

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: DATE 2008

Region: Fayetteville Regional Office
County: Anson
NC Facility ID: 0400016
Inspector's Name: Robert Hayden
Date of Last Inspection: 09/13/2007
Compliance Code: C/In Compliance With
 Procedural Reqr

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Wade Manufacturing Co - Wadesboro Facility Address: Wade Manufacturing Co - Wadesboro Highway 74 East Wadesboro, NC 28170 SIC: 2261 / Finishing Plants, Cotton NAICS: 313311 / Broadwoven Fabric Finishing Mills Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: 2D .0503, .0616, .0521, .0530, .0958 NSPS: NESHAP: PSD: PSD Avoidance: 250 VOC and 250 SO2 NC Toxics: 2D .1100 112(r): Other:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 0400016.07A Date Received: 10/02/2007 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 03577/T15 Existing Permit Issue Date: 07/09/2003 Existing Permit Expiration Date: 06/30/2008
David Bruton Industrial Facilities Manager (704) 694-2131 Hwy 74 East Wadesboro NC, 28170+0032	Bernard Hodges President (704) 694-2131 Highway 74 East Wadesboro NC, 28170	David Bruton Industrial Facilities Manager (704) 694-2131 Hwy 74 East Wadesboro NC, 28170+0032	
Review Engineer: Mike Benson Review Engineer's Signature: Date:		Comments / Recommendations: Issue 03577/T16 Permit Issue Date: DATE 2008 Permit Expiration Date: DATE 2012	

I. Introduction:

Wade Manufacturing Company, located in Wadesboro, North Carolina currently holds Title V Permit No. 03577T15, with an expiration date of June 30, 2008. Application No. 0400016.07A for the purpose of Title V renewal was received by the DAQ on October 2, 2007. The application was determined to be complete at that time.

II. Facility Description:

As noted in the most recent inspection report by Robert Hayden, Fayetteville Regional Office, September 13, 2007:

“This is a Title V facility based on the burning of No. 6 Fuel Oil (SO₂) and the VOC emissions associated with the textile manufacturing process (bleaching, dying).

Wade Manufacturing makes, dyes and prints cotton and polyester/cotton fabric. The process involves looming/spinning raw cotton into yarn, slashing, weaving and twisting of yarn, bleaching, dying, printing, and finishing of cloth. Two natural gas//No. 6 fuel oil-fired boilers are used to provide steam for some of these processes. The company started business in 1926. Previously about 350 people were employed and operation was 3 shifts per day, 5-6 days per week. Due to the current economy the facility typically operates 1 shift per day, 4 days per week, 7AM – 5PM. The slashers and rollers are no longer operating. The weaving operation and associated starch silo have been removed.”

III. Statement of Compliance:

This facility has been noted on the last inspection report as having very good compliance with DAQ regulations such as maintaining oil sulfur content, HAP emissions, and PSD avoidance records. The facility has had a poor record of maintaining proper records for visible emissions (VE) checks, as well as actual violation(s) for exceeding the visible opacity standard. Known violations issued by the Fayetteville Regional Office are:

5/2/02 – Warning letter regarding annual compliance certification.

9/19/02 – NOV for late submittal of Title V permit renewal.

9/23/03 – NOV/NRE for VE violation.

10/5/07 – NOV/NRE for VE violation.

The facility has indicated on DAQ Form E5 that they are in compliance with all applicable Air Quality regulations for this renewal application.

III. Permit Changes from T15 to T16:

Old Page(s)*	New Page(s)	Condition/Item	Description of Change(s)
Part I			
Global	Global	N/A	<ul style="list-style-type: none"> • Change permit revision number to T16 • Change the issuance/effective dates of the permit • Amend the application number and complete date
attachment	attachment	N/A	moved from back of permit to cover letter
3	3	table	changed PR1 to steam heated
6	6	table	removal of retention pond shield disclaimer
6	7	2.1.A	changed 2D .0530 to 2Q .0317
8	9	2.1.B	changed 2D .0530 to 2Q .0317
9	11	2.1.C	changed 2D .0530 to 2Q .0317
11	13	2.1.D	changed 2D .0530 to 2Q .0317 changed natural gas-fired to steam heated for PR1
12	15	2.1.E	changed 2D .0530 to 2Q .0317
16	21	2.2.A	changed PR1 to steam heated
18	22	2.2.B	changed 2D .0530 to 2Q .0317
19	23	2.2.C	changed 2D .0530 to 2Q .0317 changed natural gas-fired to steam heated for PR1
27-37	26-36	3	updated General Conditions

