

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: **date, 2007**

Region: Wilmington Regional Office
County: Duplin
NC Facility ID: 3100123
Inspector's Name: Lynette Bryan
Date of Last Inspection: 07/26/2006
Compliance Code: C/In Compliance With
 Procedural Reqr

Facility Data			Permit Applicability (this application only)		
<p>Applicant (Facility's Name): Butterball, LLC.</p> <p>Facility Address: Butterball, LLC. 1628 Garner Chapel Rd Mt Olive, NC 28365</p> <p>SIC: 2015 / Poultry Slaughtering & Processing NAICS: 311615 / Poultry Processing</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:</p>		
Contact Data			Application Data		
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 3100123.07A Date Received: 03/20/2007 Application Type: Renewal Application Schedule: TV-Renewal</p> <p style="text-align: center;">Existing Permit Data</p> <p>Existing Permit Number: 05748/T05 Existing Permit Issue Date: 12/04/2006 Existing Permit Expiration Date: 12/31/2007</p>		
<p>Maurice Lawson Environmental Specialist (919) 658-6743 P.O. Box 589 Mount Olive NC, 28365</p>	<p>Michael Bliss VP of Operations (919) 658-6743 P.O Box 589 Mount Olive NC, 28365</p>	<p>Michael Lewis Director of Engineers (919) 658-6743 P. O. Box 589 Mount Olive NC, 28365</p>			
<p>Review Engineer: Mark Cuilla</p> <p>Review Engineer's Signature: Date: date, 2007</p>			<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 05748/T06 Permit Issue Date: date, 2007 Permit Expiration Date: date, 2012</p>		

I. Purpose of Application

This permitting action is a renewal of an existing Title V permit pursuant to 2Q .0513. The existing Title V permit (**05748T05**) was issued on **December 4, 2006**, and is currently scheduled to expire on **December 31, 2007**. The renewal application was received on **March 20, 2007**, or at least nine months prior to the expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

In addition to a request for renewal of the current application, the Permittee has requested modifications to the fuel types allowed to be fired in the boilers (**ID Nos. ES-B1 and ES-B2**) and the water heater (**ID No. ES-WH1**). Currently the boilers are allowed to fire No. 2 and No. 6 fuel oil. The Permittee is requesting that biofuel be added to this list. Currently the water heater is "permitted as written" to fire natural gas. The Permittee is requesting that this be changed to LPG exclusively. See background discussion in Section III (May 30, 2007 entry) of this Document.

The following tables illustrate the potential emissions per fuel type for the requested change:

Boilers (**ID Nos. ES-B1 and ES-B2**) @ 34.3 million Btu per hour, each.

Pollutant	No. 2 fuel oil* (@ 0.5% sulfur) Tons/year	No. 6 fuel oil* (@ 2.1% sulfur) Tons/year	Biofuel** (< 0.01% sulfur) Tons/year
PM ₁₀	1.07	19.55	7.51
SO ₂	76.19	330.21	1.95
NO _x	21.46	55.09	39.51
CO	5.37	5.01	2.55
VOCs	0.21	0.28	2.10

* Potential emissions from DAQ fuel oil combustion spreadsheet.

** Potential emissions from actual worst-case Valley Proteins Stack test results (Cooking Oil – Wadesboro, NC and Pittsburgh, PA).

Water heater (**ID No. ES-WH1**) @ 22 million Btu per hour. *See background discussion in Section III (May 30, 2007 entry) in this Document.*

Pollutant	Current “permitted as written” fuel (natural gas)* Tons/year	Actual fuel (LPG)** Tons/year
PM ₁₀	0.54	0.63
SO ₂	0.06	0.01
NO _x	9.45	20.00
CO	7.94	3.37
VOCs	0.52	0.53

* Potential emissions from DAQ natural gas combustion spreadsheet.

** Potential emissions from DAQ LPG combustion spreadsheet.

II. Facility Description

The facility is a turkey processing plant, processing approximately 78,000 turkeys per day. Plant operations are 24-hours per day, 5-days per week, 52-weeks per year. Current permitted equipment includes two identical industrial boilers to produce steam for the slaughter and processing of turkeys. The facility is Title V due to actual and potential sulfur dioxide emissions.

