A valid hour of data must have a minimum of four successive cycles of operation.
 - v. Except for monitoring malfunctions, associated repairs, and required quality assurance or control

activities (including, as applicable, calibration checks and required zero and span adjustments), conduct all monitoring in continuous operation at all times that the affected unit is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

- vi. For purposes of calculating data averages, the Permittee may not use data recorded during monitoring malfunctions, associated repairs, out-of-control periods, or required quality assurance or control activities. The Permittee must use all the data collected during all other periods in assessing compliance. Any period for which the monitoring system is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.
- vii. Determine the 3-hour block average of all recorded readings, except as provided in paragraph vi. above.
- viii. Record the results of each inspection, calibration, and validation check.
- ix. Operation below the established minimum operating limits on a 3-hour average basis shall constitute a violation of established operating limits.

Boiler Inspection and Maintenance [15A NCAC 2Q .0508(f)]

For No. 2 Fuel Oil and Natural Gas-Firing Only

- 1. If less than 10% coal and less than 10% wood or torrefied wood is fired in a boiler on a 12-month average heat input basis and the Permittee has not performed the monitoring in Section 2.1. A.4 i through k above, the Permittee shall perform an annual inspection of the boiler and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
 - i. Inspect the burners, and clean or replace any components of the burners as necessary;
 - ii. Inspect the flame pattern and make any adjustments to the burners 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.
 - iv. The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement.
- m. The results of any required annual burner 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 2D .1109 if the required boiler inspection and maintenance records are not maintained.

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

- n. Maintain copy of each notification and report required by this standard, including all documentation supporting any Notification of Compliance Status.
- o. Maintain records of performance tests or other compliance demonstrations, CMS performance evaluations, and opacity observations.
- p. For each required CEMS, CPMS, and COMS, maintain the following records:
 - i. All required measurements needed to demonstrate compliance with a relevant standard (including, but not limited to, 15-minute averages of CMS data, raw performance testing measurements, and raw performance evaluation measurements, that support data that the source is required to report);
 - ii. A record of each period during which a CMS is malfunctioning or inoperative (including out-of-control periods);
 - iii. All CMS calibration checks; and,
 - iv. All adjustments and maintenance performed on CMS;
 Maintain records of all monitoring data and calculated averages for applicable operating limits, including opacity, carbon monoxide, and sorbent injection rate used to demonstrate compliance with the standard.

- q. For each affected source, maintain records of monthly fuel use by each affected source, including the type(s) of fuel fired and amount(s) used.
- r. If the Permittee limits the firing of a specific fuel to less than 10% on 12-month average heat input basis, he shall create and retain the following records at least once per calendar month:
 - i. Record the fuel use by each affected source, including the type(s) of fuel and amount(s) used, during the previous calendar month; and,
 - ii. Calculate the 12-month average heat input from each fuel for each affected source during the previous 12-month period.

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

- s. **Notification of Compliance Status.** The Permittee must submit a Notification of Compliance Status that meets the requirements of 40 CFR 63.9(h)(2)(ii) before the close of business on the 60th day following the completion of the final required performance test and/or other initial compliance demonstration. The Notification of Compliance Status report must contain the following information, as applicable:
 - i. A description of the affected source(s) including identification of which subcategory the source is in, the capacity of the source, a description of the add-on controls used on the source description of the fuel(s) burned, and justification for the fuel(s) burned during the performance test.
 - ii. Summary of the results of all performance tests, fuel analyses, and calculations conducted to demonstrate initial compliance including all established operating limits.
 - iii. Identification of whether the facility is complying with the PM emission limit or the alternative TSM emission limit.
 - iv. Identification of whether the facility demonstrated compliance with each applicable emission limit through performance testing or fuel analysis.
 - v. Identification of whether the facility plans to demonstrate compliance by emissions averaging.
 - vi. A certification signed by the Responsible Official that the facility has met all applicable emission limits and work practice standards.
 - vii. A summary of the CO emissions monitoring data and the maximum CO emission levels recorded during the performance test to show that the facility has met any applicable work practice standard.
 - viii. If the affected source fires only gaseous fuel and/or distillate fuel oil, include a certification of such that is signed by the Responsible Official.
- t. **Semiannual Summary Report.** The Permittee shall submit a summary report 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. The first summary report shall be required on **July 30, 2013**. The report shall include the following:
 - i. Company name and address;
 - ii. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
 - iii. Date of report and beginning and ending dates of the reporting period;
 - iv. The total fuel use by each affected source for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with units of measure;
 - v. A summary of the results of the annual performance tests and documentation of any operating limits that were reestablished during this test, if applicable;
 - vi. A signed statement indicating that no new types of fuel were fired in the affected sources;
 - vii. Identification of any startup, shutdown, or malfunction events that were reported in accordance with 15A NCAC 2D .0535;
 - viii. If there are no deviations with this standard, a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period;
 - ix. If there were no periods during which the CMSs, including CEMS, COMS, and CPMS, were out of control as specified in 40 CFR 63.8(c)(7), a statement that there were no periods during which the CMSs were out of control during the reporting period; and,
 - x. All instances of deviations from the requirements of this permit must be clearly identified.

**5. 15A NCAC 02Q. 0317: AVOIDANCE CONDITION for
15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION
THIS CONDITION IS NOT SHIELDED PURSUANT TO 15A NCAC 02Q .0512(a).**

- a. In order to avoid applicability of 15A NCAC 02D .0530(g) based on the addition of wood and/or torrefied wood as permitted fuels, the above emission sources (ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7) shall discharge into the atmosphere less than 599.1 tons of nitrogen oxides per consecutive 12-month period. This condition becomes effective once the facility burns wood and/or torrefied wood in either source (but no earlier than July 1, 2010). [15A NCAC 02D .0530]

Testing [15A NCAC 02Q .0501 (c)(4)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with 15A NCAC 02D .0501(c)(4) and General Condition JJ. If the results of this test are above the limit given in Section 2.1 A. 5. a., the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

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

- c. The use of fuel in both boilers shall be limited such that nitrogen oxides emissions shall not exceed 599.1 tons for any consecutive 12-month period. Calculations shall be made monthly and recorded in a logbook (written or electronic format).
The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the above records are not kept or if nitrogen oxides emissions exceed the limit in Section 2.1.A.5.a.

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

- d. The Permittee shall submit a summary report, acceptable to the Regional Air Quality Supervisor, of monitoring and recordkeeping activities within 30 days after each calendar year quarter, due and 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 for the calendar year for the preceding three-month period between July and September. The report shall contain the following:
- i. The monthly nitrogen oxides emissions for the previous 14 months. The emissions must be calculated for each of the 12-month periods over the previous 14 month; and
 - ii. All instances of deviations from the requirements of this permit must be clearly identified.