*page numbers approximate as previous file was extremely corrupted

IV. Permitted Emissions Sources and Associated Air Pollution Control Devices and Appurtenances:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
B1	One natural gas/ No. 6 fuel oil-fired boiler (72 million Btu per hour heat input capacity)	N/A	N/A
B2	One natural gas/No. 6 fuel oil-fired boiler (24.76 million Btu per hour heat input)	N/A	N/A
PR1	One steam heated textile roller printer (3,600 pounds of cloth per hour process capacity) consisting of: a) 10 print stations b) 1 steam heated dryer	N/A	N/A
PR3	One textile roller printer (3,600 pounds of cloth per hour process capacity) consisting of: a) 8 print stations b) 1 natural gas-fired dryer (2 million Btu per hour heat input)	N/A	N/A
PR6	One textile roller printer (3,600 pounds of cloth per hour process capacity) consisting of: a) 8 print stations b) 1 natural gas-fired dryer (2 million Btu per hour heat input)	N/A	N/A
PR 4	One textile screen printer (3,600 pounds of cloth per hour process capacity) consisting of: a) 8 rotary screen printing stations b) 1 natural gas-fired dryer (4.8 million Btu per hour heat input) with four zones	N/A	N/A
PR 5	One textile screen printer (3,600 pounds of cloth per hour process capacity) consisting of: a) 12 rotary screen printing stations b) 1 natural gas- fired dryer (4.8 million Btu per hour heat input) with four zones	N/A	N/A
TEN 1	One finishing range (4,320 pounds of cloth per hour process capacity) consisting of: a) 1 pad applied finishing station b) 1 natural gas-fired 8.5 million Btu per hour three zone tenter frame oven	N/A	N/A

TEN 2	One finishing range (5,760 pounds of cloth per hour process capacity) consisting of: a) 1 pad applied finishing station b) 1 natural gas-fired 12.0 million Btu per hour eight zone tenter frame oven	N/A	N/A
TEN 3	One finishing range (4,320 pounds of cloth per hour process capacity) consisting of: a) 1 pad applied finishing station b) 1 natural gas-fired 6.0 million Btu per hour two zone tenter frame oven	N/A	N/A
J-BOX, BL1, and TEN 4	One bleach range and one natural gas-fired 8.5 million Btu per hour three zone finishing range	N/A	N/A
CR1	Steam heated cotton dye range	N/A	N/A
PIG1	One pigment range (4,800 pounds of cloth per hour process capacity) consisting of: a) 1 natural gas-fired 4.0 million Btu per hour predryer b) 1 pad applied ink dyeing station c) 1 steam heated dryer	N/A	N/A
TR 1	One thermasol range (4,800 pounds of cloth per hour process capacity) consisting of: a) 1 pad applied finishing station b) 1 natural gas-fired 7.0 million Btu per hour dryer	N/A	N/A
SL 1	One shop lathe (500 pounds per hour of rubber covered pad rolls)	SL 1C	One Cyclone (15 inch diameter)
SS 1	One starch storage silo (22.5 tons per hour filling rate)	BF 1 BF 2	One Bagfilter (12 ft ² of filter area) <i>in parallel with</i> One Bagfilter (12 ft ² of filter area)
OP 1	One blendomat (2600 lbs per hour of cotton fiber)	OP 1CA OP 1CB	One Paper Panel Filter (6.55 ft ² of filter area) <i>in series with</i> One Rotary Drum Filter (46.5 ft ² of filter area)
AC 1/ CARD 1	One carding and drawing operation (2100 lb/ hr of cotton fiber)	CARD1-1C	One Rotary Drum Filter (545.3 ft ² of surface area)
AC 2	One spinning operation (2100 lb/hr of cotton fiber)	AC2-1C	One Paper Filter (266.8 ft ² of surface area)

AC 3	One weaving operation (1870 lb/hr of cotton yarn), consisting of : three weaving areas AC 3, AC 4, and AC 5	AC3-1C	One Paper Filter (371.2 ft ² of surface area) collecting from AC-3.
AC 4		AC4-1C	One Rotary Drum Filter (834.9 ft ² of surface area) collecting AC-4.
AC 5		AC5-1C	One Rotary Drum Filter (545.3 ft ² of surface area) collecting AC-5.
NAP 1	One napping operation (2370 lbs per hour of cotton cloth), consisting of : two napping areas NAP 1 and NAP 2	NAP1-1C	One Rotary Drum Filter (483.3 ft ² of surface area) collecting from NAP 1.
NAP 2		NAP2-1C	One Rotary Drum Filter (142.1 ft ² of surface area) collecting from NAP 2.
RP	Retention pond	N/A	N/A

V. Emission Source-By-Source Evaluation:

A. Natural gas/No. 6 fuel oil-fired boiler (ID No. B1)

1. 72 million Btu per hour maximum heat input boiler fired by natural gas or No. 6 fuel oil with no pollution controls.
2. Applicable Regulatory Requirements:
 - 15A NCAC 2D .0503
 - 15A NCAC 2D .0516
 - 15A NCAC 2D .0521
 - 15A NCAC 2Q .0317 (PSD avoidance for SO₂)
 - 15A NCAC 2D .1100

No regulatory review for the above listed regulations is required at this time since there are no new applicable standards for this source under this permit renewal.

