



North Carolina Department of Environment and Natural Resources

DIVISION OF AIR QUALITY

Beverly Eaves Perdue, Governor

Dee Freeman, Secretary
B. Keith Overcash, P.E., Director

DATE, 2009

DRAFT

Mr. Marvin S. Burchfield
Vice President
Hertford Renewable Energy, LLC
152 Lincoln Avenue
Winter Park, FL 32789

Subject: Air Permit No. 09947R00
Hertford Renewable Energy, LLC
Aulander, Hertford County, North Carolina
Fee Class: Title V
Site Number: 05/46/00104

Dear Mr. Burchfield:

In accordance with your completed application received August 29, 2008, we are forwarding herewith Permit No. 09947R00 to Hertford Renewable Energy, LLC, Aulander, Hertford County, North Carolina for the construction and operation of air emissions sources or air cleaning devices and appurtenances. Please note the records retention requirements are contained in General Condition 2 of the General Conditions and Limitations.

If any parts, requirements, or limitations contained in this permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. Such a request will stay the effectiveness of the entire permit. This hearing request must be in the form of a written petition, conforming to G.S. 150B-23 of the North Carolina General Statutes, and filed with the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, NC 27699-6714. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Unless a request for a hearing is made pursuant to G.S. 150B-23, this air permit shall be final and binding.

You may request modification of your air permit through informal means pursuant to G.S. 150B-22. This request must be submitted in writing to the Director and must identify the specific

Raleigh Central Office

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Mr. Marvin S. Burchfield

DATE, 2009

Page 2

provisions or issues for which the modification is sought. Please note that the permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under G.S. 150B-23.

Unless exempted by a condition of this permit or the regulations, construction of new air pollution sources or air cleaning devices, or modifications to the sources or air cleaning devices described in this permit must be covered under a permit issued by the Division of Air Quality prior to construction. Failure to do so is a violation of G.S. 143-215.108 and may subject the Permittee to civil or criminal penalties as described in G.S. 143-215.114A and 143-215.114B.

For PSD increment tracking purposes, PM-10, SO₂, and NO_x emissions have increased by 31.9 lbs/hr, 21.4 lbs/hr, and 86.1 lbs/hr, respectively for Hertford County.

This permit shall be effective from DATE, 2009 until DATE, 2014, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Changes have been made to the permit stipulations. The Permittee is responsible for carefully reading the entire permit and evaluating the requirements of each permit stipulation. The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. 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. Should you have any questions concerning this matter, please contact Jeff Twisdale at (919) 715-6260.

Sincerely,

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

Enclosures

c: Gregg Worley, EPA Region 4
Washington Regional Office
Connie Horne, cover page only
Central Files

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

DIVISION OF AIR QUALITY

AIR PERMIT NO. 09947R00

Issue Date: **DATE**, 2009

Effective Date: **DATE**, 2009

Expiration Date: **DATE**, 2014

Replaces Permit: (new)

To construct and operate air emission source(s) and/or air cleaning device(s), and for the discharge of the associated air contaminants into the atmosphere in accordance with the provisions of Article 21B of Chapter 143, General Statutes of North Carolina (NCGS) as amended, and other applicable Laws, Rules and Regulations,

Hertford Renewable Energy, LLC
 Joe Holloman Road
 Aulander, Hertford County, North Carolina
 Fee Class: Title V
 Site Number: 05/46/00104

(the Permittee) is hereby authorized to construct and operate the air emissions sources and/or air cleaning devices and appurtenances described below:

Emission Source ID	Emission Source Description	Control System ID	Control System Description
ES-BLR-1 NSPS Subpart Db, PSD	One unadulterated wood-fired boiler (858 million Btu per hour maximum heat input rate; biodiesel-fired startup burners (215 million Btu per hour maximum heat input rate))	CD-SNCR	Selective non-catalytic NO _x reduction system
		CD-MC	Multicyclone (420 tubes 10 inches in diameter each)
		CD-ESP	Electrostatic precipitator (100,450 square feet of collection plate area)
ES-EG MACT Subpart ZZZZ, NSPS Subpart III, PSD	One No. 2 fuel oil-fired emergency generator (447 horsepower engine rating)	N/A	N/A