B. One natural gas/No. 2 fuel oil-fired boiler (338 million Btu per hour heat input capacity, ID No. ES-003-Boiler #8, NSPS-Subpart Db)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Natural or No. 2 fuel oil firing 0.174 lbs/million Btu heat input	15A NCAC 2D .0503
Sulfur dioxide	No. 2 fuel oil-firing only Burn low sulfur fuel 0.5 percent sulfur content by weight or less	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db §60.42b (j)
Sulfur dioxide	Natural gas firing only 2.3 lbs/million Btu per heat input	15A NCAC 2D .0516
Sulfur dioxide	See Multiple Emissions Section 2.2	15A NCAC 2D .0501(e)
Visible emissions	20 percent opacity	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db §60.43b (f) and (g)
Nitrogen dioxide	0.20 lbs/million Btu heat input	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db§60.44b (a)(1)
Nitrogen dioxide	See Multiple Emissions Section 2.2	15A NCAC 2D .2400 (CAIR)
HAPs	From No. 2 fuel oil firing: <ul style="list-style-type: none"> • Filterable PM: 0.014 lbs/MMBtu • Mercury (Hg): 3.0e-06 lbs/MMBtu • CO: 30 ppmvd, corrected to 7% O₂ From natural gas firing: <ul style="list-style-type: none"> • CO: 66 ppmvd, corrected to 7% O₂ 	15A NCAC 2D .1109 [CAA § 112(j)]

1. 15A NCAC 2D .0503: PARTICULATE EMISSIONS FROM FUEL BURNING INDIRECT HEAT EXCHANGERS - NATURAL GAS OR NO. 2 FUEL OIL FIRING

- a. Emissions of particulate matter from the combustion of natural gas or No. 2 fuel oil, that are discharged from this boiler (ID No. ES-003-Boiler #8) into the atmosphere shall not exceed **0.174 pounds per million Btu heat input.**

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. If the results of this test are above the limit provided in Section 2.1 B. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

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

- c. In addition to any other recordkeeping required by 40 CFR §60.48b or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of natural gas and No. 2 fuel oil fired during **each month** in boiler (ID No. ES-003-Boiler #8).

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

- d. The Permittee shall submit a summary report of the fuel records by January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART Db - WHEN FIRING NO. 2 FUEL OIL

- a. The Permittee shall comply with all applicable provisions, including the notification, testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission

Standard 15A NCAC 2D .0524 "New Source Performance Standards (NSPS) as promulgated in 40 CFR Part 60 Subpart Db, including Subpart A "General Provisions." [15A NCAC 2D .0524]

Emission Limitations [15A NCAC 2D .0524]

- b. **Sulfur Dioxide** - The maximum sulfur content of No. 2 fuel oil fired in boiler (ID No. ES-003-Boiler #8) shall not exceed **0.5 sulfur percent by weight**.
- c. **Nitrogen Dioxide** - The maximum nitrogen dioxide emissions when firing natural gas or No. 2 fuel oil shall not exceed **0.20 pounds per million Btu heat input** for boilers with a high heat release rate.
- d. **Opacity** - When firing No. 2 fuel oil, or natural gas, this boiler shall not cause to be discharged into the atmosphere any gases that exhibit greater than **20 percent opacity** (six-minute average), except for one six-minute period per hour of not more than 27 percent opacity.

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

- e. A continuous emissions monitor for nitrogen dioxide, and opacity emissions shall be installed, calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures."

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

- f. In addition to any other recordkeeping required by 40 CFR § 60.49b or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of each fuel fired during **each month** when firing No. 2 fuel oil.

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

- g. In addition to any other reporting required by 40 CFR § 60.49b or notification requirements to the EPA, the Permittee is required to **NOTIFY** the DAQ in **writing** of the following:
 - i. any excess opacity emission reports as measured by the continuous emission monitor (CEM), by January 30, April 30, July 30, and October 30 of each calendar year for the preceding three-month period. If there are no excess emissions during the calendar quarter, the Permittee shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.
 - ii. All records required under this section shall be maintained by the owner or operator of an affected facility for a period of two years following the date of such record.

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

- a. Emissions of sulfur dioxide from boiler (ID No. ES-003-Boiler #8) 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 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. If the results of this test are above the limit provided in Section 2.1 B. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping [15A NCAC 2Q .0508(f) and 15A NCAC 2D .2601(B)]

- c. In addition to any other recordkeeping required by 40 CFR § 60.49b or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of natural gas and No. 2 fuel oil fired during **each month** in boiler (ID No. ES-003-Boiler #8).

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

- d. The Permittee shall submit a summary report of the fuel records by January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for

the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

4. 15A NCAC 2D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters

- a. Emissions of the following regulated pollutants shall not exceed the emissions limits listed below for the affected boiler (**ID No. ES-003-Boiler #8**):
 - i. From No. 2 fuel oil firing:
 - (A) Filterable PM: 0.014 lbs/MMBtu
 - (B) Mercury (Hg): 3.0e-06 lbs/MMBtu
 - (C) Carbon Monoxide (CO): 30 ppmvd, corrected to 7% oxygen
 - ii. From natural gas firing:
 - (A) Carbon Monoxide (CO): 66 ppmvd, corrected to 7% oxygen

The initial compliance date for these emission limitations and associated monitoring, recordkeeping, and reporting requirements is February 3, 2013. These conditions need not be included on the annual compliance certification until after the initial compliance date.

Boiler Inspection and Maintenance [15A NCAC 2Q .0508(f)]

- b. The Permittee shall perform an annual inspection of the boilers and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
 - i. Inspect the burners, and clean or replace any components of the burners as necessary;
 - ii. Inspect the flame pattern and make any adjustments to the burners 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.
 - iv. The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement.
- c. The results of any required annual burner 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 2D .1109 if the required boiler inspection and maintenance records are not maintained.

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

- d. To assure compliance, each calendar month the Permittee shall create and retain a record of the amounts of each fuel fired in the affected boiler during the previous calendar month. The monthly fuel combustion records shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if these records are not maintained or if the boiler fires a fuel other than natural gas or No. 2 fuel oil.

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

- e. Semiannual Summary Report. The Permittee shall submit a summary report 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. The first summary report shall be required on **July 30, 2013**. The report shall include the following:
 - i. Company name and address;
 - ii. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
 - iii. Date of report and beginning and ending dates of the reporting period;
 - iv. The total fuel use by each affected source for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with

units of measure;

- v. A signed statement indicating that no new types of fuel were fired in the affected sources; and,
- vi. All instances of deviations from the requirements of this permit must be clearly identified.

C. Two natural gas/No. 2 fuel oil-fired boilers (249 million Btu per hour heat input capacity each, ID Nos. ES-004-Boiler#9 and ES-005-Boiler#10, NSPS-Subpart Db) located at the Manning Drive Steam Plant

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate matter	Natural or No. 2 fuel oil firing 0.164 lbs/million Btu heat input	15A NCAC 2D .0503
Sulfur dioxide	No. 2 fuel oil-firing only Burn low sulfur fuel 0.3 percent sulfur content by weight or less	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db §60.42b (j)
Sulfur dioxide	Natural gas firing only 2.3 lbs/million Btu per heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db, §60.43b (f) and (g)
Nitrogen dioxide	0.20 lbs/million Btu heat input	15A NCAC 2D .0524 40 CFR Part 60, Subpart Db, §60.44b (a)(1)
HAPs	From No. 2 fuel oil firing: <ul style="list-style-type: none"> • Filterable PM: 0.014 lbs/MMBtu • Mercury (Hg): 3.0e-06 lbs/MMBtu • CO: 30 ppmvd, corrected to 7% O₂ From natural gas firing: <ul style="list-style-type: none"> • CO: 66 ppmvd, corrected to 7% O₂ 	15A NCAC 2D .1109 [CAA § 112(j)]

1. 15A NCAC 2D .0503: PARTICULATE EMISSIONS FROM FUEL BURNING INDIRECT HEAT EXCHANGERS - NATURAL GAS OR NO. 2 FUEL OIL FIRING

- a. Emissions of particulate matter from the combustion of natural gas or No. 2 fuel oil that are discharged from boilers (ID Nos. ES-004-Boiler #9 and ES-005-Boiler #10) into the atmosphere shall not exceed **0.164 pounds per million Btu heat input**. [15A NCAC 2D .0503(a)]

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. If the results of this test are above the limit provided in Section 2.1 C. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0503.

