

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Raleigh Regional Office
County: Person
NC Facility ID: 7300029
Inspector's Name: Steven Carr
Date of Last Inspection: 10/20/2009
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Progress Energy - Roxboro Plant Facility Address: Progress Energy - Roxboro Plant 1700 Dunnaway Road Semora, NC 27343 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: 2D .2400 (CAIR), 2Q .0400 (Acid Rain) NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 7300029.09A Date Received: 12/23/2008 Application Type: Modification Application Schedule: TV-Significant Existing Permit Data Existing Permit Number: 01001/T45 Existing Permit Issue Date: 08/31/2009 Existing Permit Expiration Date: 08/31/2013
William Milam Senior Environmental Specialist (336) 597-6284 1700 Dunnaway Road Semora, NC 27343	Harry Sideris Plant Manager (336) 597-6101 1700 Dunnaway Semora, NC 27343	Stephen Boone Lead Environmental Specialist (919) 546-4798 410 S. Wilmington Street Raleigh, NC 27601	
Review Engineer: Ed Martin Review Engineer's Signature: _____ Date: _____ DRAFT FOR PUBLIC NOTICE		Comments / Recommendations: Issue 01001/T46 Permit Issue Date: Permit Expiration Date:	

I. Purpose of Application

The purpose of this permit modification is to make the following changes:

1. Application 7300029.09A
 Incorporate the Clean Air Interstate Rule (CAIR) requirements into the permit. This rule replaces the 2D .1416 and 40 CFR 52 Subpart II NO_x rules previously in the permit.
2. Application 7300029.09B (consolidated with Application 7300029.09A)
 To renew the Title IV Acid Rain portion of the Title V permit extending the effective dates for the calendar years 2010-2014. Progress Energy submitted an Acid Rain Permit Application, a Phase II NO_x Compliance Plan, and a revised Phase II NO_x Averaging Plan all dated May 5, 2009, which will become part of the Title V permit (as attachments).

This change is a significant permit modification being made in accordance with 15A NCAC 2Q .0501(d)(1). Public notice of the draft permit is required at this time.

II. Permit Changes

The following changes were made to the Progress Energy - Roxboro Plant Air Permit No. 01001T45:

Page	Section	Description of Changes
Cover	--	Amended permit numbers and dates.
TOC	--	Added Section 2.2 to correct previous permit omission.
		Added Section 2.5 - Clean Air Interstate Rule (CAIR) Permit Requirements.
		Revised dates for Acid Rain Permit Application, Phase II NOx Compliance Plan, and Phase II NOx Averaging Plan attachments.
		Added CAIR Application as an attachment.
3	--	Removed the two paragraphs prior to Section 1.
7-8	2.1 A, regulation table	Added 15A NCAC 2D .2404 CAIR permit requirements as an applicable regulation for sulfur dioxide and 15A NCAC 2D .2403 and .2405 CAIR permit requirements as applicable regulations for nitrogen oxides.
		Removed 40 CFR 52 Subpart II and 15A NCAC 2D .1416 as these NOx rules have been superseded by the CAIR permit requirements added in Section 2.5.
14	2.1 A.9 (old section)	Removed this section as this 40 CFR 52 Subpart II rule has been superseded by the CAIR permit requirements added in Section 2.5.
	2.1 A.10 (old section)	Removed this section as this 15A NCAC 2D .1416 NOx rule has been superseded by the CAIR permit requirements added in Section 2.5.
20	2.1 B.2.j.iii	Revised language to require reporting of all PM CEMS hourly averages.
17	2.1 B, regulation table	Added 15A NCAC 2D .2404 CAIR permit requirements as an applicable regulation for sulfur dioxide and 15A NCAC 2D .2403 and .2405 CAIR permit requirements as applicable regulations for nitrogen oxides
		Removed 40 CFR 52 Subpart II and 15A NCAC 2D .1416 as these NOx rules have been superseded by the CAIR permit requirements added in Section 2.5.
21	2.1 B.4 (old section)	Removed this section as this 40 CFR 52 Subpart II rule has been superseded by the CAIR permit requirements added in Section 2.5.
	2.1 B.5 (old section)	Removed this section as this 15A NCAC 2D .1416 NOx rule has been superseded by the CAIR permit requirements added in Section 2.5.
43-44	2.4	Revised Acid Rain effective dates.
		Revised NOx limits and heat inputs in accordance with new averaging plan in Section 2.4 B.
		Revised dates for Acid Rain Permit Application, Phase II NOx Compliance Plan, and Phase II NOx Averaging Plan attachments in Section 2.4 D.
44-46	2.5	Added Section 2.5 - CAIR Permit Requirements.
54	3.0	Added General Condition OO.