B. Natural gas/No. 6 fuel oil-fired boiler (ID No. B2)

1. 24.76 million Btu per hour maximum heat input boiler fired by natural gas or No. 6 fuel oil with no pollution controls.
2. Applicable Regulatory Requirements:
 - 15A NCAC 2D .0503
 - 15A NCAC 2D .0516
 - 15A NCAC 2D .0521
 - 15A NCAC 2Q .0317 (PSD avoidance for SO₂)
 - 15A NCAC 2D .1100

No regulatory review is required at this time since there are no new applicable regulations for this source under this permit renewal.

C. One natural gas-fired textile roller printer (ID No. PR3) and one natural gas-fired pigment range (ID No. PIG1)

1. One steam heated textile roller printer and one natural gas-fired pigment range.
2. Applicable Regulatory Requirements:
 - 15A NCAC 2D .0515
 - 15A NCAC 2D .0516
 - 15A NCAC 2D .0521
 - 15A NCAC 2Q .0317 (PSD avoidance for VOC)
 - 15A NCAC 2D .0958
 - 15A NCAC 2D .1100

No regulatory review is required at this time since there are no new applicable regulations for this source under this permit renewal.

D. One steam heated textile roller printer (ID No. PR1)

1. One natural gas-fired textile roller printer.
2. Applicable Regulatory Requirements:
 - 15A NCAC 2D .0515
 - 15A NCAC 2D .0521
 - 15A NCAC 2Q .0317 (PSD avoidance for VOC)
 - 15A NCAC 2D .0958
 - 15A NCAC 2D .1100

No regulatory review is required at this time since there are no new applicable regulations for this source under this permit renewal.

E. One natural gas-fired textile roller printer (ID No. PR6), two natural gas-fired textile screen printers (ID Nos. PR 4 and PR 5), three natural gas-fired tenter frames (ID Nos. TEN1, TEN2, and TEN3), one natural gas-fired thermosol range (ID No. TR1), and one bleaching range with tenter frame (ID Nos. J-BOX, BL1, and TEN4)

1. One natural gas-fired textile roller printer, two natural gas-fired textile screen printers, three natural gas-fired tenter frames, one natural gas-fired thermosol range, and one bleaching range with tenter frame.
2. Applicable Regulatory Requirements:
 - 15A NCAC 2D .0515
 - 15A NCAC 2D .0516
 - 15A NCAC 2D .0521
 - 15A NCAC 2Q .0317 (PSD avoidance for VOC)
 - 15A NCAC 2D .0958
 - 15A NCAC 2D .1100

No regulatory review is required at this time since there are no new applicable regulations for this source under this permit renewal.

F. One shop lathe (ID No. SL1) with one associated cyclone (ID No. SL1C), one starch storage silo (ID No. SS1) with two associated bagfilters (ID Nos. BF1 and BF2), and one blendomat operation (ID No. OP1) with one associated paper panel filter and one associated rotary drum filter (ID Nos. OP1CA and OP1CB)

1. One shop lathe (ID No. SL1) with one associated cyclone (ID No. SL1C), one starch storage silo (ID No. SS1) with two associated bagfilters (ID Nos. BF1 and BF2), and one blendomat operation (ID No. OP1) with one associated paper panel filter and one associated rotary drum filter (ID Nos. OP1CA and OP1CB)

2. Applicable Regulatory Requirements:

- 15A NCAC 2D .0515
- 15A NCAC 2D .0521

No regulatory review is required at this time since there are no new applicable regulations for this source under this permit renewal.

G. One carding and drawing operation (ID No. AC1/CARD1) with one associated rotary drum filter (ID No. CARD1-1C), one spinning operation (ID No. AC2) with one associated paper filter (ID No. AC2-1C), one weaving operation (ID Nos. AC3, AC4, and AC5) with one associated paper filter and two rotary drum filters (ID Nos. AC3-1C, AC4-1C, and AC5-1C), and one napping operation (ID Nos. NAP1 and NAP2) with two associated rotary drum filters (ID Nos. NAP1-1C and NAP2-1C)

1. One carding and drawing operation with one associated rotary drum filter, one spinning operation with one associated paper filter, one weaving operation with one associated paper filter and two rotary drum filters, and one napping operation with two associated rotary drum filters

2. Applicable Regulatory Requirements:

- 15A NCAC 2D .0515
- 15A NCAC 2D .0521

No regulatory review is required at this time since there are no new applicable regulations for this source under this permit renewal.