Emission Source ID	Emission Source Description	Control System ID	Control System Description
ES-FW MACT Subpart ZZZZ, NSPS Subpart III, PSD	One No. 2 fuel oil-fired emergency firewater pump engine (400 horsepower engine rating)	N/A	N/A
ES-FS PSD	One flyash storage silo (9,250 cubic feet capacity)	CD-FF-FS	Fabric filter (15 square feet of filter area)
ES-CT PSD	One four-cell cooling tower with drift eliminators (43,441 gallons per minute recirculation rate)	N/A	N/A

in accordance with the completed application 4600104.08A received August 29, 2008 including any plans, specifications, previous applications, and other supporting data, all of which are filed with the Department of Environment and Natural Resources, Division of Air Quality (DAQ) and are incorporated as part of this permit.

This permit is subject to the following specified conditions and limitations including any TESTING, REPORTING, OR MONITORING REQUIREMENTS:

A. SPECIFIC CONDITIONS AND LIMITATIONS

1. Any air emission sources or control devices authorized to construct and operate above must be operated and maintained in accordance with the provisions contained herein. The Permittee shall comply with applicable Environmental Management Commission Regulations, including Title 15A North Carolina Administrative Code (NCAC), Subchapter 2D .0400, 2D .0503, 2D .0504, 2D .0516, 2D .0521, 2D .0524 (40 CFR 60, Subpart A -- General Provisions, Subpart Db – Industrial-Commercial-Institutional Steam Generating Units, and Subpart III – Stationary Compression Ignition Internal Combustion Engines), 2D .0530, 2D .0535, 2D .0540, 2Q .0207, and 2Q .0504.
2. ANNUAL EMISSION INVENTORY REQUIREMENT - 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.
3. PARTICULATE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers," particulate matter emissions from the fuel burning indirect heat exchangers shall not exceed the allowable emission rates listed below:

Source	Emission Limit (lb/million Btu)
Biodiesel-fired startup burners for boiler (215 million Btu per hour, ID No. ES-BLR-1)	0.27

4. PARTICULATE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0504 "Particulates from Wood Burning Indirect Heat Exchangers," particulate matter emissions from the wood burning indirect heat exchangers shall not exceed the allowable emission rates listed below:

Source	Emission Limit (lb/million Btu)
Wood-fired boiler (858 million Btu per hour, ID No. ES-BLR-1)	0.26

5. SULFUR DIOXIDE CONTROL REQUIREMENT - As required by 15A NCAC 2D .0516 "Sulfur Dioxide Emissions from Combustion Sources," sulfur dioxide emissions from the combustion sources shall not exceed 2.3 pounds per million Btu heat input.
6. VISIBLE EMISSIONS CONTROL REQUIREMENT - As required by 15A NCAC 2D .0521 "Control of Visible Emissions," visible emissions from the emission sources, manufactured after July 1, 1971, shall not be more than 20 percent opacity when averaged over a six-minute period, except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period. However, sources which must comply with 15A NCAC 2D .0524 "New Source Performance Standards" or .1110 "National Emission Standards for Hazardous Air Pollutants" must comply with applicable visible emissions requirements contained therein.
7. 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For the following equipment, 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 60, Subpart indicated below, and including Subpart A "General Provisions."

Emission Source(s)	Regulation
One wood-fired power boiler (ID No. ES-BLR-1)	Subpart Db - Industrial-Commercial-Institutional Steam Generating Units

- a. NSPS Reporting Requirements - In addition to any other notification requirements to the Environmental Protection Agency (EPA), the Permittee is required to NOTIFY the Regional Supervisor, DAQ, in WRITING, of the following:
- i. The date construction (40 CFR 60.7) or reconstruction (40 CFR 60.15) of an affected source is commenced, postmarked no later than 30 days after such date.
 - ii. The actual date of initial start-up of an affected source, postmarked within 15 days after such date.