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

- c. No monitoring, recordkeeping, or reporting is required for particulate emissions from the firing of natural gas or No. 2 fuel oil in any boiler.

2. 15A NCAC 2D .0524: NSPS 40 CFR PART 60 SUBPART Db - WHEN FIRING NO. 2 FUEL OIL (For boilers installed after February 28, 2005)

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

Emission Limitations [15A NCAC 2D .0524]

- b. **Sulfur Dioxide** - The maximum sulfur content of No. 2 fuel oil fired in each boiler (ID No. ES-004-Boiler #9 or ES-005-Boiler#10) shall not exceed **0.3 sulfur percent by weight**.
- c. **Nitrogen Dioxide** - The maximum nitrogen dioxide emissions when firing natural gas or No. 2 fuel oil shall not exceed **0.20 pounds per million Btu heat input** for boilers with a high heat release rate.
- d. **Particulate** – Boilers (ID Nos. ES-004-Boiler#9 and ES-005-Boiler#10) will burn fuel oil that contains no more than 0.3 weight percent sulfur, or will burn natural gas that does not have a PM standard under §60.43b, and these boilers do not use a post-combustion technology to reduce SO₂ or PM emissions. Therefore, these boilers are not subject to the PM limits under §60.43b(h)(1).
- e. **Opacity** - When firing No. 2 fuel oil, or natural gas, each boiler shall not cause to be discharged into the atmosphere any gases that exhibit greater than **20 percent opacity** (six-minute average), except for one six-minute period per hour of not more than 27 percent opacity.

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

- f. A continuous emissions monitor for nitrogen dioxide, and opacity emissions shall be installed, calibrated, maintained, tested, and operated in accordance with 40 CFR Part 60 Appendix B "Performance Specifications" and Appendix F "Quality Assurance Procedures."

The owner or operator of an affected facility who elects to demonstrate that the affected facility combust only very low sulfur oil under §60.42b (j)(2) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier which certify that the oil meets the definition of distillate oil as defined in §60.41b.

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

- g. In addition to any other recordkeeping required by 40 CFR § 60.49b or recordkeeping requirements of the EPA, the Permittee shall record and maintain records of the amounts of each fuel fired during **each month** when firing No. 2 fuel oil.

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

- h. In addition to any other reporting required by 40 CFR § 60.49b or notification requirements to the EPA, the Permittee is required to **NOTIFY** the DAQ in **writing** of the following:
 - i. Any excess opacity emission reports as measured by the continuous emission monitor (CEM), by January 30, and July 30 each calendar year for the preceding **six-month period**. If there are no excess emissions during the calendar quarter, the Permittee shall submit a report semiannually stating that no excess emissions occurred during the semiannual reporting period.
 - ii. The owner or operator of an affected facility who elects to demonstrate that the affected facility combust only very low sulfur oil under §60.42b (j)(2) shall obtain and maintain at the affected facility fuel receipts from the fuel supplier which certify that the oil meets the definition of distillate oil as defined in §60.41b.
 - iii. The owner or operator of each affected facility subject to the sulfur dioxide, particulate matter, and/or nitrogen oxides emissions limits under §§60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in appendix B. The owner or operator of each affected facility described in §60.44b(j) or §60.44b(k) shall submit to the Administrator the maximum heat input capacity data from the demonstration of the maximum heat input capacity of the affected facility.
 - iv. All records required under this section shall be maintained by the owner or operator of an affected facility for a period of two years following the date of such record.

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

-When firing Natural Gas-

- a. Emissions of sulfur dioxide from boiler (ID Nos. ES-004-Boiler #9 and ES-005-Boiler #10) 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 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. If the results of this test are above the limit provided in Section 2.1 C. 3. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

Monitoring/Recordkeeping/Reporting[15A NCAC 2Q .0508(f) and 15A NCAC 2D .2601(B)]

- c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from the firing of natural gas.

4. 15A NCAC 2D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters

- a. Emissions of the following regulated pollutants shall not exceed the emissions limits listed below for the affected boilers (**ID Nos. ES-004-Boiler#9 and ES-005-Boiler#10**):

- i. From No. 2 fuel oil firing:
(A) Filterable PM: 0.014 lbs/MMBtu
(B) Mercury (Hg): 3.0e-06 lbs/MMBtu
(C) Carbon Monoxide (CO): 30 ppmvd, corrected to 7% oxygen
- ii. From natural gas firing:
(A) Carbon Monoxide (CO): 66 ppmvd, corrected to 7% oxygen

The initial compliance date for these emission limitations and associated monitoring, recordkeeping, and reporting requirements is February 3, 2013. These conditions need not be included on the annual compliance certification until after the initial compliance date.

Boiler Inspection and Maintenance [15A NCAC 2Q .0508(f)]

- b. The Permittee shall perform an annual inspection of the boilers and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
- i. Inspect the burners, and clean or replace any components of the burners as necessary;
- ii. Inspect the flame pattern and make any adjustments to the burners 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.
- iv. The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement.
- c. The results of any required annual burner 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 2D .1109 if the required boiler inspection and maintenance records are not maintained.

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

- d. To assure compliance, each calendar month the Permittee shall create and retain a record of the amounts of each fuel fired in the affected boilers during the previous calendar month. The monthly fuel combustion records shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall be deemed in

noncompliance with 15A NCAC 2D .1109 if these records are not maintained or if either boilers fires a fuel other than natural gas or No. 2 fuel oil.

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

- e. **Semiannual Summary Report.** The Permittee shall submit a summary report 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. The first summary report shall be required on **July 30, 2013**. The report shall include the following:
 - i. Company name and address;
 - ii. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
 - iii. Date of report and beginning and ending dates of the reporting period;
 - iv. The total fuel use by each affected source for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with units of measure;
 - v. A signed statement indicating that no new types of fuel were fired in the affected sources; and,
 - vi. All instances of deviations from the requirements of this permit must be clearly identified.

D. One coal handling, conveying, crushing, and storage system [NSPS] consisting of :

- * **Three enclosed railcar dump pits (ID Nos. ES-010.1, 010.2, & 010.3) with associated wet dust suppression systems (100 gallons per minute water injection rate in each hopper, ID No. CD-018),**
- * **One coal silo (ID No. ES-1) with associated bagfilter (533 square feet of filter surface area, ID No. CD-011),**
- * **One coal silo (ID No. ES-2) with associated bagfilter (533 square feet of filter surface area, ID No. CD-012),**
- * **One coal crusher building (ID No. ES-010A) with associated bagfilter (1330 square feet of filter surface area, ID No. CD-013), and**
- * **Five silo feed conveyors (ID Nos. ES-3.1, 3.2, 3.3, 3.4, & 3.5) with associated bagfilter (1598 square feet of filter surface area, ID No. CD-019)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate emissions	$E = 4.10 \times P^{0.67}$ $P < 30$ tpy; $E = 55.0 \times P^{0.11} - 40$ $P \geq 30$ tpy Where: E = allowable particulate emission rate (lbs/hr) P = process weight rate in tons/hr	15A NCAC 2D .0515
Visible emissions	20 percent opacity	15A NCAC 2D .0524 40 CFR Part 60, Subpart Y

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

- a. Emissions of particulate matter from the coal handling, conveying, crushing, and storage system shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad P < 30 \text{ tpy; and}$$

$$E = 55.0 \times P^{0.11} - 40 \quad P \geq 30 \text{ tpy}$$

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

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

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. If the results of this test are above the limit provided by the equation in Section 2.1 D. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

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

- c. Particulate matter emissions from the coal handling, conveying, crushing, and storage system shall be controlled by a bagfilters (ID Nos. CD-011, 012, and 013). To assure compliance, the Permittee shall perform the following inspections and maintenance activities:
 - i. a **monthly** external visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. an **annual** internal inspection of the bagfilter's structural integrity to be performed.The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515 if the ductwork and bagfilters are not inspected and maintained.
- d. The records of inspection and maintenance shall be maintained in a logbook, updated on a monthly basis (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 findings of each inspection; and
 - iii. the records of any maintenance performed on the bagfilter.

