

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Air Permit Review including RACT Requirements**  
(in conformance with Section 172(c) of the CAA)

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

**Region:** Mooresville Regional Office  
**County:** Rowan  
**NC Facility ID:** 8000034  
**Inspector's Name:** Tonisha Dawson  
**Date of Last Inspection:** 08/29/2008  
**Compliance Code:** C/In Compliance With  
Procedural Reqr

<b>Facility Data</b>			<b>Permit Applicability (this application only)</b>
<p><b>Applicant (Facility's Name):</b> Performance Fibers Operations, Inc. - Salisbury Plant</p> <p><b>Facility Address:</b> Performance Fibers Operations, Inc. - Salisbury Plant 7401 Statesville Boulevard Salisbury, NC 28147</p> <p><b>SIC:</b> 2824 / Organic Fibers, Non-cellulosic <b>NAICS:</b> 325222 / Non-cellulosic Organic Fiber Manufacturing</p> <p><b>Facility Classification: Before:</b> Title V <b>After:</b> Title V <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V</p>			<p><b>SIP:</b> 2Q .0317 for Avoidance of 2D .0531 <b>NSPS:</b> <b>NESHAP:</b> <b>PSD:</b> <b>PSD Avoidance:</b> <b>NC Toxics:</b> <b>112(r):</b> <b>Other:</b> NNSR Avoidance for VOC and NOx</p>
<b>Contact Data</b>			<b>Application Data</b>
<b>Facility Contact</b>	<b>Authorized Contact</b>	<b>Technical Contact</b>	<p><b>Application Number:</b> 8000034.07A <b>Date Received:</b> <b>02/27/2008</b> <b>Application Type:</b> Modification <b>Application Schedule:</b> TV-Significant <b>Existing Permit Data</b> <b>Existing Permit Number:</b> 03325/T41 <b>Existing Permit Issue Date:</b> 04/17/2008 <b>Existing Permit Expiration Date:</b> 11/30/2008**</p>
<p>Stephen Lamb Environmental Section Leader (704) 636-6000 ext 4862 7401 Statesville Blvd. Salisbury NC, 28147</p>	<p>Erik S. Shore Site Manager (704) 639-2010 7401 Statesville Blvd. Salisbury NC, 28147</p>	<p>Stephen Lamb Environmental Section Leader (704) 636-6000 ext 4862 7401 Statesville Blvd. Salisbury NC, 28147</p>	
<p><b>Review Engineer:</b> Charles F. Yirka <b>Review Engineer's Signature:</b> _____ <b>Date:</b> <b>XX XX, 2010</b></p>		<p style="text-align: center;"><b>Comments / Recommendations:</b></p> <p><b>Issue</b> 03325/T42 <b>Permit Issue Date:</b> <b>XX XX, 2010</b> <b>Permit Expiration Date:</b> October 31, 2013</p>	

\*\*This permit shall expire on the earlier of October 31, 2013 or the renewal of permit 03325T42 has been issued or denied.

**I. Purpose of Application**

Performance Fibers Operations, Inc (Performance Fibers) is requesting modification to the Title V permit pursuant to 2Q .0513 to address RACT<sup>1</sup> applicability for existing sources. The applicant requested avoidance conditions as a means of avoiding RACT. This application was processed as a significant modification pursuant to 15A NCAC 2Q .0501(d) since this modification requires the insertion of a NNSR avoidance condition for both VOC and NOx. The facility remains a title V major source for HAP emissions and is subject to MACT.

**II. Facility Description**

The facility produces polyethylene terephthalate (PET) fibers and other polyester products (staple and filament).

<sup>1</sup> "Reasonably available control technology" (also denoted as RACT) means the lowest emission limit, which a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility. It may require technology, which has been, applied to similar, but not necessarily identical, source categories.