III. Facility Description

Progress Energy’s Roxboro Plant is the second largest coal-fired electrical generating facility in North Carolina based on MW output. The facility produces steam in four coal-fired combustion units (Units 1-4) and one No. 2 fuel oil-fired combustion turbine. The steam from the combustion units is routed to steam turbines that produce electricity to sell to residential or industrial consumers. The coal-fired units are permitted to operate electrostatic precipitators for particulate emissions control, low-NOx burner systems combined with selective catalytic reduction (SCR) systems for nitrogen oxides (NOx) emissions control, and wet limestone scrubbers for sulfur dioxide (SO₂) control. Wet scrubbers have been installed and are in operation on all four units (the last scrubber to start-up was on Unit 1 in the fall of 2008). The SCR systems are used on an as needed basis during ozone season to control NOx emissions. The facility has a total of six coal/recycled No. 2 fuel oil-fired electric utility boilers (Units 3 and 4 have two boilers each); one No. 2 fuel oil-fired internal combustion turbine; flyash conveyance, handling and storage equipment; coal conveyance and storage equipment; and limestone conveyance and storage equipment associated with the Units 1-4 scrubbers.

IV. Summary of Changes to Emission Sources and Control Devices

NA

V. Regulatory Evaluation

1. CAIR

North Carolina’s CAIR rules were approved into the SIP by EPA on November 17, 2009 and published in the Federal Register on November 30, 2009. This rule replaces the federal-only 40 CFR 52 Subpart II, and state-only 2D .1416 NOx SIP Call rules previously in the permit.

The applicable CAIR rules, as specified in the CAIR Permit Application attached to the permit, includes the emission and monitoring requirements shown below for the following affected CAIR sources:

PERMITTED SOURCE ID No.	CAIR ID No.
ES-Unit 1	1
ES-Unit 2	2
ES-Unit 3A	CS003
ES-Unit 3B	
ES-Unit 4A	CS004
ES-Unit 4B	

15A NCAC 2D .2400 “Clean Air Interstate Rule” (STATE-ONLY REQUIREMENT)

This rule implements the federal Clean Air Interstate Rule under 40 CFR Part 96. The following 2D .2400 sections apply:

15A NCAC 2D .2403 “Nitrogen Oxide Emissions”

This section specifies the total annual NOx allocations and includes the compliance, emissions measurements recording and reporting, excess emissions and liability requirements.

15A NCAC 2D .2405 “Nitrogen Oxide Emissions During Ozone Season”

This section specifies the NOx allocations during the ozone season and includes the compliance, emissions measurements recording and reporting, excess emissions and liability requirements.

15A NCAC 2D .2404 “Sulfur Dioxide Emissions”

This section specifies the annual SO₂ allocations and includes the compliance, emissions measurements recording and reporting, excess emissions and liability requirements.

2. Acid Rain

15A NCAC 2Q .0400 "Acid Rain Procedures" (40 CFR Part 72 "Permits Regulation")

North Carolina air quality regulation 15A NCAC 2Q .0400 implements Phase II of the federal acid rain program pursuant to Title IV of the CAA as provided in 40 CFR Part 72. Issuance or denial of acid rain permits shall follow the procedures under 40 CFR Part 70 (Title V) and Part 72. If the provisions or requirements of Part 72 conflict or are not included in Part 70, the Part 72 provisions and requirements shall apply and take precedence.

15A NCAC 2Q .0400 "Acid Rain Procedures" (40 CFR Part 73 "Sulfur Dioxide Allowance System")

Establishes the procedures for allocation, tracking, holding and transfer of sulfur dioxide emission allowances, including the allowances allocated to each applicable Phase II unit account to be held in each calendar year as specified in 40 CFR 73.10.

15A NCAC 2Q .0400 "Acid Rain Procedures" (40 CFR Part 76 "Acid Rain Nitrogen Oxides Emission Reduction Program")

Each coal-fired utility unit that is subject to an Acid Rain emissions limit for SO₂ under Phase I or Phase II of the CAA must meet the NO_x emission limitations under 40 CFR Part 76. Progress Energy has revised their Phase II NO_x Averaging Plan to comply with the NO_x emissions limits. NO_x emissions averaging is a NO_x compliance option under 40 CFR 76.11 which allows any affected units subject to a NO_x emissions limit under 40 CFR 76.5, 76.6 or 76.7, under the control of the same owner and operator, and with the same designated representative, to average their NO_x emissions under an approved averaging plan. It has been verified that the averaging plan proposed meets the criteria that the Btu-weighted annual emission rate averaged over the units if they are operated in accordance with the proposed averaging plan is less than or equal to the Btu-weighted annual average emission rate for same units operated in compliance with 40 CFR 76.5, 76.6 or 76.7, as shown in the application.

VI. Public Notice

Pursuant to 15A NCAC 2Q .0521, a notice of the draft Title V Operating Permit will be published in a newspaper of general circulation in the area where the facility is located, to provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the draft (proposed) permit, review and public notice will be sent to EPA for their 45-day review, to persons on the Title V mailing list, and to the Permittee for review.

VII. Other Requirements

PE Seal

NA. No control devices are being added.

Zoning

There is no expansion of the facility, therefore Zoning consistency is not required.

Fee Classification

The facility fee classification before and after this modification will remain as "Title V".

VIII. Recommendations

later after public notice