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

- e. The Permittee shall submit the records of any maintenance performed on the bagfilters within 30 days of receipt of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities by January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 2D .0524: 40 CFR PART 60, SUBPART Y - CONTROL OF VISIBLE EMISSIONS

- a. Visible emissions from the coal handling, conveying, crushing, and storage system shall not be more than **20 percent opacity** when in operation.

Testing [15A NCAC 2D .2601]

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

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

- c. The Permittee may operate the three enclosed railcar dump pits (ID No. 010) without concurrent operation of the wet spray dust suppression system (100 gallons per minute water injection rate, ID No. 018) during times when the received coal contains sufficient moisture to prevent visible emissions from exceeding **20 percent opacity**. During unloading operations when the wet suppression system is not in use, a currently certified visible emissions observer (EPA Method 9) shall observe the building vent emissions and record observations in a logbook (written or electronic format). The water sprays shall be turned on when any one opacity reading exceeds twenty percent.

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

- d. The records of the monitoring shall be maintained in a logbook, updated on a monthly basis (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 findings 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 records of any corrective actions performed.

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

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

E. One ash handling, storage, and loading system consisting of:

- * **One ash storage silo equipped with dry loadout system (ID No. ES-030) and associated bagfilter (ID No. CD-031)**
- * **One wet loadout system (ID No. ES-030A) with water injection system (ID No. CD-032)**

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Particulate emissions	$E = 4.10 \times P^{0.67} \quad P < 30 \text{ tpy};$ $E = 55.0 \times P^{0.11} - 40 \quad P \geq 30 \text{ tpy}$ Where: E = allowable particulate emission rate (lbs/hr) P= process weight rate in tons/hr	15A NCAC 2D .0515
Visible emissions	20 percent opacity	15A NCAC 2D .0521

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

- a. Emissions of particulate matter from the ash handling, storage, and loading system shall not exceed an allowable emission rate as calculated by the following equation:

$$E = 4.10 \times P^{0.67} \quad P < 30 \text{ tpy}; \text{ and}$$

$$E = 55.0 \times P^{0.11} - 40 \quad P \geq 30 \text{ tpy}$$

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

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

Testing [15A NCAC 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. If the results of this test are above the limit provided in Section 2.1 E. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0515.

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

- c. Particulate matter emissions from the ash storage silo shall be controlled by a bagfilter (ID No. CD-031). To assure compliance, the Permittee shall perform inspections and maintenance consisting of routine bag cleaning and replacement and pulse air system check, as recommended by the manufacturer. In addition to the manufacturer’s recommendations, the inspection and maintenance requirement shall include the following:
 - i. a **monthly** external visual inspection of the system ductwork and material collection unit for leaks; and

- ii. an **annual** internal inspection of the bagfilters' structural integrity to be performed during the period of seasonal down time.

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

- d. The records of inspection and maintenance shall be maintained in a logbook, updated on a monthly basis (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 findings of each inspection; and
 - iii. the records of any maintenance performed on the bagfilters.

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

- e. The Permittee shall submit the records of any maintenance performed on the bagfilters within 30 days of receipt of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities by January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June.

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

- a. Visible emissions from the ash handling, storage, and loading system shall not be more than **20 percent opacity** when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

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

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

- c. To assure compliance, **once a day when the system is in operation**, the Permittee shall observe the emission points of this source for any visible emissions above normal. The daily observation must be made for each day of the calendar year period to ensure compliance with this requirement. The Permittee shall be allowed three (3) days of absent observations per semi-annual period. If the emission sources is not operating, a record of this fact along with the corresponding date and time shall substitute for the daily observation. The Permittee shall establish "normal" for the source in the first 30 days following the effective date of the permit. If visible emissions from this source are observed to be above normal, the Permittee shall either: (a) be deemed to be in noncompliance with 15A NCAC 2D .0521 or (b) demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 2D .2601 is below the limit given in Section 2.1 E. 2. a. above. If the demonstration in (b) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 2D .0521.

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

- d. The records of the monitoring shall be maintained in a logbook , updated on a monthly basis (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 findings 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 records of any corrective actions performed.

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

- e. The Permittee shall submit a summary report of the observations by January 30 of each calendar year for the preceding six-month period between July and December, and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

F. Four No. 2 fuel oil storage tanks (two with 500,000 gallon capacity each, ID Nos. ES-T-001 & T-002, and two with 184,200 gallon capacity each, ID Nos. ES-T-003 & T-004)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Volatile organic compounds	No applicable requirements	None

G. Diesel-fired emergency generators located in various buildings

ID Number	Source Description	Size of Generator (Maximum Output)	Location
ES-EG#1	Diesel-fired	900 kW	EPA Building
ES-EG#2	Diesel-fired	1600 kW	Thurston Bowles Building
ES-EG#3	Diesel-fired	728 kW	Lineberger Cancer Research Building
ES-EG#4	Diesel-fired	1000 kW	Taylor Hall
ES-EG#5	Diesel-fired	910 kW	Neuroscience Research Building
ES-EG#6	Diesel-fired	1500 kW	Medical Biomolecular Research Building
ES-EG#7*	Diesel-fired	1250 kW	Michael Hooker Research Center
ES-EG#8*	Diesel-fired	800 kW	Chapman Hall
ES-EG#9*	Diesel-fired	1000 kW	Caudill Labs
ES-EG#10*	Diesel-fired	800 kW	Bondurant Hall
ES-EG#11*	Diesel-fired	1750 kW	Burnett-Womack Building
ES-EG#12*	Diesel-fired	1250 kW	Mary Ellen Jones Building
ES-EG#13* NSPS	Diesel-fired	2000 kW	Genetic Medicine Building
ES-EG#14*	Diesel-fired	900 kW	440 West Franklin Building
ES-EG#15*	Diesel-fired	2000 kW	Rams Head Center
ES-EG#16*	Diesel-fired	2000 kW	ITS Building
ES-EG#17* NSPS	Diesel-fired	1000 kW	Brinkhous-Bullitt Building
ES-EG#18* NSPS	Diesel-fired	1000 kW	Venable Hall
ES-EG#19* NSPS	Diesel-fired	2500 kW	Imaging Research Building
ES-EG#20* NSPS	Diesel-fired	2000 kW	Genomic Science Building

* Classified as “new” emergency generators in R.I.C.E. MACT, in accordance with 40 CFR Part 63, Subpart ZZZZ

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity each	15A NCAC 2D .0521
Multiple pollutants	See Permit Condition 2.2.E. (ID Nos. ES-EG#13,#17, #18, #19, and #20)	15A NCAC 2D .0524 40 CFR Part 60, Subpart IIII
Hazardous air pollutants	Existing RICE units Keep applicability determination in accordance with 40 CFR 63.10(b)(3)	15A NCAC 2D .1111 40 CFR Part 63, Subpart ZZZZ
	New RICE units Notification requirements and applicability determination in accordance with 40 CFR 63.10(b)(3)	

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

- a. Emissions of sulfur dioxide from each emergency generator 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 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 G. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

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

- c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from firing diesel fuel in any emergency generator.