- b. NSPS Operation - The Permittee shall operate and maintain the wood-fired boiler including air pollution control systems, and all associated monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown and malfunction.
- c. NSPS Emissions Limitations - As required by 15A NCAC 2D .0524, the following permit limits shall not be exceeded:

Affected Source(s)	Pollutant	Emission Limit
Wood-fired boiler (ID No. ES-BLR-1)	Particulate matter 40 CFR 60.43b(h)(1)	0.03 pounds per million Btu heat input
	Opacity 40 CFR 60.43b(f)	20 percent opacity six minute average except for one six-minute period per hour of not more than 27% opacity

- d. NSPS Performance Testing - As required by 15A NCAC 2D .0524, the following performance tests shall be conducted:

Affected Source(s)	Pollutant	Test Method ¹
Wood-fired boiler (ID No. ES-BLR-1)	PM	5, 5B or 17
	Opacity	9

¹ Test method will be determined by DAQ approved testing protocol.

- i. The performance testing shall be conducted using one of the test methods specified in the table above in accordance with EPA Reference Method, contained in 40 CFR 60, Appendix A. Use of an alternate test method must be approved in advance by the Division of Air Quality, and must be based on a test protocol that documents the alternate method is at least as accurate as the specified method. The EPA Administrator retains the exclusive right to approve equivalent and alternative test methods, continuous monitoring procedures, and reporting requirements.
- ii. Within 60 days after achieving the maximum production rate at which the equipment will be operated, but not later than 180 days after the initial start-up of the equipment, the Permittee shall conduct the required performance testing on the wood-fired boiler (ID No. ES-BLR-1) to demonstrate compliance with the PM emission limit.
- iii. The initial NSPS performance testing may be combined with the initial PSD performance testing specified in Permit Condition 9.e.
- iv. All associated testing costs are the responsibility of the Permittee.

- v. At least 45 days prior to performing any required emissions testing, the Permittee must submit two copies of a testing protocol to the Regional Supervisor, DAQ for review and approval. All testing protocols must be approved by the Division of Air Quality prior to performing tests.
 - vi. To afford the Regional Supervisor, DAQ the opportunity to have an observer present, the Permittee shall PROVIDE the Regional Office, in WRITING, at least 15 days notice of any required performance test(s).
 - vii. The Permittee shall submit two copies of a written report of the results of each performance test, postmarked no later than 60 days following the completion of the test, to the Regional Supervisor, DAQ.
- e. NSPS Monitoring - As required by 15A NCAC 2D .0524, the following monitoring shall be performed:
- i. In accordance with §60.48b(a), the Permittee shall install, calibrate, maintain and operate a continuous opacity monitoring system (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.
 - ii. In accordance with §60.48b(e), the Permittee shall follow the procedures under 40 CFR 60.13 for installation, evaluation, and operation of the continuous monitoring system, including Appendix B “Performance Specifications” and Appendix F “Quality Assurance Procedures.”
 - iii. In accordance with 15A NCAC 2D .0613, the Permittee shall develop and implement a quality assurance program for the continuous monitoring system.
- f. NSPS Recordkeeping and Reporting - As required by 15A NCAC 2D .0524, the following recordkeeping shall be performed:
- i. In accordance with §60.49b(b), the Permittee shall submit to the Regional Supervisor, DAQ the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in Appendix B.
 - ii. In accordance with §60.49b(d)(2), the Permittee shall record and maintain records of the amount of each fuel combusted during each calendar month since only wood will be fired in the boiler except during startup when biodiesel will be fired.
 - iii. In accordance with §60.49b(f), the Permittee shall maintain records of opacity according to the following requirements:
 - (a) For each performance test conducted using Method 9, the Permittee shall keep the records including the information specified in the following:
 - (i) Dates and time intervals of all opacity observation periods;

- (ii) Name, affiliation, and copy of current visible emission reading certification for each visible emission observer participating in the performance test; and
 - (iii) Copies of all visible emission observer opacity field data sheets;
 - (b) For each digital opacity compliance system, the Permittee shall maintain records and submit reports according to the requirements specified in the site-specific monitoring plan approved by the Regional Supervisor, DAQ.
 - iv. In accordance with §60.49b(h), the Permittee shall submit excess emissions and monitoring system performance summary reports. The reports shall contain the information required per 40 CFR 60.7(c) and (d). The format for the reports will be provided by DAQ.
 - (a) The quarterly reports, acceptable to the Regional Supervisor, DAQ, shall be 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, October 30 for the calendar year for the preceding three-month period between July and September.
 - v. In accordance with §60.49b(o), all records required by NSPS Subpart Db for this wood-fired boiler (**ID No. ES-BLR-1**) shall be maintained by the Permittee for a period of 2 years following the date of such record.
8. 15A NCAC 2D .0524 "NEW SOURCE PERFORMANCE STANDARDS" - For the following equipment, 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 60, Subpart indicated below, and including Subpart A "General Provisions."

