

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date: **XX XX, 2010**

Region: Mooresville Regional Office
County: Rowan
NC Facility ID: 8000034
Inspector's Name: Carlotta Adams
Date of Last Inspection: 08/31/2010
Compliance Code: 3 / Compliance - inspection

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Performance Fibers Operations, Inc. - Salisbury Plant Facility Address: Performance Fibers Operations, Inc. - Salisbury Plant 7401 Statesville Boulevard Salisbury, NC 28147 SIC: 2824 / Organic Fibers, Noncellulosic NAICS: 325222 / Noncellulosic Organic Fiber Manufacturing Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: N/A NSPS: N/A NESHAP: N/A PSD: N/A PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other: 15A NCAC 2D .1109 <i>[112(j) – Part 2 MACT Hammer for Boilers & Process Heaters]</i>
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: Date Received: 08/31/2009 Application Type: 112(j) Part I Application Schedule: TV-Significant Existing Permit Data Existing Permit Number: 03325/T42 Existing Permit Issue Date: 09/14/2010 Existing Permit Expiration Date:
Stephen Lamb Environmental Section Leader (704) 636-6000 7401 Statesville Blvd Salisbury, NC 28147	Erik Shore Director of Operations 7401 Statesville Blvd. Salisbury, NC 28147	Stephen Lamb Environmental Section Leader (704) 636-6000 7401 Statesville Blvd Salisbury, NC 28147	
Review Engineer: Charles F. Yirka Review Engineer's Signature:		Date:	Comments / Recommendations: Issue 03325/T43 Permit Issue Date: XX XX, 2010 Permit Expiration Date: October 31, 2013

I. Purpose of Application

Performance Fibers Operations, Inc. - Salisbury Plant is located in Salisbury, Rowan County, North Carolina. Application No. 8000034.09A , received 08/31/2009, is a Part 2 MACT "Hammer" application for:

- Five (5) 90 million Btu/hour maximum heat input Natural gas and No. 2/No. 6 fuel oil-fired boilers;
- Six (6) 22 million Btu/hour maximum heat input Natural gas and No. 2/No. 6 fuel oil-fired Dowtherm Heaters: KA, KB, KC, KD, KE, KF; and
- One (1) 6 million Btu/hour maximum heat input Natural Gas-Fired Boiler (ID No. 6) or I-6

The application states; "The Salisbury site is permitted to burn #2 fuel oil, #6 fuel oil or natural gas; however we have chosen to use only natural gas. All equipment necessary to burn fuel oil has been shutdown and abandoned in place. The oil storage tanks have been physically removed or emptied and leaned. The site has no intention of burning oil and will remain on natural gas."

Furthermore, the inspection report dated September 3, 2010 indicates;

- The facility has no No. 6 fuel oil on site. The last (summary) report was postmarked July 30, 2010;
- No. 6 fuel oil is not fired at this facility. Compliance is indicated for this condition (2D .0516): and

- The 2.3 million gallon No. 6 fuel oil feed tank was also removed from the facility in 2000.

Mr. Stephen Lamb, Environmental Section Leader, was notified via email that DAQ intends to remove all references to the firing of No. 6 and No. 2 oil from facility's permit. Mr. Lamb has agreed with these changes to the permit as per email dated October 18, 2010. As all boilers only fire natural gas the boiler MACT will require only work-practice standards.

II. Permit Modifications/Changes

The following table describes the modifications to the current permit.

Page(s)	Section	Description of Change(s)
Through-out permit		Updated permit number and headers and relevant dates
Cover Letter		New template. Amend permit revision numbers and issuance/effective dates.
Insignificant Activity List	Attachment	Remove affected boiler (ID No. 6) from the insignificant activity list. Move into permit as now subject to 112(j). Remove first 8 items from list as per C. Adam's August 31, 2010 inspection report on Page 30.
4-5	Section 1, Table	Remove CPK5, CPK6 as per C. Adam's August 31, 2010 inspection report. Add 2D .1109 Case by Case MACT designation to the affected boilers on the list of permitted sources.
7	2.1 A.	Remove CPK5, CPK6 as per C. Adam's August 31, 2010 inspection report.
15	2.1 .D.	Add the affected boiler (ID No. 6) from the insignificant activities list to the list of boilers and DowTherm heaters
16	2.1 D. Table	Add 2D .1109 Case by Case MACT as an applicable requirement
	2.1 D. 1., 2., and 3.	Removed all references to No. 2 and No. 6 fuel oil. Revised monitoring, recordkeeping and reporting requirements for 2D .0516 and .0521 to no longer
17-18	2.1 D.4.	Add the new applicable requirements 2D .1109 Case by Case 112(j) work-practice standards

