

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Mooresville Regional Office
County: Catawba
NC Facility ID: 1800107
Inspector's Name: Jennifer Manning
Date of Last Inspection: 05/23/2007
Compliance Code: C/In Compliance With
 Procedural Reqr

Facility Data			Permit Applicability (this application only)
<p>Applicant (Facility's Name): Hickory Springs Manufacturing - Conover Complex</p> <p>Facility Address: Hickory Springs Manufacturing - Conover Complex 1115 Farrington Street Highway Conover, NC 28613</p> <p>SIC: 3086 / Plastics Foam Products NAICS: 32615 / Urethane and Other Foam Product (except Polystyrene) Manufacturing</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: 1800107.06A Date Received: 10/17/2006 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 04271/T17 Existing Permit Issue Date: 10/05/2004 Existing Permit Expiration Date: 08/31/2007</p>
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<p>Review Engineer: Mike Smithwick</p> <p>Review Engineer's Signature: _____ Date: _____</p>		<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 04271/T18 Permit Issue Date: Permit Expiration Date:</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 has the expiration date of August 31, 2006. However, the application was submitted in a timely manner on October 17, 2006 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.

II. Facility Description

The facility is divided into three plants. One plant manufactures polyurethane foam (Foam Plant), another plant manufactures extruded foam polyethylene (PTI Div.) and the third plant is the Wire Drawing Plant. The foam pouring process operates 6-8 hours per day on the average. The cure area in the Foam Plant and the PTI plant operate 24 hours per day and 5 days per week. The Wire Drawing Plant operates 12 hours per day and 7 days per week. These products are used in the furniture, bedding, and packaging businesses.

III. Application Chronology

October 14, 2004 – Modification issued for the installation of: (1) a polyethylene foam extruder at the Plastics operation (ID No. ES-P-01k); and (2) an inkjet printing process also at the Plastics operation (ID No. ES-P-011).

October 17, 2006 – Permit application for renewal received.

November 9, 2006 – MRO Regional comments received.

May 23, 2007 – Facility inspected.

October 9, 2007 - Permit submitted for review

Draft Permit issued

IV. Permit Modifications/Changes and ESM Discussion

The wire drawing operation, ID No. ES-EW-01, is listed on the current Permit exhausting to a bagfilter, ID No. CD-W-01. The only pollutant emitted from this source is particulate matter. The source no longer exhausts to the bagfilter and the bagfilter has been removed. It has no exhaust to the ambient air at all now. Therefore, there are now no emissions from this source. It is being removed from the Permit and placed on the Insignificant List with ID No. I-ES-EW-01.

The following sources were previously listed on the Insignificant List:

Five <0.1 million Btu per hour polyethylene foam extrusion natural gas-fired preheaters
<0.1 million Btu per hour wire coating process natural gas-fired preheater

These sources are no longer at the facility and are being removed from the list.

The facility previously had 2D .0521 visible emission monitoring requirements for all permitted sources. However, three of these sources did not emit particulate matter and only had clear gaseous emissions and never registered any visible emissions. These sources were listed in the Specific Limitations and Conditions as follows:

**2.1 A. a Varimax foam pouring process (ID No. ES-F-01(a)) with six associated exhaust stacks
a cure area No. 1 (ID No. ES-F-01(j)) with four associated exhaust stacks
two bun-gas extraction systems (ID Nos. ES-F-01(k).1 and (k).2) with two associated exhaust stacks
a cure area No. 2 (ID No. ES-F-01(l)) with six associated exhaust stacks**

2.1 C. One spray adhesive operation (ID No. ES-F-02) used in the polyurethane foam gluing operations

2.1 E. Polyethylene foam extrusion operations consisting of:

- six polyethylene foam extrusion (ID Nos. ES-P-01(a), ES-P-01(b), ES-P-01(c), ES-P-01(d), ES-P-01(j), and ES-P-01(k))
- six inkjet printing processes (ID Nos. ES-P-01(e), ES-P-01(f), ES-P-01(g), ES-P-01(h), ES-P-01(i), and ES-P-01(l))

The facility requested that the 2D .0521 monitoring requirements along the associated recordkeeping and reporting requirements be removed from the Permit since these sources appeared to have never had visible emissions. The Region concurred with this request. Therefore, the requirements have been removed from the Permit.

The following changes were made to the Hickory Springs Manufacturing Company – Conover Complex Air Permit.