Emission Source(s)	Regulation
Emergency generator (ID No. ES-EG) and emergency firewater pump engine (ID No. ES-FW)	Subpart III – Stationary Compression Ignition Internal Combustion Engines

- a. NSPS Equipment Specification – The Permittee shall purchase an emergency generator (**ID No. ES-EG**) for the model year 2007 or later, and an emergency firewater pump engine (**ID No. ES-FW**), which meet the applicable requirements under NSPS Subpart

III. The Permittee shall maintain a record of engine manufacturer data indicating compliance with the standards

- b. NSPS Fuel Specification – The Permittee shall use No. 2 fuel oil for the emergency generator and firewater pump engine (**ID Nos. ES-EG and ES-FW**) with the following specifications:
 - i. a maximum sulfur content of 500 ppm (0.05 percent by weight) through September 30, 2010, and then a maximum sulfur content of 15 ppm (0.0015 percent by weight) beginning October 1, 2010, and
 - ii. cetane index or aromatic content, as follows:
 - (a) a minimum cetane number of 40, or
 - (b) a maximum aromatic content of 35 percent by volume.
- c. NSPS Emissions Limitations - As required by 15A NCAC 2D .0524 (§89.112 for emergency generators and Table 4 of §60 Subpart IIII for emergency fire pump engines), the following permit limits shall not be exceeded:

Affected Source(s)	Pollutant	Emission Limit
Emergency generator (ID No. ES-EG) and Emergency firewater pump engine (ID No. ES-FW)	VOC and NO _x combined	4.0 g/kW-hr (3.0 g/HP-hr)
	CO	3.5 g/kW-hr (2.6 g/HP-hr)
	PM	0.20 g/kW-hr (0.15 g/HP-hr)

- d. NSPS Monitoring and Compliance Requirements - As required by 15A NCAC 2D .0524 (§60.4209 and §60.4211), the following monitoring shall be performed:
 - i. The emergency generator and firewater pump engine (**ID Nos. ES-EG and ES-FW**) shall each be equipped with a non-resettable hour meter prior to startup.
 - ii. For each engine (**ID Nos. ES-EG and/or ES-FW or none**) equipped with a diesel particulate filter to comply with the emission standards in Condition 8.d. above, the Permittee shall install a backpressure monitor on the diesel particulate filter that signals when the high backpressure limit of the engine is approached.
 - iii. The Permittee may operate the emergency generator and firewater pump engine (**ID Nos. ES-EG and ES-FW**) for maintenance checks and readiness testing for up to 100 hours per year each provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the insurance company associated with these sources, or best operating practices. To exceed the annual hour limit, the Permittee must either maintain records indicating that Federal, State, or local standards require maintenance and testing of these emergency internal combustion engines beyond 100 hours or receive approval from the Regional Supervisor, DAQ for additional hours. All other non-emergency operation is prohibited. Operation during an actual emergency is not limited under NSPS.
 - iv. The Permittee shall operate and maintain the stationary CI internal combustion engines and control device according to the manufacturer's written instructions or procedures developed by the Permittee that are approved by the engine

manufacturer. In addition, the Permittee may only change those settings that are permitted by the manufacturer. The Permittee must also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply.

- v. The Permittee shall comply by purchasing an engine certified to the emission standards in §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine shall be installed and configured according to the manufacturer's specifications.
- vi. The Permittee shall maintain a current, valid purchase contract, tariff sheet, or transportation contract, which specifies the sulfur and aromatic content and the cetane number for the No. 2 fuel oil, for a period of two years after the date on which the record was made.

