

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Raleigh Regional Office
County: Person
NC Facility ID: 7300056
Inspector's Name: Steve Hall
Date of Last Inspection: 04/06/2006
Compliance Code: W/In Violation W/regard To Proc Compliance

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Primary Energy of North Carolina LLC - Roxboro Plant Facility Address: Primary Energy of North Carolina LLC - Roxboro Plant 331 Allie Clay Road Roxboro, NC 27573 SIC: 4911 / Electric Services NAICS: 221112 / Fossil Fuel Electric Power Generation Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: 15A NCAC 2D .0614 NSPS: NA NESHAP: 15A NCAC 2D .1111, Subpart DDDDD PSD: NA PSD Avoidance: NA NC Toxics: NA 112(r): NA Other:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 7300056.05A (Note. Application 7300056.05B consolidated into renewal application) Date Received: 07/21/2005 and 09/07/05 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 05856/T07 Existing Permit Issue Date: 06/09/2004 Existing Permit Expiration Date: 04/30/2006
Tim Tuck Operations Manager (336) 597-4798 P O Box 1153 Roxboro NC, 27573	Ruffin Shackelford Site Manager (336) 597-4798 P O Box 1153 Roxboro NC, 27573	Greg Wagoner Compliance Supervisor (910) 457-5056 PO Box 10836 Southport NC, 28461	
Review Engineer: Mark Cuilla Review Engineer's Signature: Date:		Comments / Recommendations:	
		Issue 05856/T08 Permit Issue Date: date, 2006 Permit Expiration Date: date, 2006	

I. Purpose of Application

Primary Energy of North Carolina – Roxboro* is currently operating under permit **05856T07** set to expire on **April 30, 2006**. Per the requirements of the permit, an application for renewal was due by **August 1, 2005**. This application completes that requirement. The permit is deemed complete for processing. The Permittee did not request any modifications to the permit as part of this renewal process.

*The facility is formerly known as Cogentrix of North Carolina, Inc – Roxboro. A complete ownership change application including permit fee of \$60 was submitted on **September 7, 2005**, and entered into IBEAM as application **7300056.05B** and consolidated into this renewal application.

II. Facility Description

This facility is a cogeneration facility producing steam for Collins and Aikman and selling electricity to Progress Energy. The facility operates three boilers, each with a maximum rated heat input of 220 million Btu per hour. Under its contract with Progress Energy, the facility's maximum power output is limited to 56 megawatts. The maximum steam rate capacity for each of the three boilers is approximately 180,000 pounds of steam per hour. One of the facility's three boilers is always in operation (usually at a minimum steam flow rate) for plant auxiliary usage and to provide the necessary steam to Collins and Aikman. When Progress Energy needs additional electricity to meet peak demand, they buy some of the needed electricity from Primary Energy*. During these periods, the facility operates all three of its boilers at full load.

III. History/Background/Application Chronology

June 30, 2003 – Permit **05856T06** was issued as a 15A NCAC 2Q .0501(c)(2) modification for the modification of applicable requirements of the three boilers. In addition, the three boilers were allowed to combust unadulterated wood and TDF. The permit was issued with a requirement that a complete Title V application be submitted on or before 12 months after commencing operation of the modified process.

June 9, 2004 – Permit **05856T07** was issued as a minor modification to add the 15A NCAC 2D .1400 NO_x SIP call regulations for three boilers at the facility. The permit was issued with the following statement: *“The permit shield described in General Condition R does not apply. Unless otherwise notified by NCDAQ, the terms and conditions of this permit (excluding General Condition R) shall become final on August 8, 2004. Until this date, the Permittee shall comply with the proposed permit terms and conditions herein pursuant to 15A NCAC 2Q .0515(f).”*

July 21, 2005 – Permit application **7300056.05A** was received for the renewal of the current permit **05856T07**. The application was deemed complete for processing.

September 2, 2005 – Permit application **7300056.05B** was received to request an ownership change from Cogentrix of North Carolina, LLC – Roxboro to Primary Energy of North Carolina – Roxboro. This permit application was deemed complete for processing and consolidated into application **7300056.05A** for processing.

June 22, 2006 – DRAFT permit sent to Title V coordinator, Permittee, and Regional Office for comment prior to public notice and EPA review.

August 1, 2006 – Received comments on DRAFT permit from Permittee. See Section IX of this Document for a summary and discussion of the comments.