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

- a. Visible emissions from the emergency generators (ID Nos. ES-EG#1, EG#2, EG#3, EG#4, EG#5, EG#6, EG#7, EG#8, EG#9, EG#10, EG#11, EG#12, EG#13, EG#14, EG#15, EG#16, EG#17, EG#18, EG#19, and EG#20) shall not be more than **20 percent opacity** each when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

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

Monitoring/Recordkeeping/Reporting

- c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of diesel fuel in any emergency generator.

3. 15A NCAC 2D .1111, 40 CFR Part 63, Subpart ZZZZ “National Emission Standards For Hazardous Air Pollutants For Stationary Reciprocating Internal Combustion Engines

- ES-EG#7 (1250 kW)
- ES-EG#8 (800 kW)
- ES-EG#9 (1000 kW)
- ES-EG#10 (800 kW)

- ES-EG#11 (1750 kW)
- ES-EG#12 (1250 kW)
- ES-EG#13 (2000 kW)
- ES-EG#14 (900 kW)
- ES-EG#15 (2000 kW)
- ES-EG#16 (2000 kW)
- ES-EG#17 (1000 kW)
- ES-EG#18 (1000 kW)
- ES-EG#19 (2500 kW)
- ES-EG#20 (2000 kW)

a. General Provisions [40 CFR §63.6665]:

The Permittee shall comply with the requirements of 40 CFR part 63 Subpart A “General Provisions,” according to the applicability of Subpart A to such sources, as identified in Table No. 8 in Subpart ZZZZ, “Applicability Of General Provisions to Subpart ZZZZ”.

b. Compliance/Notification Procedures [40 CFR §63.6645]

Stationary RICE that are **emergency generators** are subject to limited requirements of Subpart ZZZZ and do not have to meet the requirements of Subpart ZZZZ and of subpart A of this part, except for the initial notification requirements. Notification should include the following information:

The owner or operator of an affected source that has an initial startup on or after August 16, 2004 shall submit an Initial Notification to the Administrator in writing that the source is subject to the relevant standard. The notification, which shall be submitted not later than 120 calendar days after startup of the emergency generator and shall provide the following [40 CFR §63.9 (b)(2)]:

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

c. Recordkeeping Requirement For Applicability Determination [40 CFR §63.10(b)(3)]

The applicability determination for exclusion of these emergency generators from the requirements of 40 CFR Part 63, Subpart ZZZZ and Subpart A of this part, shall be maintained on site for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The analyses, or other information, that demonstrates the exemption from the requirements of Subpart ZZZZ and Part A of this Subpart, shall be signed by the person making the determination.

d. Reporting Requirement:

- i. The Permittee shall comply with all applicable provisions, including Notification Requirements per 40 CFR §63.9.
- ii. The Permittee shall submit the initial notification to the following per 40 CFR §63.9(a)(4)(ii) and 15A NCAC 2Q .0508(f):
 - (A) Division of Air Quality, Permitting Section
 - (B) Division of Air Quality, Regional Office Supervisor, and
 - (C) EPA-Region IV

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

- ES-EG#1 (900 kW)
 - ES-EG#2 (1600 kW)
 - ES-EG#3 (728 kW)
 - ES-EG#4 (1000 kW)
 - ES-EG#5 (910 kW)
 - ES-EG#6 (1500 kW)
- a. Existing RICE units (onsite prior to December 19, 2002) do not have meet the requirements of 40 CFR Part 63, Subpart ZZZZ or the General Provision located in 40 CFR Part 63, Subpart A.

Recordkeeping Requirement For Applicability Determination [40 CFR §63.10(b)(3)]

- b. The applicability determination for exclusion of these emergency generators from the requirements of 40 CFR Part 63, Subpart ZZZZ and Subpart A of this part, shall be maintained on site for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The analyses, or other information, that demonstrates the exemption from the requirements of Subpart ZZZZ and part A of this subpart, shall be signed by the person making the determination.

H. Two No. 2 fuel oil-fired, compression ignition, non-emergency generators

ID Number	Source Description	Size of Generator	Location
ES-006 - MACT	No. 2 fuel oil	2000 kW maximum output	Cogeneration Facility
ES-007- MACT	No. 2 fuel oil	2000 kW maximum output	Cogeneration Facility

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	2.3 pounds per million Btu heat input	15A NCAC 2D .0516
Visible emissions	20 percent opacity each	15A NCAC 2D .0521
Hazardous air pollutants	Work practice standards, emission limits, performance testing	15A NCAC 2D .1111 40 CFR Part 63, Subpart ZZZZ

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

- a. Emissions of sulfur dioxide from each emergency generator 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 2D .2601]

- b. If emissions testing is required, the testing shall be performed in accordance with 15A NCAC 2D .2601 and General Condition JJ found in Section 3. If the results of this test are above the limit given in Section 2.1 H. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0516.

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

- c. No monitoring, recordkeeping, or reporting is required for sulfur dioxide emissions from firing No. 2 fuel oil in any generator.

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

- a. Visible emissions from the generators (ID Nos. ES-006 and ES-007) shall not be more than **20 percent opacity** each when averaged over a six-minute period. However, six-minute averaging

periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity.

Testing [15A NCAC 2D .2601]

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

Monitoring/Recordkeeping/Reporting

- c. No monitoring, recordkeeping, or reporting is required for visible emissions from the firing of No. 2 fuel oil in any generator.
3. **15A NCAC 2D .1111, 40 CFR Part 63, Subpart ZZZZ “National Emission Standards For Hazardous Air Pollutants For “New” Non-emergency, Compression Ignition, Stationary Reciprocating Internal Combustion Engines**
- ES-006 (2000 kW)
 - ES-007 (2000 kW)
- a. **General Provisions** [40 CFR §63.6665]
The Permittee shall comply with the requirements of 40 CFR part 63 Subpart A “General Provisions,” according to the applicability of Subpart A to such sources, as identified in Table No. 8 in Subpart ZZZZ, “Applicability Of General Provisions to Subpart ZZZZ”.
 - b. **Emission Limitations** [40 CFR §63.6600(b)]
 - i. Reduce CO emissions by 70 percent or more at 100 percent load plus or minus 10 percent; or
 - ii. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 parts per billion by volume (ppbvd) or less at 15 percent O₂.
 - c. **Operating Limitations (using an oxidation catalyst)** [40 CFR §63.10(b)(3), §63.6600]
 - i. Maintain your catalyst so that the pressure drop across the catalyst does not change by more than two inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and
 - ii. Maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 degrees Fahrenheit, and less than or equal to 1350 degrees Fahrenheit.
 - d. **General Requirements** [40 CFR §63.6605]
 - i. You must be in compliance with the emission limitations and operating limitations in this Subpart that apply to you at all times, except during periods of startup, shutdown, and malfunction.
 - ii. If you must comply with emission limitations and operation limitations, you must operate and maintain your stationary RICE, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at all times, including during startup, shutdown, and malfunction.
 - e. **Initial Performance Test** [40 CFR §63.6610]
 - i. You must conduct the initial performance test or other initial compliance demonstrations in Table 4 of this Subpart that apply to you within 180 days after startup. Each performance test must be conducted according to the requirements in 40 CFR §63.7(e). You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in 40 CFR §63.7(e)(1). You must conduct three separate test runs for each performance test required in this section, as specified in 40 CFR §63.7(e)(3). Each test run must last at least 1 hour.
 - (A) To comply with the requirement to reduce CO emissions, you must measure the O₂ and CO at the inlet and outlet of the control device using a portable CO and O₂ analyzer.