9. 15A NCAC 2D .0530 "PREVENTION OF SIGNIFICANT DETERIORATION"

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

Emission Source	Pollutant	Emission Limit¹	Control Technology
Wood-fired boiler (ID No. ES-BLR-1)	NO _x (as NO ₂)	0.10 lb/MMBtu [30-day average]	Selective non-catalytic reduction (SNCR)
	CO	0.25 lb/MMBtu at 90 to 100% load [30-day average]	Proper boiler design and good combustion control practices
		0.30 lb/MMBtu at 60 to < 90% load [30-day average]	
		0.40 lb/MMBtu at 40 to <60% load [30-day average]	
	VOC (as CH ₄)	0.017 lb/MMBtu [3-hour average]	Proper boiler design and good combustion control practices
	PM ₁₀ /PM _{2.5} (filterable only)	0.02 lb/million Btu [3-hour average]	Electrostatic precipitator OR Fabric filter
	SO ₂	0.025 lb/million Btu [3-hour average]	N/A
Emergency generator (ID No. ES-EG) and Emergency fire water pump engine (ID No. ES-FW)	NO _x and VOC combined	4.0 g/kW-hr (3.0 g/hp-hr)	Good combustion control practices; periods of non- emergency operation not to exceed 100 hours per year
	CO	3.5 g/kW-hr (2.6 g/hp-hr)	Good combustion control practices; periods of non- emergency operation not to exceed 100 hours per year
	PM ₁₀ /PM _{2.5} (filterable and condensable)	0.20 g/kW-hr (0.15 g/hp-hr)	Use of ultra-low sulfur No. 2 fuel oil containing a maximum of 0.0015% by weight (15 ppmw) sulfur content and annual use limits
	SO ₂	15 ppmw sulfur fuel	N/A
Flyash storage silo (ID No. ES-FS)	PM ₁₀ /PM _{2.5} (filterable only)	0.01 grain/dscf [3-hr average]	Fabric filter
Cooling tower with drift eliminators (ID No. ES-CT)	PM ₁₀ /PM _{2.5} (filterable only)	0.0005% drift loss factor	N/A

¹ BACT emission limits shall apply to each source (ID Nos. ES-BLR-1, ES-EG, ES-FW, ES-FS, and ES-CT) at all times.

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

AFFECTED SOURCES	POLLUTANT	EMISSION LIMIT	
		Annual (tons/yr)	per 24-hour (lb)
Wood-fired boiler (ID No. ES-BLR-1), emergency generator (ID No. ES-EG), emergency fire water pump engine (ID No. ES-FW), flyash storage silo (ID No. ES-FS), and cooling tower with drift eliminators (ID No. ES-CT)	PM ₁₀ /PM _{2.5}	139.92	770.1

* Tons per consecutive 12-month period based on a maximum of 500 startup hours while firing biodiesel in the burners of the boiler (ID No. ES-BLR-1), and a maximum of 500 operating hours each for the emergency generator and firewater pump engine (ID Nos. ES-EG and ES-FW).

- c. Startup while firing biodiesel in the 215 million Btu per hour burners of the boiler (ID No. ES-BLR-1) shall be limited to 500 hours per rolling consecutive 12-month period.
- d. The operation of the No. 2 fuel oil-fired emergency generator and firewater pump engine (ID Nos. ES-EG and ES-FW) shall not exceed 500 hours each per year.
- e. PSD Performance Testing - As required by 15A NCAC 2D .0530, the following performance tests shall be conducted:

Affected Source(s)	Pollutant	Test Method
Wood-fired boiler (ID No. ES-BLR-1)	PM ₁₀ /PM _{2.5}	As determined by DAQ approved testing protocol
	SO ₂	

- i. The performance test shall be conducted using the test method specified in the table above in accordance with EPA Reference Methods, contained in 40 CFR 60, Appendix A. Use of an alternate test method must be approved in advance by the Division of Air Quality, and must be based on a test protocol that documents the alternate method is at least as accurate as the specified method. The EPA Administrator retains the exclusive right to approve equivalent and alternative test methods, continuous monitoring procedures, and reporting requirements.
- ii. Within 60 days after achieving the maximum production rate at which the boiler will be operated, but not later than 180 days after the initial start-up of the boiler, the Permittee shall conduct the required performance testing on the wood-fired boiler (ID No. ES-BLR-1) and shall begin the required compliance monitoring with continuous emissions monitor systems (CEMS).