October 19, 2006 – DRAFT permit sent to Permittee for a second time in response to comments received on **August 1, 2006**. Title V Coordinator returned DRAFT permit on **October 26, 2006** with no additional comments. Permittee returned DRAFT permit on **November 8, 2006**. See Section XI of this Document for a complete listing comments/responses.

Date, 2006 – DRAFT permit sent to 30-day public notice and 45-day EPA review.

IV. Permit Modifications/Changes

The following table describes the modifications to the current permit as part of the renewal process.

Page(s)	Section	Description of Change(s)
Attachment	Insignificant Activities	-added ID Nos. per ESM -associated insignificant activity (paved haul roads)
Cover	-	-updated permit revision numbers and all dates -changed facility name and address per application request
All	Header	-amended permit revision number
3	Equipment Table	-modified boiler description to include "watertube design" -added MACT notation to applicable equipment
4	2.1 A (title)	-modified boiler description to include "watertube design"
4-5	2.1 A (table)	-corrected rule citation for 2Q .0317 -added rule citation for 2D .0614 and 2D .1111 -added emission limit compliance certification asterisked language
5	2.1 A.1.a 2.1 A.1.c 2.1 A.1.d	-added ID Nos. -updated shell language -updated shell language
6	2.1 A.2.b 2.1 A.2.c 2.1 A.2.1	-added ID Nos. -added ID Nos. -amended language per Permittee
7	2.1 A.3.g 2.1 A.3.h 2.1 A.3.i	-added ID Nos. -added ID Nos. -updated shell language
8	2.1 A.3.l 2.1 A.3.n 2.1 A.3.o 2.1 A.3.p 2.1 A.4.f 2.1 A.4.i	-added ID Nos. -updated shell language -updated shell language -updated shell language -added ID Nos. -corrected cross reference
9	2.1 A.5 2.1 A.5.e 2.1 A.5.f	-corrected rule citation for 2Q .0317 -corrected cross reference -modified testing from annually to once per permit term
10	2.1 A.5.i.iii 2.1 A.6.a	-corrected cross reference -added ID Nos..
11	2.1 A.6.b 2.1 A.6.c 2.1 A.6.d 2.1 A.6.e 2.1 A.6.f 2.1 A.6.g 2.1 A.6.h 2.1 A.6.i	-added ID Nos -added ID Nos. -corrected Regional Office name -added ID Nos. -added ID Nos. -added ID Nos. -added ID Nos. -added ID Nos.
12	2.1 A.6.j 2.1 A.6.l 2.1 A.6.p 2.1 A.7.a	-added ID Nos. -added recordkeeping requirements -added ID Nos. -amended language to remove old dated emission limits that no longer apply
13-15	2.1 A.8	-added CAM requirements
15	2.1 A.9 2.1 B	-added MACT requirements -corrected equipment ID Nos.

Page(s)	Section	Description of Change(s)
16	2.1 B.1.c 2.1 B.1.d 2.1 B.1.e 2.1 B.2.d	-added ID Nos. and updated shell language -updated shell language -updated shell language -added ID Nos. and updated shell language
17	2.1 B.2.e 2.1 B.2.g 2.1 C 2.1 C.1.c	-updated shell language -updated shell language -corrected equipment description -added ID Nos. and updated shell language
18	2.1 C.1.d 2.1 C.1.e 2.1 C.2.a 2.1 C.2.b 2.1 C.2.d 2.1 C.2.e	-updated shell language -updated shell language -added ID Nos. and added "as needed" per Regional Office request -added ID Nos. and added "as needed" per Regional Office request -added ID Nos. -added ID Nos.
19	2.1 C.2.f	-updated shell language
19-27	General Conditions	-updated shell conditions

The following table indicates the changes to ESM associated with this permit renewal:

ESM Before	ESM After
Paved Roads (ID No. U-ES1)	Paved haul roads (ID No. IES10) – Associated source
One coal/natural gas/No. 2 and No. 4 fuel oil/tire derived fuel/wood*/pelletized paper fuel/flyash briquette-fired steam, electric generating boilers (220 million Btu per hour heat input each; ID Nos. ES-1-1A) **unadulterated wood** as defined per NCAC 2Q .0703(23)	One <i>watertube design</i> coal/natural gas/No. 2 and No. 4 fuel oil/tire derived fuel/wood**/pelletized paper fuel/flyash briquette-fired steam, electric generating boiler (220 million Btu per hour <i>maximum</i> heat input <i>capacity</i> , ID No. -1A) ***unadulterated wood** as defined per NCAC 2Q .0703(23)
One coal/natural gas/No. 2 and No. 4 fuel oil/tire derived fuel/wood*/pelletized paper fuel/flyash briquette-fired steam, electric generating boilers (220 million Btu per hour heat input each; ID Nos. ES-1-1B) **unadulterated wood** as defined per NCAC 2Q .0703(23)	One <i>watertube design</i> coal/natural gas/No. 2 and No. 4 fuel oil/tire derived fuel/wood**/pelletized paper fuel/flyash briquette-fired steam, electric generating boiler (220 million Btu per hour <i>maximum</i> heat input <i>capacity</i> , ID No. -1B) ***unadulterated wood** as defined per NCAC 2Q .0703(23)
One coal/natural gas/No. 2 and No. 4 fuel oil/tire derived fuel/wood*/pelletized paper fuel/flyash briquette-fired steam, electric generating boilers (220 million Btu per hour heat input each; ID Nos. ES-1-1C) **unadulterated wood** as defined per NCAC 2Q .0703(23)	One <i>watertube design</i> coal/natural gas/No. 2 and No. 4 fuel oil/tire derived fuel/wood**/pelletized paper fuel/flyash briquette-fired steam, electric generating boiler (220 million Btu per hour <i>maximum</i> heat input <i>capacity</i> , ID No. -1C) ***unadulterated wood** as defined per NCAC 2Q .0703(23)

V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 2D .0501, Compliance with National Ambient Air Quality Standards
15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources
15A NCAC 2D .0521, Control of Visible Emissions
15A NCAC 2D .0524, New Source Performance Standards (40 CFR 60, Subpart Db)
15A NCAC 2D .0530, Prevention of Significant Deterioration
15A NCAC 2D .1417, Emission Allocations for Large Combustion Sources
15A NCAC 2Q .0317, Avoidance Conditions
15A NCAC 2Q .0700, Toxic Air Pollutant Procedures

No regulatory review is required for these existing permit conditions as part of the renewal process. However, as part of this renewal process the following new permit condition has been added:

15A NCAC 2D .0614, Compliance Assurance Monitoring
15A NCAC 2D .1111, Maximum Achievable Control Technology

VI. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

NSPS – The Permittee is currently subject to the New Source Performance Standards for boilers (40 CFR 60 Subpart Db). Specifically, the Permittee is subject to a particulate matter emission limit of 0.5 pounds per million Btu heat input, a nitrogen oxide emission limit of 0.60 pounds per million Btu heat input while firing coal, a nitrogen oxide emission limit established by the following equation:

$$E_n = (0.1H_{go} + 0.3H_{ro} + 0.6H_c)/(H_{go} + H_{ro} + H_c),$$

while simultaneously burning coal with fuel oil or a mixture of these fuels with natural gas or any other fuel, and a 20 percent opacity. This permit renewal does not affect this status. No modifications to the current permit language are required.

NESHAPS/MACT – As a major hazardous air pollutant emitter, the facility's three boilers (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) will be required to comply with the National Emission Standards for Hazardous Air Pollutants from Industrial, Commercial, Institutional Boilers and Process Heaters" (40 CFR 63, Subpart DDDDD). These existing, watertube design, large solid fuel-fired boilers are required to be in compliance by September 13, 2007. The following language has been included in the renewed permit as Section 2.1 A.9:

9. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

The Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters" for its existing, watertube design, large, solid fuel fired boilers (ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C) by September 13, 2007.

However, it should be noted that these same boilers will be subject to the proposed mercury rules for electric generators (CAMR; 15A NCAC 2D .2500). These rules are (as of the date of this document) in the proposal stage. These boilers are cogeneration emission units because they combust coal, tire-derived fuel and wood to produce useful thermal energy for the facility's industrial host and generate electricity for sale to Progress Energy. The boilers serve an electrical generator with a nameplate capacity greater than 25 megawatts of electrical output and sell greater than one-third of their potential electric output capacity to the electrical grid. Although the boilers do not technically meet the definition of an electrical utility steam generating unit because their individual design capacity is not more than 25 megawatts, the boilers serve a similar purpose as they collectively supply more than 25 megawatts to the grid. Based on the boilers status as cogeneration units supplying a certain amount of electricity to the grid, they are regulated by, among other CAA programs, the New Source Performance Standards, CAMR and the Clean Air Act Interstate Rule (CAIR).