III. History/Background/Application Chronology

March 20, 2007 – Permit application **3100123.07A** was received and deemed complete for processing.

March 30, 2007 – Received an email from Lynette Bryan of WiRO in response to my email concerning the status of the “hot water heater”. I requested verification that the water heater should be listed in the permit because it appeared that it was not being included in the permit conditions. In addition, I asked if WiRO had any issues with the facility adding fuel types to the list of fuels eligible to be combusted in the boilers and water heater. She replied that she assumed that whoever wrote the permit knew there were no other applicable requirements, that NSPS does not apply, and that she had no issues with the requested fuel changes.

May 1, 2007 – Received an email from Maurice Lawson, of Butterball giving the specification sheets for the LP gas and biofuel per my request.

May 30, 2007 – Mark Cuilla sent email to Maurice Lawson requesting clarification on the water heater. Specifically, what fuel type it currently is, what fuel type he was requesting as part of this renewal, and its description. He replied the same day stating “the Ludell DC22000 is a 22 million Btu per hour LPG direct fired water heater.” He added that the facility has not used natural gas at this location. The water heater was purchased pre-set for natural gas firing, but has never used natural gas. Upon completing the permit renewal application, he noticed the error in the fuel type and requested the change. The water heater is permitted non-exempt, and has been firing LPG since its installation. It should be noted that this statement is in agreement with the Bruce Ingle permit review for application **3100123.02A** (title V renewal). In that review, Mr. Ingle wrote that the addition of the water heater was handled as a 502(b)(10) addition to the renewal application and that the addition of the water heater will result in a facility-wide potential emission increase in NOx of 20 tons per year (*consistent with being LPG-fired*).

June 1, 2007 – DRAFT permit sent to Permittee, Title V Coordinator, and Regional Office for comment prior to the public notice and EPA review periods.

Date, 2007 – DRAFT permit sent to 30-day public notice and 45-day EPA review.

IV. Permit Modifications/Changes and ESM Discussion

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	-amended permit revision number
Cover	-	-amended facility name, permit revision number, and all dates
All	Header	-amended permit revision number
3	Equipment Table	-amended description of boilers to include biofuel -amended description of water heater to modify fuel type from natural gas to LPG
3-4	2.1 A (table)	-corrected rule citation
4	2.1 A.1.a 2.1 A.1.b 2.1 A.1.c 2.1 A.2.a 2.1 A.2.b 2.1 A.2.c 2.1 A.2.d	-added ID Nos. and fuel types -updated shell language -added ID Nos. and fuel types -added ID Nos. -updated shell language -updated shell language -updated shell language
4-5	2.1 A.2.e	-updated shell language
5	2.1 A.2.f 2.1 A.3.a 2.1 A.3.b 2.1 A.3.c	-updated shell language -added ID Nos. -updated shell language -updated shell language

Page(s)	Section	Description of Change(s)
6	2.1 A.3.e 2.1 A.4 2.1 A.4.a 2.1 A.4.d	-updated shell language -corrected rule citation -added ID Nos. -modified reporting requirements from quarterly to semiannually
7	2.1 A.5.b	-updated shell language
7-16	General Conditions	-updated shell language (version 2.20)

The following table indicates the modifications to ESM as a result of this permit renewal:

Current Description	Change resulting from permit renewal
Two boilers firing No. 2 and No. 6 fuel oil (34.3 million Btu per hour heat input, each; ID Nos. ES-B1 and ES-B2)	Two No. 2/No. 6/Biofuel-fired boilers (34.3 million Btu per hour maximum heat input capacity, each; ID Nos. ES-B1 and ES-B2)
One Ludell DC-22000 natural gas-fired water heater (22 million Btu per hour heat input rate; ID No. ES-WH1)	One Ludell DC-22000 direct LPG-fired water heater (22 million Btu per hour maximum heat input capacity; ID No. ES-WH1)

V. Regulatory Review

The facility is currently subject to the following regulations:

- 15A NCAC 2D .0402, Ambient Air Quality Standards
- 15A NCAC 2D .0503, Particulates from Fuel Burning Indirect Heat Exchangers
- 15A NCAC 2D .0516, Sulfur Dioxide Emissions from Combustion Sources
- 15A NCAC 2D .0521, Control of Visible Emissions
- 15A NCAC 2D .1806, Control and Prohibition of Odorous Emissions
- 15A NCAC 2Q .0317, Avoidance Conditions (for 15A NCAC 2D .0530, Prevention of Significant Deterioration)

A regulatory review for these existing requirements will not be included in this document. No new regulations are proposed as part of this permit renewal.

Specific notes on the water heater (**ID No. ES-WH1**) applicability (*note, equipment is permitted only because potential NOx emissions are greater than 5 tons per year*):

- not subject to 15A NCAC 2D .0503 particulate standard because it is direct fired,
- not subject to 15A NCAC 2D .0515 particulate standard because liquid fuels are not considered as part of the process weight,
- subject to 15A NCAC 2D .0516 sulfur limitation. Equipment ID has been added to the permit condition),
- subject to 15A NCAC 2D .0521 visible emission limitation. Equipment ID has been added to the permit condition), and
- not subject to 15A NCAC 2Q .0317 SO₂ PSD avoidance limitation because its potential facility-wide SO₂ contribution is 0.01 tons per year while firing LPG.

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

NSPS – The facility is not currently subject to any New Source Performance Standards. This permit renewal does not affect this status.

NESHAPS/MACT – The facility is not currently subject to any National Emission Standards for Hazardous Air Pollutants because potential HAP emissions remain below the major source thresholds. This permit renewal does not affect this status.

PSD – The facility is subject to a facility-wide sulfur dioxide emissions limitation of less than 250 tons per year from the combustion of fuel oil in its two boilers (ID Nos. ES-B1 and ES-B2). The Permittee is required to calculate SO₂ emissions per 12-month period according to the equation contained in the permit on a monthly basis. Recordkeeping and reporting is also required. As part of this permit renewal, the quarterly reporting language is being replaced with semi-annual to bring this permit condition in line with the remaining reporting periods contained in the permit and in accordance with EPA's guidance. The following language now appears as Section 2.1 A.4.d in the renewed permit:

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

- d. *The Permittee shall submit a summary report of the monitoring and recordkeeping 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. The report shall contain the following:*
- i. *the monthly sulfur dioxide emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months,*
 - ii. *the monthly quantities of No. 2 and No. 6 fuel oil fired for the previous 17 months, and*
 - iii. *all instances of deviations from the requirements of this permit.*

112(r) – The facility is subject to the 40 CFR 68 Subpart C, Regulated Substances for Accidental Release Prevention. The facility stores on site anhydrous ammonia that exceeds the threshold quantity of 10,000 pounds. The facility has approximately 150,000 pounds of ammonia that is used as a refrigerant. The facility is subject to the Level III program. This permit renewal does not affect this status.

CAM – 40 CFR 64 requires that a continuous compliance 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. Per the applicability of Part 64, Compliance Assurance Monitoring, the Permittee is not subject to any CAM requirements because it currently does not “use a control device to achieve compliance with any emission limitation or standard.”

VII. Facility Wide Air Toxics

The facility has not been triggered for air toxics and is therefore not subject to any NC air toxic regulations. This permit renewal does not affect this status.

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)	2005 Actual Emissions (tpy)
CO	3.62
NO _x	33.66
PM ₁₀	10.08
SO ₂	174.91
VOC	0.20
Total HAP/TAP	0.132

IX. Stipulation Review

WIRO did not specify any needed permit modifications. Nor does the latest inspection report indicate any necessary changes at this time.

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. South Carolina is an affected State within 50 miles of this facility.

XI. Conclusions, Comments, and Recommendations

A professional engineer's seal was not required for this renewal.

A consistency determination was not required for this renewal.

WIRO recommends issuance of the permit and was presented with a DRAFT permit prior to notice and issuance.

RCO concurs with WIRO's recommendation to issue the renewed air permit.