- iii. The number of runs and time required for each run for the performance test shall be in accordance with the approved testing protocol. The ambient temperature for each test run shall be above 0⁰F.
 - iv. All associated testing costs are the responsibility of the Permittee.
 - v. At least 45 days prior to performing any required emissions testing, the Permittee must submit two copies of a testing protocol to the DAQ Regional Supervisor, for review and approval. All testing protocols must be approved by the DAQ prior to performing tests.
 - vi. To afford the DAQ Regional Supervisor the opportunity to have an observer present, the Permittee shall PROVIDE the Regional Office, in WRITING, at least 15 days notice of any required performance test(s).
 - vii. The Permittee shall submit two copies of a written report of the results of each performance test, postmarked no later than 60 days following the completion of the test, to the Regional Supervisor, DAQ.
 - viii. The Division of Air Quality retains the right to require additional performance testing for the boiler if the results of the stack tests show a small margin of compliance with a PM₁₀/PM_{2.5}, or SO₂ emission limit.
- f. PSD Monitoring - As required by 15A NCAC 2D .0530, the following monitoring shall be performed:
- i. The Permittee shall record and maintain records of the actual number of hours of startup when firing biodiesel in the burners of the boiler (**ID No. ES-BLR-1**) each month.
 - ii. The Permittee shall record and maintain records of the actual number of hours of operation for both the emergency generator and firewater pump engine (**ID Nos. ES-EG and ES-FW**) for each month.
- g. PSD Monitoring – In accordance with 15A NCAC 2D .0611, the Permittee shall perform the following monitoring to demonstrate compliance with the emission standards of 15A NCAC 2D .0530 (BACT limits for CO and NO_x) using a continuous emissions monitoring system (CEMS):
- i. install, calibrate, operate, and maintain, in accordance with applicable performance specifications in 40 CFR Part 60 Appendix B, process and control equipment monitoring instruments or procedures as necessary;
 - ii. comply with the requirements of 15A NCAC 2D .0613; and
 - iii. maintain, in writing, data and reports of any monitoring instruments or procedures necessary to comply with subparagraph (i) above that will document the compliance status of the sources or control equipment.

- h. PSD Monitoring – In accordance with 15A NCAC 2D .0524, the Permittee shall perform the following monitoring to demonstrate compliance with the emission standards of 15A NCAC 2D .0530 (BACT limit for PM₁₀) using a continuous opacity monitoring system (COMS):
- i. In accordance with §60.48b(a), the Permittee shall install, calibrate, maintain and operate a continuous opacity monitoring system (COMS) for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.
 - ii. In accordance with §60.48b(e), the Permittee shall follow the procedures under 40 CFR 60.13 for installation, evaluation, and operation of the continuous monitoring system, including Appendix B “Performance Specifications” and Appendix F “Quality Assurance Procedures.”
 - iii. In accordance with 15A NCAC 2D .0613, the Permittee shall develop and implement a quality assurance program for the continuous monitoring system.
- i. PSD Monitoring – As required by 15A NCAC 2D .0530, particulate matter emissions from the boiler (**ID No. ES-BLR-1**) shall be controlled by an electrostatic precipitator (**ID No. CD-ESP**), and the following monitoring shall be performed:
- i. To ensure that optimum control efficiency is maintained when particulate matter emissions are controlled by an electrostatic precipitator (**ID No. CD-ESP**), the Permittee shall monitor the following parameters daily for values outside the normal operating range in each field or section:
 - (a) Primary voltage,
 - (b) Secondary voltage,
 - (c) Primary current,
 - (d) Secondary current, and
 - (e) Spark rate.

The results of the electrostatic precipitator monitoring shall be maintained in a logbook (written or electronic form) on site and made available to an authorized representative upon request. The logbook shall record the following:

 - (a) The date and time of actions recorded,
 - (b) The normal range of values for each parameter, and
 - (c) The values of each parameter.
 - ii. The Permittee shall submit the results of all monitoring performed on the electrostatic precipitator within 30 days of a written request by the DAQ.
- j. PSD Monitoring – In accordance with 15A NCAC 02D .0530, particulate matter emissions from the flyash storage silo (**ID No. ES-FS**) shall be controlled by the associated bagfilter (**ID No. CD-FF-FS**). To assure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer’s inspection and maintenance recommendations, or if there is no manufacturer’s inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:

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

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

- (a) The date and time of each recorded action;
 - (b) The results of each inspection;
 - (c) The results of any maintenance performed on the bagfilter; and
 - (d) Any variance from manufacturer's recommendations, if any, and corrections made.
- iii. The Permittee shall submit the results of all monitoring performed on the bagfilter within 30 days of a written request by the DAQ
- k. PSD Monitoring – To demonstrate compliance with 15A NCAC 2D .0530 for the emergency generator and firewater pump engines (**ID Nos. ES-EG and ES-FW**), the Permittee shall comply with relevant NSPS Subpart IIII applicable requirements specified in Specific Condition 8 above.