In proposed modifications to the boiler MACT (70FR62264-62275, October 31, 2005), EPA writes:

*“On March 29, 2005, EPA revised the regulatory finding that it issued in December 2000, removing electric utility steam generating units from the CAA Section 112 source category list. EPA instead established standards of performance for mercury from new and existing electric utility steam generating units under the authority of Section 111 of the CAA. These standards of performance (Subparts Da and HHHH of 40 CFR Part 60) regulating mercury from electric utility steam generating units were promulgated on May 18, 2005 in the Clean Air Mercury Rule....Thus to clarify applicability of the final rule, we are proposing to modify 40 CFR 63.7491(c) to **EXCLUDE** ‘an electric utility steam generating unit (including a unit covered by 40 CFR Part 60, Subpart Da) and a Mercury (Hg) Budget unit covered by 40 CFR Part 60, Subpart HHHH.’ The term ‘electric utility steam generating unit’ is defined in 40 CFR 63.7575 of Subpart DDDDD in accordance with the statutory definition in Section 112(a)(8) of the CAA.”*

This permit should be reviewed for future boiler MACT and CAMR rule consideration as the proposed rules are promulgated. If EPA promulgates the proposed modifications to exclude the CAMR subject sources from the requirements of the Boiler MACT prior to the compliance date of the MACT, this permit should be administratively amended to remove this language as a “non-applicable requirement”.

PSD – The facility is currently subject to PSD conditions for all of its permitted equipment. First, the three boilers (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) are subject to particulate matter, sulfur dioxide, nitrogen oxide, carbon monoxide, sulfuric acid mist, and sulfur content of coal requirements. Second, the coal bunkers (**ID Nos. ES-2A through ES-2C**), flyash silo (**ID No. ES-3**), and ash transfer systems (**ID Nos. ES-5A and ES-5B**) are all subject to particulate matter restrictions. Finally, the coal unloading/storage and transfer operations (**ID No. ES-6**) are subject to particulate matter restrictions. No permit modifications are required as part of this renewal process.

In addition to these requirements, the boilers (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) are also subject to PSD avoidance requirements for particulate matter, sulfur dioxide, nitrogen oxide, and carbon monoxide emissions. No permit modifications are required as part of this renewal process.

112(r) – The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule. This permit renewal does not affect this status.

CAM – 40 CFR 64 requires that a continuous assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold, and use a control device to meet an applicable standard. The facility currently operates the following equipment:

- three boilers (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) with associated bagfilters (**ID Nos. CD-1-1A through CD-1-1C**) respectively;
- three fuel bunkers (**ID Nos. ES-2A through ES-2C**) with associated bagfilters (**ID Nos. CD-2A through CD-2C**);
- one flyash silo (**ID No. ES-3**) with associated binvent (**ID No. CD-3**);
- one bottom ash silo (**ID No. ES-4**) with associated binvent (**ID No. CD-4**);
- two ash vacuum transport pumps (**ID Nos. ES-5A and ES-5B**) with associated filters (**ID Nos. CD-5A and CD-5B**), two cyclones (**ID Nos. CD-5D and CD-5E**), and one bagfilter (**ID No. CD-5C**); and
- coal unloading/storage and transfer operations (**ID No. ES-6**) with associated wet suppression system (**ID No. Wetsup**).

The following table illustrates the applicable regulations and CAM applicability for each piece of equipment:

Regulated Pollutant	Applicable Regulation	CAM Demonstration Needed
Boilers (ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C)		
SO ₂	15A NCAC 2D .0516	No; control devices not for SO ₂
PM ₁₀ NO _x (coal firing) NO _x (coal w/other fuels) Opacity	15A NCAC 2D .0524 (Subpart Db)	Yes No; control devices not for NO _x No; control devices not for NO _x No; opacity is not a criteria pollutant
PM ₁₀ SO ₂ NO _x CO	15A NCAC 2D .0501(e)	Yes No; control devices not for SO ₂ No; control devices not for NO _x No; control devices not for CO
PM ₁₀ SO ₂ NO _x CO Sulfuric acid mist	15A NCAC 2D .0530	Yes No; control devices not for SO ₂ No; control devices not for NO _x No; control devices not for CO No; acid mist not a criteria pollutant
NO _x	15A NCAC 2D .1417	No; control device not for NO _x
PM ₁₀ NO _x SO ₂ CO	15A NCAC 2Q .0317 (PSD Avoidance)	Yes No; control device not for NO _x No; control device not for SO ₂ No; control device not for CO
Toxics	15A NCAC 2Q .0700 (State only requirement)	No; control device not for toxics
Fuel Bunkers (ID Nos. ES-2A through ES-2C)* Flyash Silo (ID No. ES-3)* Bottom Ash Silo (ID No. ES-4)* Ash Vacuum Transport Pumps (ID Nos. ES-5A and ES-5B)* Coal Unloading/Storage and Transfer Operations (ID No. ES-6)*		
Opacity	15A NCAC 2D .0521	No; opacity is not a criteria pollutant
PM ₁₀	15A NCAC 2D .0530	No; PSEUs<major source threshold*

* Renewal application included estimated potential emission calculations that indicate that these sources are below the major source threshold for particulate therefore; CAM is not applicable.

The bagfilters for each boiler are installed for particulate matter control. A check against the DAQ spreadsheets for PM₁₀ indicates that potential precontrolled PM₁₀ emissions exceed the threshold quantity for CAM applicability. The following language has been included as Section 2.1 A.8 in the renewed permit.

8. 15A NCAC 2D .0614: COMPLIANCE ASSURANCE MONITORING

a. Per 40 CFR 64 and 15A NCAC 2D .0614, the Permittee shall comply with the following.

b. **Background**

i. Emission Unit(s).

(A) *Description.* Three watertube design coal/natural gas/No. 2 and No. 4 fuel oil/tire derived fuel/wood**/pelletized paper fuel/flyash briquette-fired boilers

(B) *Identification.* **ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**

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

(A) *Regulations.* 15A NCAC 2D .0524 (Subpart Db)

15A NCAC 2D .0501(e)

15A NCAC 2D .0530

15A NCAC 2Q .0317 (PSD Avoidance)

(B) *Emission limits.*

1. 0.05 pounds per million Btu heat input (40 CFR 60.43b(a)(1)) – [particulate matter]
20 percent opacity [40 CFR 60.43b(f)]

2. 5.94 pounds per hour per boiler [PM₁₀]

3. 0.027 pounds per million Btu heat input per boiler [PM₁₀]

4. Less than 61 tons per consecutive 12 month period [PM₁₀]

(C) *Control Technology.* Three bagfilters (**ID Nos. CD-1-1A, CD-1-1B, and CD-1-1C**)

c. **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	2
I. Indicator	Visible emissions	Pressure drop
Measurement Approach	Visible emissions from the fabric filter will be monitored continuously using COM system on each common stack	Pressure drop across the fabric filter is measured with a differential pressure gauge
II. Indicator Range	An excursion is defined as visible emissions in amounts greater than or equal to 15% (six-minute average). Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a pressure drop greater than 9.5 inches of water. Excursions trigger an inspection, corrective action, and a reporting requirement.
QIP Threshold	The QIP threshold is six excursions in a 6-month reporting period.	None selected

	1	2
<i>III. Performance Criteria</i>		
<i>A. Data Representativeness</i>	<i>Measurements are being made at the emission point (fabric filter outlet) of each common stack</i>	<i>Pressure taps are located at the fabric filter inlet and outlet. The gauge has a minimum accuracy of 0.5 inches of water.</i>
<i>B. Verification of Operational Status</i>	NA	NA
<i>C. QA/QC Practices</i>	<i>The COM systems shall be calibrated, maintained and operated according to 40 CFR 60, Appendix B, PSI.</i>	<i>The pressure gauge is checked daily for operation.</i>
<i>D. Monitoring Frequency</i>	<i>Data is collected continuously with COM systems.</i>	<i>Pressure drop is monitored daily.</i>
<i>Data Collection Procedures</i>	<i>Data from the COM systems is collected electronically and maintained on the Data Acquisition and Handling System computer along with information on the operating status of the boilers.</i>	<i>Pressure gauge readings are manually recorded daily.</i>
<i>Averaging Periods</i>	NA	NA

d. Justification

- i. Background. *The pollutant-specific emission units are the three identical stoker boilers used to produce steam. A portion of which is sold to a nearby industrial facility for use in their process. The remainder of the steam is used to drive a steam turbine connected to an electrical generator to generate electricity for wholesale to the connected utility. The particulate matter emissions from each boiler are controlled by fabric filters with approximately 16,800 square feet of filter area, each.*
- ii. Rationale for Selection of Performance Indicators. *Visible emissions was selected as the performance indicator 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% (six-minute average) is used as a performance indicator.*

In general, filters are designed to operate at a relatively constant pressure drop. Monitoring pressure drop provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged/broken, the bags are becoming blinded, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags, but this is also indicated by the presence of visible emissions, indicator No. 1. A pressure drop across the filter unit also serves to indicate that there is airflow through the control device.

