

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Winston-Salem Regional Office
County: Stokes
NC Facility ID: 8500004
Inspector's Name: Eric Hudson
Date of Last Inspection: 07/31/2007
Compliance Code: 3/In Compliance - Inspection

Facility Data			Permit Applicability (this application only)	
Applicant (Facility's Name): Duke Energy Carolinas, LLC - Belews Creek Steam Station Facility Address: Duke Energy Carolinas, LLC - Belews Creek Steam Station 3195 Pine Hall Road Belews Creek, NC 27009 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: 2Q .0400 NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other: 40 CFR Parts 72, 73 and 76	
Contact Data			Application Data	
Facility Contact	Authorized Contact	Technical Contact	Application Number: 8500004.07A and .07B Date Received: 12/27/2006 Application Type: Modification Application Schedule: TV-Significant Existing Permit Data Existing Permit Number: 01983/T22 Existing Permit Issue Date: 08/21/2007 Existing Permit Expiration Date: 10/31/2008	
Melonie Martin Environmental Coordinator (336) 445-0610 3195 Pine Hall Road Belews Creek NC, 27009	Tom Guthrie Manager (336) 427-0274 Belews Creek Steam Station Belews Creek NC, 27009	William Horton Senior Scientist (704) 373-3226 526 S. Church Street Charlotte NC, 28202		
Review Engineer: Ed Martin Review Engineer's Signature: _____ Date: _____ DRAFT FOR PUBLIC NOTICE			Comments / Recommendations: Issue 01983/T23 Permit Issue Date: Permit Expiration Date:	

I. Purpose of Application:

Duke Energy has submitted an application (8500004.07A) to comply with the annual NOx emission requirements of the Acid Rain program by averaging the NOx emission rates and heat inputs for the 52 units listed in their application Averaging Plan. Previously Duke complied with the Acid Rain regulations on an individual unit-by-unit basis rather than averaging among units. Duke's initial Averaging Plan application was received December 27, 2006. Duke then submitted a corrected Averaging Plan form, received January 9, 2007, because the two numbers in Step 2 of the form were reversed. Also, the \$834 application fee was not included in the initial application, and was received February 9, 2007, along with other changes they wanted made to the permit. An application fee is not required for a renewal (only) of the Acid Rain portion of the permit; however, it is required anytime a change to an averaging plan is made. In addition, Duke submitted an application, (8500004.07B) received June 21, 2007, for renewal of the Title IV Acid Rain portion of their Title V permit.

Therefore, this permit revision will include both the averaging plan requirements and the renewal of the Acid Rain portion of the Title V permit (with application 8500004.07B consolidated with application 8500004.07A) , extending the effective dates of the Acid Rain portion of the permit for the calendar years 2007-2011. Duke Energy submitted an Acid Rain Permit Application dated June 18, 2007, a Phase II NO_x Compliance Plan dated December 18, 2006, and a Phase II NO_x Averaging Plan dated January 4, 2007, which will become part of the Title V permit (as attachments).

In addition, the permit was revised to make the 2D .1416 condition (condition 2.1 A.9) a Federal-only requirement under 40 CFR 52 Subpart II and add a separate 2D .1416 State-only requirement (condition 2.1 A.10). This is necessary because the recent revision to the State 2D .1404(g) rule, eliminating the interim NO_x reporting, which required the tons of nitrogen oxides emitted during the previous May and June to be reported no later than July 30 of each year, has not yet been approved by EPA into the SIP. Therefore, the SIP version must be retained until the new State rule is approved by EPA. Removed NO_x allocations for years 2004 and 2005.

Also, Duke has submitted with this application (letter received February 9, 2007) an E5 form (dated February 8, 2007) for the equipment in Table 2 of Part II, Section 1 of permit No. 01983T20 (sources ES-4a(EmGen) and ES-5(AC)) to comply with Part II, condition 2.2 of that permit (the permit in effect at the time this application was made) which requires an E5 form to be submitted with the next significant modification or permit renewal. Note however, this equipment had already been removed, along with condition 2.2, from Part II in permit No. 01983T21 (issued May 30, 2007) by mistake (it should not have been removed because the change did not go through public notice) because Duke submitted another E5 form (dated February 7, 2007) to the engineer (Gautam Patnaik) working on that change for this same equipment at that time (this was after Duke submitted the application for the acid rain changes, received February 9, 2007). Part of the confusion was that there were different engineers working on the two applications at the same time). In any event, this equipment will now be shielded after going through public notice, but no change is needed to the previous permit since the equipment had already been removed by mistake. The start-up notice has already been made for ES-4a(EmGen) and ES-5(AC) (see e-mail to Ed Martin from Bill Horton dated October 3, 2007). Further, the E5 form submitted for permit No. 01983T21 also included sources ES-34 and ES-35 (which were being added in that permit) in addition to ES-4a(EmGen) and ES-5(AC) (which were inadvertently removed at that time). Therefore, ES-34 and ES-35, in Table 2 in Part II, can now be removed since this equipment will now be shielded and the equipment is in operation (note, the permit did not require a start-up notice for this equipment when the equipment was added but Duke confirms it is in operation).