10. NOTIFICATION REQUIREMENT - As required by 15A NCAC 2D .0535, the Permittee of a source of excess emissions that last for more than four hours and that results from a malfunction, a breakdown of process or control equipment or any other abnormal conditions, shall:

- a. Notify the Director or his designee 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 describe:
 - i. the name and location of the facility,
 - ii. the nature and cause of the malfunction or breakdown,
 - iii. the time when the malfunction or breakdown is first observed,
 - iv. the expected duration, and
 - v. an estimated rate of emissions.

- b. Notify the Director or his designee immediately when the corrective measures have been accomplished.

This reporting requirement does not allow the operation of the facility in excess of Environmental Management Commission Regulations.

11. FUGITIVE DUST CONTROL REQUIREMENT - 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).

12. TOXIC AIR POLLUTANT EMISSIONS LIMITATION AND REPORTING REQUIREMENT - Pursuant to 15A NCAC 2D .1100 "Control of Toxic Air Pollutants," and in accordance with the approved application for an air toxic compliance demonstration, the following permit limits shall not be exceeded:

Affected Source(s)	Toxic Air Pollutant	Emission Limit
Boiler (ID No. ES-BLR-1)	Ammonia (50-00-0)	195.93 pounds per hour

13. MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY – For the following equipment, 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 .1111 "Maximum Achievable Control Technology" as promulgated in 40 CFR Part 63, Subpart indicated below, and including Subpart A "General Provisions."

Emission Source(s)	Regulation
Emergency generator (ID No. ES-EG) and emergency firewater pump engine (ID No. ES-FW)	Subpart ZZZZ– Stationary Reciprocating Internal Combustion Engines (RICE)

The Permittee shall fulfill the requirements of 40 CFR 63 Subpart ZZZZ by meeting all applicable requirements of 40 CFR 60 Subpart III, as specified in Permit Condition 9 above, for the emergency generator and firewater pump engine (**ID Nos. ES-EG and ES-FW**) located at an area source. In accordance with §63.6590(c), no further requirements under 40 CFR 63 Subpart ZZZZ shall apply to these emissions sources (**ID Nos. ES-EG and ES-FW**).

14. TITLE V PERMITTING REQUIREMENT – As required by 15A NCAC 2Q .0504(d), within 12 months of beginning operation at the facility, the Permittee shall file an amended permit application, following the requirements of 15A NCAC 2Q .0500, for Title V operating permit.

STATE-ONLY REQUIREMENT:

15. The following additional requirements for hazardous air pollutants apply:

- a. Emissions from the boiler (**ID No. ES-BLR-1**) shall not exceed 10 tons per year for any single Hazardous Air Pollutant (HAP), as listed in Section 112(b) of the Clean Air Act, or 25 tons per year of any combination of HAPs.

Performance Testing

- b. Under the provisions of North Carolina General Statute 143-215.108, the Permittee shall perform a test for hydrogen chloride (HCl) emissions from the wood-fired boiler (**ID No. ES-BLR-1**). The test shall be conducted at a load greater than 90% of the maximum production rate in accordance with a test protocol (using test protocol submittal form) approved by the Division of Air Quality. Details of the emissions testing and requirements can be found in General Condition 18.
 - i. Test results shall be the average of 3 valid test runs.
 - ii. Within 90 days after achieving 90% of the maximum production rate at which the facility will be operated, the Permittee shall conduct a performance test and submit a written report of the test to the Regional Supervisor, Division of Air Quality.
 - iii. If the emission rate is greater than 2.66 E-3 pounds per million Btu, the Permittee shall submit an application to amend the permit.