- iii. 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 (six-minute average). 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 indicator range of no visible emissions was selected because: (1) an increase in visible emissions is indicative of an increase in particulate emissions; and (2) 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. This level is 3 percent of the total visible emissions observations. If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented.

The indicator range chosen for the fabric filter pressure drop is greater than 9.5 inches water. An excursion triggers an inspection, corrective action, and a reporting requirement. The pressure drop is recorded daily. As the pressure drop approaches 9.5 inches water the bags are scheduled for replacement.

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

- e. *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.*

VII. Facility Wide Air Toxics

The Permittee is subject to toxic requirements for the combustion of supplemental fuels, spent cation/anion resins, tire derived fuel, flyash briquettes, and unadulterated wood in its three boilers (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**). No permit modifications are required as part of this renewal process.

VIII. Facility Emissions Review

There is no change in emissions for this renewal.

The following table represents the latest years emission inventory from the facility:

Pollutant(s)	2004 Actual Emissions (tpy)
CO	70.70
NO _x	512.48
PM	8.09
SO ₂	1623.03
VOC	2.34
HAPs	72.73

IX. Stipulation Review

In his April 6, 2006 inspection report, Mr. Steve Hall of the RRO indicated that the facility is required to maintain a wet suppression system on its rail car unloading system, coal pile load-in/out, and the wind erosion piles. He noted that the facility has historically operated these wet suppression systems on an as-needed basis. However, the permit does not specify whether the system should be used continuously or on an as-needed basis. He recommends that the renewed permit clarify this issue. *Agree, the permit was modified to include the term "as needed" where appropriate.*

The Permittee provided the following comments to the first DRAFT renewed permit prior to the notice period. DAQ's response are in italics. The Permittee was given a second chance at commenting. Their comments follow DAQ's.

1. Change the mailing address to Roxboro, NC 27573 on the cover page of the permit. *Agree, change will be made.* Thank you.
2. Request that the renewal application due date be changed from proposed nine months prior to expiration to current six months. *No change; 15A NCAC 2Q .0513(b) requires that applications be submitted within nine months.* Thank you – we were not aware of the time change from six to nine months change per the regulation you cited.

3. Modify the equipment description of the three boilers (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) in both the equipment table and in Section 2.1 A of the permit to reflect that each boiler is designed and operates with an overfired-air system. *No change; this request is under investigation by the regional office and central office compliance section.* The Overfire Air (OFA) systems were part of the original boiler design and construction. The OFA systems have been in operation since the boiler start-up in 1987. The intent of adding the OFA system to the boiler descriptions was to provide a more complete description of the boiler as originally constructed, permitted and operated. *No change. The ongoing testing requirement for Roxboro (letter dated September 27, 2006) is in effect. Once this testing is completed and the results submitted, the description of the boilers will either:*
 1. *be modified through a required permit modification; OR*
 2. *via a Permittee requested administrative amendment.*
4. We note that the limits have been clarified to indicate that emissions are based on a per boiler basis. Stack measured or calculated emissions represent the collective emissions for the three boilers in the power unit. Per boiler emissions are derived by dividing the measured emissions by the boilers in operation during the timeframe specified. Compliance certification on a per-boiler basis will be based on the common stack emissions performance divided by the boilers in operation per power unit. *Agree; the renewed permit will be clarified to make this clarification.* Thank you.
5. To ensure that all proper records are maintained consistent with the agency's view of the proper averaging period for all applicable limits, we ask that averaging times be explicitly included in the permit. *No change; averaging times are listed in the permit condition where necessary.* Thank you. We will abide by permit condition 2.1 A.2.h which specifies a 1-hour NO_x reading averaged on a 30-day rolling average basis per 2.1 A.2.d.iii.
6. They question the appropriate method to reflect the fact that the agency has determined that the ICR Boiler MACT does not apply to the facility because the State's implementing regulations for the Clean Air Mercury Rule has been determined to apply. *In a June 9, 2006 response to Mr. Thor Ketzback concerning the applicability of CAMR and the boiler MACT, DAQ states that:*