### III. Application Chronology

Following is an abbreviated chronology of permit actions:

**July 28, 2004** – Permit 03325T40 issued for administrative amendment

**July 19, 2007** – RACT Compliance Plan Extension request as dated

**October 30, 2007** – RACT Compliance Plan submittal as dated

**November 1, 2007** – RACT Compliance Plan submitted

**March 28, 2008** – Test Protocol submittal forms submitted for testing steam boiler No. 3

**April 17, 2008** – Permit 03325T41 issued for name change from Invista S.a.r.l. to Performance Fibers, Inc.

**April 18, 2008** – Letter correcting RACT Compliance Plan (Dowtherm Heater rated at 22 MMBtu/hr)

**April 23, 2008** – Letter with confidential materials supporting reduction of NOx and VOC for previous 6 years

**June 9, 2008** – RACT Compliance Plan submitted November 1, 2007 withdrawn. As an alternative RACT avoidance requested.

**June 23, 2010** – Draft submitted to supervisor and ESM review

**June 25, 2010** – ESM problems were found by J. Sheppard

**June 28, 2010** – J. Sheppard fixed the insignificant activities. C. Yirka emailed T. Dawson requesting a review of sources on permit

**July 6, 2010** – Sent draft permit and review to applicant for review

**July 16, 2010** – Date of response letter from applicant. Includes corrections for insignificant activities and source list

**XX XX, 2010** – Proposed permit based on response letter from applicant was sent to EPA and public notice as well as applicant and region for comment.

### IV. Regulatory Approach for RACT Avoidance

In order to avoid the application of RACT to all affected emissions units with NOx and/or VOC emissions the facility will now be subject to 15A NCAC 2Q .0317 - Avoidance Conditions for 15A NCAC 2D .0531 for Sources in Nonattainment. The applicant has submitted additional confidential information which appears to demonstrate that both VOC emissions and NOx emissions be a function of the total plant polymer production. There appears to be a comprehensive emissions tracking system in place that allows for actual emissions to be tracked from practically every emissions unit. The actual emissions data supplied for DAQ review was based on 24/7 operations. Actual emissions were shown to be substantially less than 100 tpy. The DAQ's internet based emissions summary report for 2008 based on emissions inventory data submitted by applicant also indicates the same.

The following permit conditions now appear in the permit:

#### 1. 15A NCAC 2Q .0317: AVOIDANCE CONDITIONS

##### for 15A NCAC 2D .0531: SOURCES IN NONATTAINMENT

- a. In order to avoid applicability of 15A NCAC 2D.0531, VOC and NOx emissions from the entire facility shall be less than 100 tons per consecutive 12-month period.

##### Testing [15A NCAC 2D .0501(c)(17)]

- b. If emissions testing is required, the Permittee shall perform such testing in accordance with General Condition JJ found in Section 3. If the results of this test are above the limit above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0531.

##### Monitoring/ Recordkeeping [15A NCAC 2Q .0508 (f)]

- c. The emissions of VOC and NOx were found to be dependent on the Total Plant Polymer Production as per confidential information submitted July 9, 2008. Calculations of NOx emissions shall be made monthly and recorded in a log (written or electronic format) according to the following formula:

$$T_{\text{VOC}} = \text{TPPP} \times \text{EF}_{\text{VOC}}$$

where:  $T_{VOC}$  = total VOC emissions per month (tons/month)  
 $TPPP$  = total plant polymer production (pounds/month)  
 $EF_{VOC}$  = 7.065XE-04 pounds of VOC/pound of polymer produced (emissions factor for plant wide VOC emissions)

and;

$$T_{NOx} = TPPP \times EF_{NOx}$$

where:  $T_{NOx}$  = total NOx emissions per month (tons/month)  
 $TPPP$  = total plant polymer production (pounds/month)  
 $EF_{NOx}$  = 5.692XE-04 pounds of NOx/pound of polymer produced (emissions factor for plant wide NOx emissions)

If emissions of VOC or NOx exceed 100 tons per year or are not monitored or records are not maintained the Permittee shall be deemed in noncompliance with 15A NCAC 2D .0531.

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

- d. The Permittee shall submit a semi-annual summary report, acceptable to the Regional Air Quality Supervisor, of 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 monthly VOC emissions for the previous 17 months. The emissions must be calculated for each of the 12-month periods over the previous 17 months.

**V. Facility Compliance Status**

This facility appears to have a history of compliance. In addition the latest compliance inspection report dated August 29, 2008 by Ms. Tonisha Dawson indicates the facility is in compliance.