- (B) Measurements to determining O₂ must be made at the same time as the measurements for CO concentration using ASTM D6522-00. Methods 3A and 10 may be used as alternatives to ASTM D6522-00. The CO concentration must be at 15% percent O₂, on a dry basis.
 - (C) To comply with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust, you must:
 - (1) Select the sampling port location and the number of traverse points using Method 1 or 1A OF 40 CFR PART 60, APPENDIX A. [§63.7(d)(1)(i)] If using a control device the sampling site must be located at the outlet of the control device.
 - (2) Determine the O₂ concentration of the stationary RICE exhaust at the sampling port location using Method 3 or 3A or 3b of 40 CFR Part 60, Appendix A. Measurements to determine O₂ concentration must be made at the same time and location as the measurements for formaldehyde concentration.
 - (3) Measure moisture content of the stationary RICE exhaust at the sampling port location using Method 4 of 40 CFR Part 60, Appendix A, or Test Method 320 of 40 CFR Part 63, Appendix A or ASTM D 6348-03. Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
 - (4) Measure formaldehyde at the exhaust of the stationary RICE using Method 320 or 323 of 40 CFR Part 60, Appendix A, or ASTM D6348-03, provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130. Formaldehyde concentration must be at 15 percent O₂, on a dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
- f. Monitoring Requirements [40 CFR §63.6625, §63.6630, §63.6635, and §63.6640]**
- i. If you are required to install a Continuous Parameter Monitoring System (CPMS) as specified in Table 5 of this Subpart, you must install, operate, and maintain each CPMS according to the requirements in §63.8.
 - ii. You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of this Subpart.
 - iii. You must submit the notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.
 - iv. Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.
 - v. You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must however, use all the valid data collected during all other periods.
 - vi. You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 2a and 2b of this Subpart that apply. These instances are deviations from the emission and operating limitations in this Subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must re-establish the values of the operating parameters measured during the initial performance test. When you re-establish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to you stationary RICE.
 - vii. During periods of startup, shutdown, and malfunction you must operate in accordance with your startup, shutdown, and malfunction plan. Consistent with §63.7(e)(1), deviations from the emission or operating limitations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the startup, shutdown, and malfunction plan. For new,

reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations.

- viii. You must also report each instance in which you did not meet the requirements in Table 8 “General Provisions” of this Subpart.

g. Recordkeeping [40 CFR §63.6655 and §63.6650]

- i. If you must comply with the emission and operating limitations of this Subpart, you must keep the following records:
 - (A) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance Status that you submitted, according to the requirements in §63.10(b)(2)(xiv).
 - (B) The records in §63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.
 - (C) Records of performance tests and performance evaluations as required in §63.10(b)(2)(viii).
- ii. For each CMPS, you must keep following records:
 - (A) Records described in §63.10(b)(2)(vi) through (ix).
 - (B) Previous (i.e. superseded) versions of the performance evaluation plan as required §63.8(d)(3).
 - (C) Requests for alternatives to the relative accuracy test for CPMS as required in §63.8(f)(6)(i), if applicable.
- iii. You must keep the records required in Table 6 of this Subpart to show continuous compliance with each emission or operating limitation that applies to you.
- iv. Your records must be in a form suitable and readily available for expeditious review according to §63.10(b)(1). You must keep each record readily accessible in hard copy or electronic form on site for at least 2 years after the date of each occurrence, measure, maintenance, corrective action, report, or record, according to §63.10(b)(1). You can keep the records off-site for the remaining 3 years.
- v. Each record shall be kept for five years following the date of occurrence, measurement, maintenance, corrective action, report, or record.

h. Reporting [40 CFR §63.6645 and §63.6650]

- i. You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified.
- ii. If you start up your new or reconstructed stationary RICE on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this Subpart.
- iii. If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).
- iv. If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this Subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).
 - (A) For each initial compliance demonstration required in Table 5 of this subpart that includes a performance test conducted according to the requirements in Table 4 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).
- v. The first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.
- vi. The first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

- vii. Each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.
- viii. The Compliance report must contain the following information:
 - (A) Company name and address.
 - (B) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
 - (C) Date of report and beginning and ending dates of the reporting period.
 - (D) If you had a startup, shutdown, or malfunction during the reporting period, the compliance report must include the information in §63.10(d)(5)(i).
 - (E) If there are no deviations from any emission or operating limitations, a statement that there were no deviations from the emission or operating limitations during the reporting period.
 - (F) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.
 - (G) For each deviation from an emission or operating limitation occurring for a stationary RICE where a CMS is used to comply with the emission and operating limitations in this Subpart, include the following information:
 - (1) The date and time that each malfunction started and stopped.
 - (2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
 - (3) The date, time, and duration that each CMS was out-of-control, including the information in §63.8(c)(8).
 - (4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
 - (5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
 - (6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
 - (7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
 - (8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.
 - (9) A brief description of the stationary RICE.
 - (10) A brief description of the CMS.
 - (11) The date of the latest CMS certification or audit.
 - (12) A description of any changes in CMS, processes, or controls since the last reporting period.
 - (H) Each affected source that has obtained a Title V operating permit pursuant to 40 CFR Part 70 or 71 must 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 7 of this Subpart 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 or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

I. One natural gas-fired boiler (2.52 million Btu per hour heat input capacity, ID No. ES-SB-6) and One natural gas-fired water heater (0.95 million Btu per hour heat input capacity, ID No. ES-SB-15)

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
HAPs	Work practices	15A NCAC 2D .1109 [CAA § 112(j)]

1. 15A NCAC 2D .1109: CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters

- a. **The initial compliance date for these emission sources and associated monitoring, recordkeeping, and reporting requirements is February 3, 2013.** These conditions need not be included on the annual compliance certification until after the initial compliance date.

Inspection and Maintenance [15A NCAC 2Q .0508(f)]

- b. The Permittee shall perform an annual inspection of the boiler and the water heater (ID Nos. ES-SB6 and ES-SB15) and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:
 - i. Inspect the burners, and clean or replace any components of the burners as necessary;
 - ii. Inspect the flame pattern and make any adjustments to the burners 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.
 - iv. The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement.
- c. The results of any required annual burner 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 2D .1109 if the required inspection and maintenance records are not maintained.

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

- d. To assure compliance, each calendar month the Permittee shall create and retain a record of the amounts of each fuel fired in each the affected source during the previous calendar month. The monthly fuel combustion records shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if these records are not maintained or if the boiler or water heater fires a fuel other than natural gas.