“Based on the fact that both Primary Energy facilities will be subject to the regulations for CAMR and on the fact that EPA, with its clarification of the Boiler MACT, does intent to clarify that CAMR subject sources are excluded from having to comply with the modified Boiler MACT, NC DAQ does confirm that the Boiler MACT does not apply to the electric steam generating units at both the Roxboro and Southport Primary Energy facilities. HOWEVER, it should be noted that this determination is being made on the basis of a proposed modification. If the modification to the Boiler MACT specifically excluding CAMR affected sources is not promulgated as written, NC DAQ reserves the right to change its decision.”

Based on this response, it has been determined that placeholder language for the MACT should be placed in the renewed permit. The underlying rules which would exclude these sources from the Boiler MACT have not been promulgated as of yet. Until that time, these sources ARE subject and therefore as existing sources would be required to comply by September 13, 2007. If prior to that date, EPA promulgates the modified rule, the permit can either be administratively amended to remove a “non-applicable” requirement OR the language can remain as unnecessary. We spoke to Jim Eddinger at EPA RTP who said that the clarification on the boiler MACT has cleared OMB, gone to the EPA Administrator for signature and should have been out by the end of October 2006. If the clarification is not unduly delayed, it may be worth either waiting for the issuance of the clarification or contacting EPA prior to issuing the permit, as the clarification is close to final issuance. This would enable NCDENR to remove the ICI Boiler MACT “placeholder language” from the permit. No change to the DRAFT permit. If during the public notice period and/or the EPA review period, EPA does finalize these changes, then the permit can be issued without the MACT language. However, if not, then the permit will be issued as drafted and the Permittee can request an administrative amendment to remove any unnecessary language once EPA does act.

7. Request the reduction of its permit requirement for annual stack testing per 15A NCAC 2Q .0317 from once per year to once per permit term. *Agree, the testing requirement has been modified and agreed upon by Steve Hall of RRO to require testing on each stack once per permit term instead of annually.* Thank you.
8. Request that 2.1 A.6.k reflect that daily recordkeeping be required only on days in which briquettes are burned. *No change; language already appears in DRAFT permit as suggested.* Thank you.
9. Requests that the steam production limit be set at 25,000 pounds steam per hour rather than 80,000 pounds per hour to reflect "low steam condition". *Agree; renewed permit will reflect change as suggested.* Thank you.
10. Requests modification of the compliance assurance monitoring plan for an allowance of a short time period (5 minutes) to allow for instantaneous opacity spikes and short excursions that typically return to normal quickly with only minor or in many cases no operational adjustments. *Not agree with Permittee's suggestion. However, the DRAFT renewed permit has been modified to reflect that the opacity excursion is based on a six minute average level. This modification brings the level in line with the opacity emission limit of the NSPS.* Thank you. The 6-minute period provides the clarification needed to address the instantaneous opacity spikes.
11. Requests modification of the compliance assurance monitoring plan for clarification that bagfilters typically operate in a differential pressure range and is not constant. The actual gauge reading is a function of both demand for output and changes in our blend of fuels. The permit condition should be modified to address this normal operating scenario and allow for short time period (5 minutes) to allow for instantaneous spikes and short excursions. *No change; the pressure drop indicator is measured daily. The excursion level is accurately identified to allow for fluctuations within a normal operating range not to exceed the excursion level.* Your additional clarification is requested. Our understanding of the term "normal operating range" in your response excludes conditions that are not generated as part of the baghouse PM removal operation. For example, on-line bag air pulse cleaning that can cause pressure spikes when pressurized air is purposely injected into the bags to remove ash accumulation from the filterbag surface. Differential pressure spikes caused by air pulse cleaning are not indicative of excessive PM loading and poor baghouse performance. *The specific monitoring required by this permit condition allows the Permittee to establish "when" the monitoring is to be completed. Section 2.1 A.8 requires that the pressure differential be monitored and recorded once daily. The allowance for spikes during cleaning are built into this requirement. It is expected that the Permittee will, while taking this weekly reading, record such conditions that may have been present that would have caused an exceedance of the permit requirement and any actions to correct those conditions. The official daily reading can then be properly recorded. These records reflect "normal operation."*
12. Request modification of the reporting requirements for compliance assurance monitoring to indicate that excursions only occur when both of the monitored indicators are out of range. We believe that the purpose of the CAM plan is to establish a primary and secondary indicator. The secondary indicator is only used in those cases where the primary indicator is out of range. *No change; CAM is not written to include a primary and secondary indicator as suggested. Each parameter is required to be monitored and recorded separately. In the case where only one indicator is required, the Permittee has adequately correlated the indicator range to the emission standard. In this case, opacity and pressure drop are good performance indicators of a properly operating control device. However, a direct correlation has not been established. Any excursions recorded are not considered deviations or violations of any standard. Excessive excursions (those that fall outside the levels set in the CAM plan) will require that the Permittee revisit what is "normal" for the proper operation of the control equipment. A QIP would be required to be submitted at that point. The QIP allows the Permittee to adjust the CAM plan requirements to assure that the control equipment is operating in a manner that provides reasonable assurance that the respective emission limit is not being exceeded prior to an actual violation of the standard.* Thank you.

