

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Wilmington Regional Office
County: New Hanover
NC Facility ID: 6500036
Inspector's Name: Ashby Armistead
Date of Last Inspection: 07/28/2010
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)
<p>Applicant (Facility's Name): Carolina Power and Light Company d/b/a Progress Energy Caro</p> <p>Facility Address: Carolina Power and Light Company d/b/a Progress Energy Caro 801 Sutton Steam Plant Road Wilmington, NC 28401</p> <p>SIC: 4911 / Electric Services NAICS: 221112 / Fossil Fuel Electric Power Generation</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>			<p>SIP: NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other: 15A NCAC 2D .1109 (112(j) – Part 2 Case-by-Case MACT Hammer for Boilers & Process Heaters)</p>
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 6500036.10B Date Received: 11/05/2010 Application Type: 112(j) Part I Application Schedule: TV-Significant Existing Permit Data Existing Permit Number: 01318/T25 Existing Permit Issue Date: 11/19/2010 Existing Permit Expiration Date: 07/31/2012</p>
Kent Tyndall Environmental Analyst (910) 343-3244 801 Sutton Steam Plant Road Wilmington, NC 28401	J. Frederick Plant Manager 801 Sutton Steam Plant Road Wilmington, NC 28401	Stephen Boone Lead Environmental Specialist (919) 546-4798 410 S. Wilmington Street Raleigh, NC 27601	
<p>Review Engineer: Ed Martin</p> <p>Review Engineer's Signature: _____ Date: _____</p> <p>DRAFT FOR PUBLIC NOTICE</p>		<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 01318/T25 Permit Issue Date: Permit Expiration Date:</p>	

I. Purpose of Application

Progress has submitted a 112(j) Case-By-Case Part 2 MACT "Hammer" permit application for the sources shown below which are covered by the vacated Boiler MACT (see discussion in Section V). The application was received November 5, 2010, along with an amendment to the application for the new combustion turbines (Turbines 3 and 4). A permit (Permit No. 01318T25) was recently issued for the new combustion turbines and for the sources subject to 112(j) on December 30, 2010. The recently permitted sources subject to 112(j) MACT are: one natural gas-fired auxiliary boiler (ID No. AB1) and two natural gas-fired dew point heaters (ID Nos. DPH1 and DPH2). Note, Progress' application listed the natural gas-fired duct burners for Turbines 3 and 4 as being subject to the 112(j) MACT. However, in accordance with the vacated Boiler MACT (§63.7491(c)), a fossil fuel-fired electric utility steam generating unit of more than 25 MW that serves a generator that produces electricity for sale is not subject to the Boiler MACT. Therefore the natural gas-fired duct burners for Turbines 3 and 4 are not subject to 112(j) for the vacated Boiler MACT. The recently issued permit did not include specific monitoring conditions under 112(j) MACT, but only a requirement to submit a 112(j) MACT application for these 112(j) sources.

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 Sutton Electric Plant Air Permit No. 01318T25:

Page(s)	Section	Description of Changes
Cover	--	Amended permit numbers and dates.
17	2.1.B.2.c	Revised monitoring for opacity to reference 15A NCAC 2D .2610 instead of 15A NCAC 2D .2601.
19	2.1.C.2.d	
21	2.1.D.2.c	
21	2.1.E.1.c	
27	2.1.G, regulation table	Added limit for 2D .1109 MACT CAA § 112(j).
28	2.1.G.5	Added 2D .1109 Case-by-Case MACT requirements.
29	2.1.H, regulation table	Added limit for 2D .1109 MACT CAA § 112(j).
30	2.1.H.4	Added 2D .1109 Case-by-Case MACT requirements.