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

- e. **Semiannual Summary Report.** The Permittee shall submit a summary report 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. The first summary report shall be required on **July 30, 2013**. The report shall include the following:
 - vii. Company name and address;
 - viii. Statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report;
 - ix. Date of report and beginning and ending dates of the reporting period;
 - x. The total fuel use by each affected source for each calendar month within the semiannual reporting period, including, but not limited to, a description of the fuel and the total fuel usage amount with units of measure;
 - xi. A signed statement indicating that no new types of fuel were fired in the affected sources; and,

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

2.2 – MULTIPLE EMISSION SOURCES AND SPECIFIC LIMITATIONS AND CONDITIONS

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

In order to ensure that the twenty-four hour SO₂ National Ambient Air Quality Standard (NAAQS) is not exceeded, boilers (ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7) are required to monitor and keep records of SO₂ emissions using a 24-hour block average **when firing coal**.

- ID No. ES-001-Boiler #6
- ID No. ES-002-Boiler #7

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

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	1.2 lbs/million Btu heat input per 24-hour block average	15A NCAC 2D .0501(e) 40 CFR Part 60, Subpart Db, 60.42b (a)

Monitoring/Recordkeeping

1. The Permittee shall determine sulfur dioxide emissions in pounds per million Btu using a continuous emissions monitoring (CEM) system meeting the requirements of 40 CFR Part 60, Subpart A and Subpart Db, Appendix B, and Appendix F. Compliance with sulfur dioxide emission standards shall be determined by averaging the average 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 shall be summed, and the sum shall be divided by the number of operating hours for which valid data exists.

A minimum of four data points, equally spaced, shall be required to determine a valid hour. Data availability shall be 95 percent on a **yearly** basis. If any 24-hour block average exceeds **1.2 pounds per million Btu heat input (388 pounds of SO₂ per hour)**, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0501 (e).

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

2. The Permittee shall submit the continuous emissions monitoring data showing the 24-hour daily block values in pounds per million Btu for each 24-hour daily block averaging period during the reporting period no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.

B. 15A NCAC 2D .0614: COMPLIANCE ASSURANCE MONITORING (CAM) for Sulfur Dioxide

1. Per 40 CFR 64 and 15A NCAC 2D .0614, the Permittee shall comply with the following.
2. **Background**
 - a. Emission Units
 - i. Description: Two coal/natural gas/No. 2 fuel oil-fired, circulating fluidized combustion boilers, 323.17 million Btu per hour heat input each.
 - ii. Identification: ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7
 - b. Applicable Regulation, Emission Limit, and Monitoring Requirements.
 - i. Regulations: 15A NCAC 2D .0516 and 15A NCAC 2D .0524 (Subpart Db)

- ii. Emission limits: 2.3 pound SO₂ per million Btu heat input when firing natural gas {15A NCAC 2D .0516}

1.2 pounds SO₂ per million Btu heat input when firing coal {15A CAC 2D .0524, 40 CFR §60.42b(d)} and 0.2 lbs SO₂ per million Btu heat input or a minimum 90% reduction when firing coal and/or No. 2 fuel oil {15A CAC 2D .0524, amended (February 27, 2006) 40 CFR §60.42b(a)}

3. Monitoring Approach

NSPS, Subpart Db requires that a Continuous Emissions Monitoring System (CEMs) be installed to monitor the SO₂ emissions from boilers, ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7. This monitoring system satisfies the requirements of CAM in accordance with 40 CFR Part 64, §64.3(d)(1).

C. 15A NCAC 2D .0614: COMPLIANCE ASSURANCE MONITORING (CAM) for Particulate

- 1. Per 40 CFR 64 and 15A NCAC 2D .0614 and until February 3, 2013, the Permittee shall comply with the following: Beginning February 3, 2013, particulate emissions from boilers #6 and #7 (ID No. ES-001 and ES-002) are subject to the requirements in Section 2.1.A.4, 15A NCAC 2D .1109: CAA § 112(j); “Case-by-Case MACT for Boilers & Process Heaters” and no longer subject to CAM.

2. Background

a. Emission Units

- i. Description: Two coal/natural gas/No. 2 fuel oil/wood/torrified wood-fired, circulating fluidized combustion boilers, 323.17 million Btu per hour heat input each.
- ii. Identification: ID Nos. ES-001-Boiler #6 and ES-002-Boiler #7

b. Applicable Regulation, Emission Limit, and Monitoring Requirements.

- i. Regulations: 15A NCAC 2D .0503 and 15A NCAC 2D .0524 (Subpart Db)
- ii. Emission limits:
 - 0.051 pounds per million Btu heat input {NSPS, 40 CFR §60.43b(a)(1) –Particulate matter}
 - 0.174 pounds per million Btu heat input {15A NCAC 2D .0503 –PM₁₀}
- iii. Control Technology: Two bagfilters (ID Nos. CD-004 and CD-005)

- 3. **Monitoring Approach.** The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criteria are presented in the following table:

1	
I. Indicator	Visible emissions
Measurement Approach	Visible emissions from the fabric filter will be monitored continuously using COM system on each boiler
II. Indicator Range	An excursion is defined as visible emissions in amounts greater than or equal to 15%. Excursions trigger an inspection, corrective action, and a reporting requirement.
QIP Threshold	The QIP threshold is six excursions in a 6-month reporting period.

1	
III. Performance Criteria	
A. Data Representativeness	Measurements are being made at the emission point (fabric filter outlet) of each boiler
B. Verification of Operational Status	DAHS
C. QA/QC Practices	The COM systems shall be calibrated, maintained and operated according to 40 CFR 60, Appendix B, PS1. Data is collected continuously with COM systems.
D. Monitoring Frequency	
Data Collection Procedures	Data from the COM system is collected electronically and maintained on the Data Acquisition and Handling System computer along with information on the operating status of the boilers.
Averaging Periods	6-minutes

4. **Justification**

- a. **Background.** The pollutant-specific emission units are the two coal/natural gas/No. 2 fuel oil/wood/torried wood-fired -fired boilers used to produce steam. The particulate matter emissions from each boiler are controlled by fabric filters with approximately 36,614 square feet of filter area each.
- b. **Rationale for Selection of Performance Indicators.** Visible emissions was selected as the performance indicator as a surrogate for PM and PM10 because it is a good indicator of the proper operation and maintenance of the filter units. When the filter units are operating properly, there will not be any visible emissions in the exhaust outlet. Any increase in visible emissions indicates reduced performance of the filter units, therefore, the presence of visible emissions in levels exceeding or equal to 15% is used as a performance indicator.
- c. **Rationale for Section of Indicator Ranges.** Per operating knowledge of the systems, the facility has selected an indicator range of greater than or equal to 15% opacity. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported. An increase in visible emissions is indicative of an increase in particulate emissions; and a COMs is a well established monitoring technique for these sources.

The selected QIP threshold for fabric filter visible emissions is six excursions in a 6-month reporting period. If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented.

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

The Permittee shall submit a summary report of all monitoring 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 for the requirements of this permit must be clearly identified.

D. 15A NCAC 2D .0524: NSPS, STANDARDS OF PERFORMANCE FOR STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES [40 CFR 60 SUBPART III], (For units manufactured after April 1, 2006)

- **ES-EG#13 (diesel-fired emergency generator, 2000 kW, 2682 hp)**
- **ES-EG#17 (diesel-fired emergency generator, 1000 kW, 1341 hp)**
- **ES-EG#18 (diesel-fired emergency generator, 1000 kW, 1341 hp)**
- **ES-EG#19 (diesel-fired emergency generator, 2500 kW, 3353 hp)**
- **ES-EG#20 (diesel-fired emergency generator, 2000 kW, 2682 hp)**

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

Emission Standards

2. The Permittee shall comply with the following emission standards for compression ignition (CI) engines for model year 2007 and later.