**VI. Permit Changes**

Old Page No.	New Page No.	Condition No.	Change
Through-out permit	Through-out permit		Updated permit number and headers and relevant dates
Cover Letter	Cover Letter		Corrected permit number, changed facility name and mailing address Changed facility contact, authorized contact and technical contact phone numbers and information as per applicant comments
Table of Contents	Table of Contents		Remove all descriptions regarding Part 1 and Part 2
2	2	NA	Insert language re: expired permit with renewal application pending
4	4	Section 1 Table	Remove Part 1 designation and introductory note above Section 1 as per latest shell change version 3.0 Remove PET Polymer Production H Lines (ID Nos. CPH13 and CPH14) as per applicant comments
5	5	Section 1 Table	Remove Pet Wastewater Operations CPHWW13 and CPHWW14 and streams CPK5, CPK6, CPK10, CPH13 and CPH14 as per applicant comments Remove H-Building Dowtherm Heaters DOWHEATHA,

			DOWHEATHB, DOWHEATHC, DOWHEATHD, DOWHEATHE, and DOWHEATHF as per applicant comments
6	6	Section 1 Table	Remove Staple Spinning Lines DDO, H13SPIN, H14SPIN, H15SPIN, H16SPIN, H17MONEXH, H18MONEXH, and H21MONEXH as per applicant comments Remove Salt bath and Kolene SALT BATH, KOLENE1, KOLENE2, and R&D as per applicant comments
7	7	2.1 A.	Remove PET Polymer Production H Lines (ID Nos. CPH13 and CPH14) as per applicant comments Table-Insert NNSR avoidance condition for VOC and NOx and reference to 2.2 B.
9	9	2.1 B.	Table-Insert NNSR avoidance condition for VOC and NOx and reference to 2.2 B.
10	10	2.1 C.	Remove Pet Production Operations CPHWW13 and CPHWW14 as per applicant comments Replace 3rd bullet with Five (5) Primary Esterifier Receiver Wastewater Streams from CPK7, CPK13, CPK14, CPK15, & CPK16 with ID numbers CPK7WW, CPK13WW, CPK14WW, CPK15WW, & CPK16WW Table-Insert NNSR avoidance condition for VOC and NOx and reference to 2.2 B.
15	15	2.1 D.	Remove 2 <sup>nd</sup> bullet Six Natural Gas/No.2 Fuel Oil/No. 6 Fuel Oil Dowtherm Heaters HA-HF (ID Nos. DOWHEATHA through DOWHEATHF) Table-Insert NNSR avoidance condition for VOC and NOx and reference to 2.2 B.
17	16	2.1 D.3.a. 2.1 D.3.b.	Remove H-Building Dowtherm Heaters DOWHEATHA, DOWHEATHB, DOWHEATHC, DOWHEATHD, DOWHEATHE, and DOWHEATHF as per applicant comments
19	19	2.1 F.	
19-20	19	2.1 F.	Table-Insert NNSR avoidance condition for VOC and NOx and reference to 2.2 B.
21	20-21	2.1 F.2.a. 2.1 F.2.b.	
21-24	NA	2.1 G.	Remove entire section for G. Pack/Spinneret Cleaning Operation with Salt bath and Kolene SALT BATH, KOLENE1, KOLENE2, and R&D as per applicant comments
24	NA	2.1 H.	Remove entire section for H. Miscellaneous Sources Wet Lay Bruderhaus, Pilot Plant (ID No. PILOTPLT), Finish Lab (ID No. FINLAB), Tire and MGR Research and Development Laboratory (ID No. TMRG)
34	31	2.2 B.	Table-Insert NNSR avoidance condition for VOC and NOx
34-35	31-32	2.2 B. 1.	Insert new NNSR avoidance condition for VOC and NOx
39-48	36-43	Section 3 General Conditions	Replace General Conditions with latest version 3.1 (See condition D. Submissions)

## VII. NSPS, NESHAPS/MACT, PSD, 112(r), Facility Wide Toxics, and CAM

**NSPS** – The facility is currently not subject to any New Source Performance Standards (NSPS) standards

**NESHAPS/MACT** - The facility is currently subject to 15A NCAC 2D .1111 and MACT Subpart JJJ National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins. This permit action does not affect this status.