VII. Compliance Assurance Monitoring (CAM):

The CAM rule (40 CFR 64) applies to a Pollutant Specific Emissions Unit (PSEU) when it is located at a major source that is required to obtain a Title V, Part 70 or 71 permit and meets both of the following criteria:

- a. the PSEU is subject to an emission limitation or standard and uses a control device to achieve compliance, and
- b. the PSEU has potential pre-control emissions that exceed or are equivalent to the major source threshold (100 TPY for any criteria pollutant).

The facility has no PSEUs that meet the above requirements. That is to say that no single source or groups of sources that emit to the same control equipment have potential emissions greater than 100 tons per year. It should be noted that there are sources that have the potential to emit greater than 100 tons per year, but these sources are uncontrolled. Therefore, CAM does not apply.

VIII. NSPS Issues:

This facility is not subject to NSPS.

IX. PSD/NAA Issues:

This facility is considered to be a PSD minor source. Sulfur dioxide emissions are limited to 250 tons per year. Actual sulfur dioxide emissions are expected to be 37 TPY. The facility also has a 250 tons per year limit for VOC emissions, but at this time, uncontrolled potential VOC emissions are 71 tons per year. The PSD avoidance condition for VOC will remain in the permit in case the facility increases production in the future.

The facility was previously considered Title V major for HAP, VOC, and SO₂ emissions. At this time it should be classified as an area source only, Title V for SO₂ emissions. It would also be considered an area source Title V for VOC emissions if production increased in the future.

Anson County has not been triggered for PSD increment tracking. This renewal does not affect PSD increment tracking.

X. MACT Issues:

This facility is not subject to any known MACT. Should the facility become MACT-affected in the future they may wish to submit an application for modification to add a MACT avoidance stipulation. Total actual HAP emissions are well below 1 TPY at this time.

XI. 112(r) Issues:

This facility is not subject to 112(r).

XII. Facility-Wide Air Toxics:

This facility is subject to 2D .1100. The facility has conducted point source air dispersion modeling for Ammonia, Formaldehyde, Styrene, Methyl Isobutyl Ketone. The modeling was done at such a time in the past that formaldehyde emissions from the boilers were included in the modeling. Toxic Air Pollutant (TAP) emissions from boilers are no longer considered when determining compliance with 2D .1100 or when conducting point source air dispersion modeling. However, for the Company to have the formaldehyde limits for the boilers removed it would need to resubmit the air dispersion modeling protocol.

The 2005 emissions inventory as well as the current Form D1 submitted with this application were examined in detail. No TAP emissions were found that are not associated with boiler emissions. No 2Q .0711 stipulation will be included in the permit as this is not required when the emissions are associated with unadulterated fuel combustion.

XIII. Facility Emissions Summary:

Criteria pollutant emissions were obtained from the 2006 emissions inventory submitted to the Division. (Note: The Division only requires actual emissions be included, not potential).

Pollutant	Actual Emissions, TPY
CO	4.70
NO _x	11.00
PM	11.57
PM ₁₀	11.07
PM _{2.5}	10.27
SO ₂	37.18
VOC	20.48

The HAP with the largest emission is ethylene glycol at 0.96 TPY. HAP emissions are below the 10/25 level. The facility is considered to be a Title V source due to potential SO₂ and VOC emissions.

Criteria pollutant emissions from the Form D1 submitted with this application are below.

Pollutant	Actual Emissions (after controls), TPY	Potential Emissions (before controls), TPY	Potential Emissions (after controls), TPY
CO	8.2	118	118
NO _x	11	223	223
PM	8.8	154	88
PM ₁₀	8.2	106	75
PM _{2.5}	7.4	87	56
SO ₂	4.7	934	250
VOC	4.7	71	71

XIV. Miscellaneous:

1. A consistency determination was not required for this renewal application.
2. A Professional Engineer seal was not required for this application.
3. An application-processing fee was not required for this application.
4. A 30-day public notice is required for this application. This permit and review will also be submitted for a 45-day EPA review concurrent to the public notice period. EPA comments were reviewed at length but no permit changes were needed <or EPA/Public comments here>. The public notice will be submitted to all affected states.

XVI. Conclusions, Comments, and Recommendations.

Note that the facility is currently not even exceeding the Title V threshold in regards to actual emissions being over 100 TPY for any given criteria pollutant (largest pollutant is SO₂ at 37 TPY followed by PM at 8.8 TPY). Although it should be noted that this is due to current business conditions and that the facility has potential emissions greater than 100 TPY for PM, PM₁₀, NO_x, CO, and SO₂.

This Air Permit issued as a renewal permit for Wade Manufacturing Company, located in Wadesboro, North Carolina has been reviewed by the DAQ to determine compliance with all procedures and requirements. The DAQ has determined that this facility is complying with all applicable requirements.

Issue Air Quality Permit No. 03577T16 to Wade Manufacturing Company.