III. Regulatory Review

1. **15A NCAC 2D .0503 – Particulates from Fuel Burning Indirect Heat Exchangers** – This regulation limits particulate matter (PM) emissions from the firing of fuel in indirect heat exchangers (in lb/mmBtu) based on the facility-wide heat input. For facilities with a total heat input of greater than 100 and up to 1000 MMBth/hr, PM emissions from the combustion sources are limited to not greater than 0.18 lb/MMBtu. Using AP-42 emission factors, PM emissions from natural gas are estimated to be less than 0.18 lb/MMBtu, as follows:

$$\frac{\left(7.6 \frac{\text{lbPM}_{total}}{\text{mmscf}}\right)}{1,020 \frac{\text{MMBtu}}{\text{mmscf}}} = 0.007 \frac{\text{lbPM}_{total}}{\text{mmBtu}}$$

Because worst-case PM emission rates are estimated to be less than the allowable PM emission rate, no monitoring, recordkeeping, or reporting shall be required to demonstrate compliance with this limitation.

2. **15A NCAC 2D .0516– Sulfur Dioxide Emissions From Combustion Sources** – This regulation limits sulfur dioxide (SO₂) emissions to no greater than 2.3 lb/mmBtu of heat input for combustion sources. Using AP-42 emission factors, SO₂ emissions from natural gas are estimated to be less than 2.3 lb/MMBtu, as follows:

$$\frac{\left(0.6 \frac{\text{lbSO}_2}{\text{mmscf}}\right)}{1,020 \frac{\text{MMBtu}}{\text{mmscf}}} = 0.0006 \frac{\text{lbSO}_2}{\text{mmBtu}}$$

Because worst-case SO₂ emission rates are estimated to be less than the allowable SO₂ emission rate, no monitoring, recordkeeping, or reporting shall be required to demonstrate compliance with this limitation.

3. **15A NCAC 2D .0521 – Control of Visible Emissions** – Visible emission (VE) standards provided in this regulation are applicable to potential VE emissions from any stack, vent, or outlet. This regulation limits visible emissions to no more than 20 percent opacity when averaged over a 6-minute period, except that 6-minute periods averaging more than 87 percent opacity may occur not more than once in any hour not more than four times in any 24-hour period. (Also, visible emissions from the boilers manufactured as of July 1, 1971, shall not be more than 40 percent opacity when averaged over a six-minute period). Because natural gas firing is associated with inherently low visible emissions, no monitoring, recordkeeping, or reporting shall be required to demonstrate compliance with this limitation.
4. **15A NCAC 2D .1109 – CAA § 112(j); Case-by-Case MACT for Boilers & Process Heaters** – On July 20, 2007, the D.C. Circuit Court vacated the National Emission Standard for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, which had been promulgated under 40 CFR 63, Subpart DDDDD. The North Carolina Attorney General’s office has determined that the NESHAP vacatur equates to the failure of the U.S. EPA to promulgate a standard as required under Section 112(d) of the Clean Air Act (CAA). As a result, the site-specific Maximum Achievable Control Technology (MACT) standards required under CAA §112(j), commonly referred to as the MACT “hammer” provisions, have been triggered. North Carolina regulations implementing the MACT hammer are found at 15A NCAC 2D .1109.

On August 21, 2009, the NC DAQ received a Part 2 MACT “Hammer” application from this facility asking that the NC DAQ establish 2D .1109 Case by Case MACT emissions limitations in accordance with NC DAQ’s recommendations.

No control technologies for the control of CO, metals, Hg, or HCl were identified for natural gas fired boilers 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). The NC DAQ has determined that MACT 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 the annual inspection and maintenance of the boiler as follows:

To assure compliance, the Permittee shall perform an annual boiler 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 boilers are 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.

IV. Draft Permit Review Summary

Ms. Carlotta Adams and Denise Hayes of the Mooresville Regional Office were provided a draft permit and review on October XX, 2010.

Mr. Stephen Lamb of Performance Fibers, Inc. was provided a draft permit for review on October 26, 2010.

Ms. Katy Forney and Ms. Gracy DeNois (U.S. EPA, Region IV) were provided a draft permit for review on October XX, 2010.

V. Recommendations

This permit modification application for the Performance Fibers, Inc. facility located in Salisbury, Rowan County, North Carolina has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements.

Issue Permit No. 03325/T43

PROPOSED