III. Facility Description

Progress Energy’s L. V. Sutton Steam Electric Plant is an electric utility facility that generates electrical power using boilers and internal combustion turbines. The L. V. Sutton facility has three coal/No. 2 fuel oil/on-specification used No. 2 fuel oil-fired electric utility boilers (ID Nos. Unit 1 Boiler, Unit 2 Boiler, and Unit 3 Boiler), and three No. 2 fuel oil/natural gas-fired simple-cycle internal combustion turbines (ID Nos. IC1, IC2A, and IC2B). Also, the following sources were recently permitted (Permit No. 01318T25, issued December 30, 2010): two combustion turbines (ID Nos. Turbine 3 and Turbine 4), an auxiliary boiler (ID No. AB1), two dew point heaters (ID Nos. DPH1 and DPH2) to control moisture in the natural gas supplied to the turbines, a diesel-fired fire-water pump engine (ID No. FWP1), and a wet surface air cooler (ID No. CTWR1) and a turbine inlet chiller (ID No. CTWR2).

IV. Summary of Changes to Emission Sources and Control Devices

NA

V. Regulatory Evaluation

15A NCAC 2D .1109: CAA § 112(j); CASE-BY-CASE MACT FOR BOILERS & PROCESS HEATERS

The sources subject to the §112(j) MACT are:

- one natural gas-fired auxiliary boiler (ID No. AB1)
- two natural gas-fired dew point heaters (ID Nos. DPH1 and DPH2)

These sources fire only natural gas.

On July 30, 2007, the US Appeals Court for the D.C. Circuit Court vacated the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, promulgated under 40 CFR 63, Subpart DDDDD (the Boiler MACT). On February 24, 2009, the

North Carolina Attorney General's office had opined that the vacatur of any Maximum Achievable Control Technology (MACT) standard is tantamount to EPA's failure to promulgate a valid Section 112(d) standard under CAA. As a result, the requirement of site-specific MACT standard under CAA §112(j), commonly referred to as the MACT "hammer" provision, has been triggered. North Carolina regulations implementing the "MACT hammer" are found at 15A NCAC 2D .1109.

The level of MACT emission control depends on whether the sources are new or existing. These sources are *existing sources* because, in accordance with the definition in the general provisions of Part 63, they are not new sources. To be a *new affected source* for 112(j) purposes, as defined in §63.51, the source (meaning the auxiliary boiler and dew point heaters in this case) would have to be constructed after the issuance of a section 112(j) permit for the source (meaning the facility). Construction is *commenced*, as defined in the general provisions, when an owner or operator has undertaken a continuous program of construction or reconstruction or when an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of construction or reconstruction. Progress Energy has stated that they have entered into a contractual obligation to procure the 112(j) sources and therefore construction has commenced. Also, since a section 112(j) permit has not been issued for the facility prior to this permit, the source is not being constructed after the issuance of a section 112(j) permit and therefore the source is not a *new affected source* and therefore the source is an *existing source*.

No control technologies for the control of CO, metals, Hg, or HCl were identified for natural gas fired boilers or process heaters in the state of North Carolina, nor were any such technologies identified in a North Carolina query using U.S. EPA's AirControlNet software (v4.1) for these existing sources. The NC DAQ has determined that MACT for these existing sources is the use of best work practice standards for natural gas combustion sources of this size, consistent with the provisions in CAA §112(d)(2)(D). Best work practice standards in this case shall include an annual inspection and maintenance of the source as follows:

To assure compliance, the Permittee shall perform an annual burner inspection and maintenance as recommended by the manufacturer, or as a minimum, the inspection and maintenance requirement shall include the following:

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

The Permittee shall conduct at least one tune-up per calendar year to demonstrate compliance with this requirement. The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1109 if the affected source is not inspected and maintained as required above.

In addition, the Permittee will be required to record the results of the annual inspection in a logbook (written or electronic format), which shall be retained on-site and made available to an authorized representative upon request.

VI. Public Notice

Pursuant to 15A NCAC 2Q .0521, a notice of the draft Title V Operating Permit will be published on the DAQ website, 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

to be determined after public notice