Purchase an engine certified to the emission standards in §60.4205(b) for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

Exhaust emission standards: (ES-EG#13, #17, #18, and #20)

NMHC and NOx (combined): 6.4 g/kW-hr

CO: 3.5 g/kW-hr

PM: 0.20 g/kW-hr

[§60.4205(b), §60.4211(c), and §89.112(a)]

Exhaust emission standards: (ES-EG#19)

NOx : 9.2 g/kW-hr

CO: 11.4 g/kW-hr

PM: 0.54 g/kW-hr

HC: 1.3 g/kW-hr

[§60.4205(b), §60.4211(c), and §89.112(a)]

3. The Permittee shall use diesel fuel in the CI engine of each emergency generator with a sulfur content of less than 500 ppm beginning October 1, 2007.

The Permittee shall use diesel fuel in the CI engine of each emergency generator with a sulfur content of less than 15 ppm beginning October 1, 2010. [§60.4207, and §80.510(a) and (b)]

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

4. 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 2.2 E. 2. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524.

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

5. Owners and operators of CI internal combustion engines (ICE) must operate and maintain stationary CI ICE that achieve the emissions standards as required in §§60.4204 and 60.4205 according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine. The Permittee may only change engine settings that are permitted by the manufacturer. The Permittee shall also meet the

requirements of 40 CFR 89, 94 and/or 1068 as applicable. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the requirements in this Section are not met. [§60.4206 and §60.4211(a)]

6. The CI emergency generator shall be equipped with a non-resettable hour meter prior to startup. If the CI engine of each emergency generator is not equipped with a non-resettable hour meter prior to startup, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524. [§60.4209(a)]
7. The Permittee may operate the CI emergency generator for maintenance checks and readiness testing for up to 100 hours per year provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Operation during an actual emergency shall not be subject to a limit on hours. The Permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the Permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. Because the Permittee is required to comply with emission standards under §60.4205 for the CI engine in the emergency generator, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if the requirements in this Section are not met. [§60.4211(e)]

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

8. Starting with emergency generator model year 2011, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the Permittee shall keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The Permittee shall record the time of operation of the engine and the reason the engine was in operation during that time. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .0524, if these records are not maintained. [§60.4214(b)]

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

9. No initial notification under §60.7 is required for the emergency use CI engines. [§60.4214(b)]
10. 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.

E. 15A NCAC 2D .2400 “Clean Air Interstate Rule” (CAIR)

1. The ozone season allocations of nitrogen oxide allowances shall be determined by the US EPA. The emissions of nitrogen oxides of a source shall not exceed the number of allowances that it has in its compliance account established and administered in accordance with 15A NCAC 2D .2408.
2. Emission measurement requirements:
 - Emission measurements recorded and reported according to 40 CFR Part 96 Subpart HHHH shall be used to determine compliance by each CAIR NOx Ozone Season source with its emissions limitation according to 40 CFR 96.306(c).
3. Excess Emissions:
 - The provisions of 40 CFR 96.306(d) shall be used for excess emissions.

Monitoring/Reporting/Recordkeeping [15A NCAC 2D .2407]

4. The owner or operator of a CAIR unit shall comply with the monitoring, recordkeeping, and reporting requirements in:
 - 40 CFR 96.306(b) and (e) and in 40 CFR Part 96, Subpart HHHH for each CAIR Ozone Season NOx unit.

Trading Program and Banking [15A NCAC 2D .2408]

5. The United States Environmental Protection Agency shall administer the allowance tracking system according to the procedures in:
 - 40 CFR Part 96, Subpart FFFF and Subpart GGGG for ozone season nitrogen oxides.
6. The owners and operators of each source covered under this Section shall have a compliance account in the EPA administered tracking system that satisfies the requirements of:
 - 40 CFR 96.351 for ozone season nitrogen oxides.
7. Any person may apply to open a general account to hold and transfer allowances by using the procedures and meeting the requirements in:
 - 40 CFR 96.351(b) for ozone season nitrogen oxides and may close that account using the procedures in 40 CFR 96.357.
8. Allowance transfers:
 - Any person who has a compliance or general account established under 40 CFR 96.351 may transfer allowances using the procedures in 40 CFR 96.360.
9. Persons with accounts shall submit information to EPA following the requirements of:
 - 40 CFR 96.352 for ozone season nitrogen oxides.
10. Any person who has a compliance account or a general account may bank allowances for future use or transfer under:
 - 40 CFR 96.355 for ozone season nitrogen oxides.
11. The appeal procedures for decisions of the Administrator are set forth in:
 - 40 CFR 96.308 for ozone season nitrogen oxides.

SECTION 3 - GENERAL CONDITIONS (version 3.3)

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

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

Supervisor, Stationary Source Compliance
North Carolina Division of Air Quality
1641 Mail Service Center
Raleigh, NC 27699-1641
- 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 2Q .0508(i)(2)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement action, for permit termination, revocation and 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 2Q .0514]
The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 2Q .0514.
2. Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 2Q .0524 and 2Q .0505]
The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 2Q.0524 and 2Q .0505.
3. Minor Permit Modifications [15A NCAC 2Q .0515]
The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 2Q .0515.
4. Significant Permit Modifications [15A NCAC 2Q .0516]
The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 2Q .0516.
5. Reopening for Cause [15A NCAC 2Q .0517]
The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 2Q .0517.

H. **Changes Not Requiring Permit Modifications**

1. Reporting Requirements
Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:
 - a. changes in the information submitted in the application;
 - b. changes that modify equipment or processes; or
 - c. changes in the quantity or quality of materials processed.

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

2. Section 502(b)(10) Changes [15A NCAC 2Q .0523(a)]
 - a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
 - b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
 - i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
 - c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;

- iii. any change in emissions; and
- iv. any permit term or condition that is no longer applicable as a result of the change.
- d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
3. Off Permit Changes [15A NCAC 2Q .0523(b)]

The Permittee may make changes in the operation or emissions without revising the permit if:

 - a. the change affects only insignificant activities and the activities remain insignificant after the change; or
 - b. the change is not covered under any applicable requirement.
4. Emissions Trading [15A NCAC 2Q .0523(c)]

To the extent that emissions trading is allowed under 15A NCAC 2D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 2Q .0523(c).

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

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

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

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

Excess Emissions

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

Permit Deviations

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1. the information contained in the application or presented in support thereof is determined to be incorrect;
2. the conditions under which the permit or permit renewal was granted have changed;

3. violations of conditions contained in the permit have occurred;
4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

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

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

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

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

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

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

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

2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

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

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

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

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

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

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

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

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

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

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

BB. **Financial Responsibility and Compliance History** [15A NCAC 2Q .0507(d)(4)]

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

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

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

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

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

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

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

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

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

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

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

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

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

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

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 2D .0400 to be exceeded at any point beyond the premises on which

the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

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

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

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

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

1. A permit shall be reopened and revised under the following circumstances:
 - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
 - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
 - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. the Director or EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements.
2. Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 2Q .0513(c).
3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 2Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 2Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.

4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

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

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

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

As required by 15A NCAC 2D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 2D .0540(f). "Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

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

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

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

ATTACHMENT

List of Acronyms

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