13. Requests clarification of General Condition I.A. that because sources are covered by a NSPS, they are required to report excess emissions via the quarterly reports only and is NOT subject to the verbal next day notifications and written reports within 2 and 15 days as required for facilities not covered by a NSPS. *Yes, the NSPS is specific concerning what is “reportable” in the quarterly report. However, for any standard that is NOT NSPS (even if the pollutant is the same) and for excess emissions not occurring during start-up and shut-down these events reported as per the prompt reporting requirements under 2D .0535 (not waiting until the quarterly report and addressing them at that time).* Thank you.
14. Requests clarification of General Condition I.B that it has been their practice to report the excess emissions in the quarterly excess emission reports but classify those excess emissions events that were the result of unavoidable conditions during start-up and shut-down as unavoidable per 2D .0535(g). Because there are no specified agency reporting requirements for written justification of this determination, we plan to generate that document internally and provide the information upon request. *It should be noted that the General Condition language has been modified in the second DRAFT to read “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.” Furthermore, it would appear with the current federal and state enforceable language that applicants would seek to obtain formal, prompt, Director concurrence that emissions were unavoidable as excess emissions that do not occur during start-up or shut-down are considered violations. DAQ would discourage the use of a quarterly report with the applicant making a determination that the emissions are unavoidable but work with the regional office to set up a more formal approach for making these determinations.* Thank you. In our request we were looking to minimize and streamline the reporting requirement for us and the NCDENR Division of Air Quality. Your point regarding concurrence with the Director is important to properly classify the compliance status of “unavoidable” emissions should such emissions occur during start-up and shut-down conditions.
15. We believe that General Condition K should be modified to require that permit renewal applications should be submitted within six months of expiration. *No change; 15A NCAC 2Q .0513(b) requires that applications be submitted within nine months.* Thank you – we were not aware of the time change from six to nine months per the regulation you cited.
16. Requests clarification of General Condition LL “Reporting Requirements for Non-Operating Equipment”. Does the agency mean this to apply to equipment that is shutdown for an extended period of time and not the everyday “non-operating” time? *This condition was designed to handle instances when an applicant did not have a record because the equipment was not operating. The DAQ could not ascertain if the applicant did not monitor or keep records because the equipment was not operating or the applicant simply did not conduct required monitoring and recordkeeping during the monitoring period. The Permittee provided specific sources such as boilers and ancillary sources that may require these kinds of records. The applicant was concerned that DAQ required “start and stop” records for each piece of equipment. This is not the case as the applicant should simply, during the monitoring period as specified in the permit, conduct monitoring at sometime during the monitoring period or do not conduct the monitoring and note the equipment is not operating as required by General Condition LL.* Thank you.

X. Public Notice/EPA and Affected State(s) Review

Pursuant to 15A NCAC 2Q .0521, a notice of the DRAFT Title V Permit shall be placed in a newspaper of general circulation in the area where the facility is located. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 2Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also pursuant to 2Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above. There are no affected States or local programs.

XI. Conclusions, Comments, and Recommendations

A Professional Engineers Seal was not required for this renewal.

A consistency determination was not required for this renewal.

RRO recommends issuance of the renewed title V permit and was presented a DRAFT permit and review prior to public notice and issuance.

RCO concurs with RRO's recommendation to issue the renewed title V permit.