B. GENERAL CONDITIONS AND LIMITATIONS

1. TWO COPIES OF ALL DOCUMENTS, REPORTS, TEST DATA, MONITORING DATA, NOTIFICATIONS, REQUESTS FOR RENEWAL, AND ANY OTHER INFORMATION REQUIRED BY THIS PERMIT shall be submitted to the:

Regional Air Quality Supervisor
North Carolina Division of Air Quality
Washington Regional Office
943 Washington Square Mall
Washington, NC 27889
(252) 946-6481

2. RECORDS RETENTION REQUIREMENT - Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. These records must be kept on site for a minimum of 2 years, unless another time period is otherwise specified.
3. PERMIT RENEWAL REQUIREMENT - The Permittee, at least 90 days prior to the expiration date of this permit, shall request permit renewal by letter in accordance with 15A NCAC 2Q .0304(d) and (f). Pursuant to 15A NCAC 2Q .0203(i), no permit application fee is required for renewal of an existing air permit. The renewal request should be submitted to the Regional Supervisor, DAQ.
4. ANNUAL FEE PAYMENT - Pursuant to 15A NCAC 2Q .0203(a), the Permittee shall pay the annual permit fee within 30 days of being billed by the DAQ. Failure to pay the fee in a timely manner will cause the DAQ to initiate action to revoke the permit.
5. EQUIPMENT RELOCATION - A new air permit shall be obtained by the Permittee prior to establishing, building, erecting, using, or operating the emission sources or air cleaning equipment at a site or location not specified in this permit.
6. This permit is subject to revocation or modification by the DAQ upon a determination that information contained in the application or presented in the support thereof is incorrect, conditions under which this permit was granted have changed, or violations of conditions contained in this permit have occurred. The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air cleaning device(s) and appurtenances.
7. REPORTING REQUIREMENT - Any of the following that would result in previously unpermitted, new, or increased emissions must be reported to the Regional Supervisor, DAQ:
 - a. changes in the information submitted in the application regarding facility emissions;
 - b. changes that modify equipment or processes of existing permitted facilities; or

- c. changes in the quantity or quality of materials processed.

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

8. This permit is nontransferable by the Permittee. Future owners and operators must obtain a new air permit from the DAQ.
9. This issuance of this permit in no way absolves the Permittee of liability for any potential civil penalties which may be assessed for violations of State law which have occurred prior to the effective date of this permit.
10. This permit does not relieve the Permittee of the responsibility of complying with all applicable requirements of any Federal, State, or Local water quality or land quality control authority.
11. Reports on the operation and maintenance of the facility shall be submitted by the Permittee to the Regional Supervisor, DAQ at such intervals and in such form and detail as may be required by the DAQ. Information required in such reports may include, but is not limited to, process weight rates, firing rates, hours of operation, and preventive maintenance schedules.
12. A violation of any term or condition of this permit shall subject the Permittee to enforcement pursuant to G.S. 143-215.114A, 143-215.114B, and 143-215.114C, including assessment of civil and/or criminal penalties.
13. Pursuant to North Carolina General Statute 143-215.3(a)(2), no person shall refuse entry or access to any authorized representative of the DAQ who requests entry or access for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
14. The Permittee must comply with any applicable Federal, State, or Local requirements governing the handling, disposal, or incineration of hazardous, solid, or medical wastes, including the Resource Conservation and Recovery Act (RCRA) administered by the Division of Waste Management.
15. PERMIT RETENTION REQUIREMENT - The Permittee shall retain a current copy of the air permit at the site. The Permittee must make available to personnel of the DAQ, upon request, the current copy of the air permit for the site.
16. CLEAN AIR ACT SECTION 112(r) REQUIREMENTS - Pursuant to 40 CFR Part 68 "Accidental Release Prevention Requirements: Risk Management Programs Under the Clean Air Act, Section 112(r)," if the Permittee is required to develop and register a risk management plan pursuant to Section 112(r) of the Federal Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

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

18. GENERAL EMISSIONS TESTING AND REPORTING REQUIREMENTS - If emissions testing is required by this permit, or the DAQ, or if the Permittee submits emissions testing to the DAQ in support of a permit application or to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 2D .2600 and follow all DAQ procedures including protocol approval, regional notification, report submittal, and test results approval.

Permit issued this the **DAY** of **MONTH**, 2009.

NORTH CAROLINA ENVIRONMENTAL MANAGEMENT COMMISSION

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

Chief, Permits Section

By Authority of the Environmental Management Commission

Air Permit No. 09947R00