**NAA-NSR/PSD** – The facility was considered a major source of VOC and NO<sub>x</sub>. A major source is a source with potential emissions above 100 tpy. The facility is located in Rowan County which is in non-attainment for ozone. VOC and NO<sub>x</sub> emissions are now limited to less than 100 tpy each. The facility will be a minor source for NO<sub>x</sub> and VOC emissions.

**RACT** – The facility is located in Rowan County, which is part of the “Charlotte-Gastonia-Rock Hill, NC-SC 8-hour ozone non-attainment area (also called the “Metrolina” non-attainment area). In accordance with 15A NCAC 2D .0902(f) (VOC) and 15A NCAC 2D .01402(e) (NO<sub>x</sub>), sources located in the Metrolina non-attainment area with potential VOC and/or NO<sub>x</sub> emissions greater than 100 tpy or 560 pounds per day (between May 1 and September 30) are required to determine and implement RACT. Performance Fibers had the potential to emit greater than 100 tpy VOC, and would have been subject to the VOC and NO<sub>x</sub> RACT rules. The facility decided to take limits to avoid RACT.

**112(r)** – The facility is subject to Section 112(r) of the Clean Air Act requirements. The most recent 112(r) inspection, conducted on September 8, 2004 by Mr. Frank King and Mr. Bill Bass of MRO, indicated compliance.

**112(j)** - There is a Part II application in house for the Boiler MACT.

**Facility Wide Air Toxics** – The facility is currently subject to facility-wide air toxics limitations under 2D .1100 and 2Q .0711. This permit action does not affect this status.

**CAM** – The need for compliance assurance monitoring (CAM) will be evaluated when the permit is renewed.

## VIII. Facility Emissions Review

There is no change in emissions for this modification.

The following table represents the latest year’s emission inventory from the facility:

Pollutant(s)	2008 Actual Emissions (tpy)
CO	34.70
NO <sub>x</sub>	41.38
PM <sub>10</sub>	19.29
PM <sub>2.5</sub>	3.19
SO <sub>2</sub>	0.250
VOC	53.61
Total HAP/TAP	(19,094.14 lb) = 9.44

## IX. Review of Permit Changes Recommended by Facility and Region

The applicant and Mooresville Regional Office (MRO) was provided a draft permit and review to review. The applicant provided comments dated July 16, 2010. During the course of the review of the draft it was determined by the ESM coordinator J. Sheppard both the insignificant activities list and the permit source list needed to be updated. Ms. Sheppard and the applicant assisted with the update of the insignificant activities list and the source list in the permit. The applicants comments included the deletion of sources. These comments

are not addressed in this section but are addressed in the Table of Changes attached to the permit and the permit itself. The applicant also changed Authorized contact information as well. DAQ's database (IBEAM) was verified and appeared accurate with the exception of the Authorized contact who is now Mr. Erik Shore.

One of the applicant's request that required a response as follows:

**Request:** Please allow our site to report on VOC and NOx emissions only once a year using the current NCAEI (North Carolina Air Emissions Inventory) and don't require additional reports. The NCAEI is sufficient for showing compliance with our VOC and NOx limits. Additional reporting would provide no improvement in either emissions or our ability to show compliance. Additional reporting will require additional expenses for the site.

**DAQ Response:** The request is denied. The DAQ reviewed the language and found it to be consistent with the permitting template for PSD/NSR/RACT avoidance. Monthly recordkeeping with semiannual determinations of emissions is consistent with EPA's policy in this regard.

Ms. Tonisha Dawson, MRO, recommends permit issuance.

## **X. Public Notice/EPA and Affected State(s) Review**

Public notice will be performed consistent with the requirements of 15A NCAC 2Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Copies of the public notice will 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 pursuant will be also provided to EPA.

## **XI. Conclusions, Comments, and Recommendations**

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

A consistency determination was not required for this significant modification.

MRO requested to see a draft of this permit. MRO had the following additional comments for the proposed permit.

**(Insert comments and responses here).**

The EPA and affected states had the following comments regarding the proposed permits

**(Insert comments and responses here).**

**Recommend issuance of Air Quality Permit No. 03325T42 to Performance Fibers, Inc.**