Other miscellaneous changes (see Section II below):

1. Corrected section reference numbers in Part I, Section 2.1 D.1.e.
2. Added limestone stackout conveyor ES-10(LCB2) to Part I, Section 2.1 D.2 since this source was inadvertently omitted from this 2D .0521 condition during issuance of permit No. 01983T20. Also, removed this source from NSPS conditions throughout permit and removed "NSPS" label for this source, since it is not subject to Subpart OOO.

This change is a significant permit modification being made in accordance with 15A NCAC 2Q .0501(d)(1).

II. Permit Changes:

The following changes were made to the Duke Energy Carolinas LLC Belews Creek Air Permit No. 01983T22:

Page	Part, Section	Description of Changes
Part I		
Cover	--	Amended permit numbers and dates.
TOC	--	Revised for new Acid Rain application attachments.
5-7	Part I, Section 1, table of permitted emission sources	Removed "NSPS" label from ES-10(LCB2). Removed asterisks and footnotes for sources ES-4a(EmGen), ES-5(AC), ES-34 and ES-35 since this equipment will now be shielded.
8	Part I, Section 2.1 A regulation table	Revised to show separate regulations for 40 CFR 52 Subpart II (Federal-only requirement) and 2D .1416 (State-only requirement) under nitrogen oxides.
15-17	Part I, Section 2.1 A.9 and 10	Revised to make 2D .1416 (old condition 2.1 A.9) a Federal-only requirement under 40 CFR 52 Subpart II and added a separate 2D .1416 State-only requirement. Removed NOx allocations for years 2004 and 2005.
19	Part I, Section 2.1 C	Removed asterisks and footnotes for sources ES-4a(EmGen) and ES-5(AC) since this equipment will now be shielded.
21	Part I, Section 2.1 D regulation table	Added limestone stackout conveyor ES-10(LCB2) under 2D .0521.
22	Part I, Section 2.1 D.1.e	Corrected section reference numbers.
22	Part I, Section 2.1 D.2	Added limestone stackout conveyor ES-10(LCB2) under 2D .0521.
24	Part I, Section 2.1.D.3.g	Removed ES-10(LCB2) from this NSPS condition,
29-31	Part I, Section 2.1 I	Removed asterisks for sources ES-34 and ES-35 since this equipment will now be shielded.
34	Part I, Section 2.2.B.1.d	Corrected typo to read: <i>The report shall contain the monthly hours of operation for these sources for the previous 17 months</i> instead of: <i>The report shall contain the monthly sulfur consumption for the previous 17 months.</i>
36-37	Part I, Section 2.4	Revised Acid Rain effective dates.
		Revised NOx limits in accordance with averaging plan in Section 2.4 B.
		Revised for new Acid Rain application attachments in Section 2.4 D.
45	Part I, Section 3	Added general condition MM.
Part II		
46	Part II, Section 1, Table 1	Removed "NSPS" label from ES-10(LCB2).
47	Part II, Section 1, Table 2	Removed this table since this equipment will now be shielded.

Page	Part, Section	Description of Changes
47	Part II, Section 2	Renumbered conditions after condition 1 since there was no condition 2 in the old permit T22.
48	Part II, Section 2.4	Removed 48 inches wide limestone stackout conveyor (ID No. ES-10(LCB2)) from this NSPS condition.

III. Statement of Compliance

The facility was last inspected on July 31, 2007 by Eric Hudson of the Winston-Salem Regional Office. Based on his report, the facility appeared to be in compliance with air quality standards and regulations at the time of the inspection.

IV. Facility Description

Duke Energy's Belews Creek Steam Station is an electric utility that generates electrical power using boilers. The Belews Creek facility has two coal/No. 2 fuel oil-fired electric utility boilers (ID Nos. ES-1 and ES-2), two No. 2 fuel oil-fired auxiliary boilers (ID Nos. ES-3 and ES-4), one No. 2 fuel oil-fired emergency/blackout protection diesel generator (2000 kW), one No. 2 fuel oil-fired diesel emergency air compressor (525 hp), two emergency diesel IC engines, and various supporting scrubber limestone equipment.

V. Summary of Changes to Emission Sources and Control Devices:

There are no changes to emission sources or control devices.

VI. Emission and Regulatory Evaluation

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 with 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 initial allowances allocated to each applicable Phase II unit account to be held in calendar years 2000 through 2009 (per Table 2, column C) and in calendar years 2010 and each year thereafter (Table 2, column F).

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. Duke Energy has exercised the option (beginning with this application) to use NO_x emissions averaging 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.

VII. 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, to the Winston-Salem Regional Office, and to the facility for review.

VIII. Other Requirements

PE Seal

NA

Zoning

NA

Fee Classification

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

Increment Tracking

NA

IX. Recommendations

after public notice