Page(s)	Section	Description of Change(s)
Attachments	-	- Added attachment summarizing changes to the Permit. - The following sources have been removed from the Insignificant List: - Five <0.1 million Btu per hour polyethylene foam extrusion natural gas-fired preheaters - <0.1 million Btu per hour wire coating process natural gas-fired preheater - The wire drawing operation, ID No. I-ES-W-01, has been added to the insignificant list - The Insignificant List format was updated and unique ID Nos. were assigned for all equipment on the list
1	Cover Page	- Updated permit revision numbers and effective date. - Updated permit issuance date.
3 - 24	All, Header	- Updated permit revision number.
3 - 4	Part I, Section 1, equipment listing	- Removed the wire drawing operation, ID No. I-ES-W-01, from the Permit along with its associated bagfilter, ID No. CD-W-01. - The equipment list was updated to conform with standard equipment listing requirements and to conform with database equipment listing
5	Part I, Section 2.1 A	- Updated the descriptions for equipment subject to the specific limitations and conditions
6	Part I, Section 2.1 A.2.c	-Removed the 2D .0521 monitoring requirements and noted that no monitoring/recordkeeping/reporting was required for compliance with this Rule.
6	Part I, Section 2.1 A.2.d and e (removed)	- Removed the 2D .0521 recordkeeping and reporting requirements
7	Part I, Section 2.1 B.2	- Updated the 2D .0521 Condition

Page(s)	Section	Description of Change(s)
9	Part I, Section 2.1 C.2.c	-Removed the 2D .0521 monitoring requirements and noted that no monitoring/recordkeeping/reporting was required for compliance with this Rule.
9	Part I, Section 2.1 C.d and e (removed)	- Removed the 2D .0521 recordkeeping and reporting requirements
10	Part I, Section 2.1 D.2	- Updated the 2D .0521 Condition
12	Part I, Section 2.1 E.2.c	-Removed the 2D .0521 monitoring requirements and noted that no monitoring/recordkeeping/reporting was required for compliance with this Rule.
12	Part I, Section 2.1 E.e and f (removed)	- Removed the 2D .0521 recordkeeping and reporting requirements
12 - 14	Part I, Section 2.1 F (removed)	- Removed the specific limitations and conditions for the wire drawing operation, ID No. I-ES-W-01.
14	Part I, Section 2.2 B.1.d	- Changed reporting from quarterly to semi-annual
15 -23	Part I, Section 3	- Updated General Conditions
24	Part II (removed)	- Removed Part II from the Permit.

V. Regulatory Review

The facility is currently subject to the following regulations:

15A NCAC 2D .0515, Particulates from Miscellaneous Industrial Processes

15A NCAC 2D .0521, Control of Visible Emissions

15A NCAC 2D .0958, Work Practices for Sources of Volatile Organic Compounds

15A NCAC 2D .1100, Control of Toxic Air Pollutants”

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)

No apparent changes have occurred which would indicate non-compliance with these Rules. The last compliance inspection noted compliance with the Rules, including any monitoring, recordkeeping, and reporting requirements.

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 NESHAP Standards as it has been deemed to be not a major source of HAPs. This permit renewal does not affect this status.

PSD – The facility is currently subject to a facility-wide volatile organic compound (VOC) emission limit of less than 250 tons per year to avoid PSD. The language is included as Section 2.2 B.1 of the Permit. No changes have occurred from this renewal.

112(r) - This facility is subject to the requirements of the *Chemical Accident Release Prevention Program*, Section 112(r) of the Clean Air Act. They are a program level 1 in the Foam Plant for TDI and a program level 3 in the PTI Plant for isobutane. An inspection was conducted by Jim Westmorland of the MRO on May 17, 2007. The facility had all of the required records and appeared to be in compliance with the 112(r) program at that time.

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. The facility did not submit a CAM plan at this time, but must be evaluated for CAM applicability under this renewal.

This facility has two current sources which are controlled as shown below:

ES-F-01(b)	one barium sulfate storage and transfer system	CD-F-01, CD-F-02	bagfilter (200 square feet of cloth area), bagfilter (200 square feet of cloth area)
ES-G-01	polyurethane foam grinding operation consisting of a storage bin, foam granulator, and conveying system	CD-01a, CD-01b, CD-01c, CD-01d, CD-G-02	cyclone (21 inches in diameter), cyclone (30 inches in diameter), cyclone (30 inches in diameter), cyclone (24 inches in diameter), one bagfilter (1,012 square feet of filter area)

Uncontrolled emissions from the sources are calculated as shown below and were submitted as an additional information request to the application:

ES-F-01(b):

Exhaust fans rated at 300 acfm (to each baghouse) with dust content of 10 grains/cu ft.
MSDS documented PM-10 content of dust = 22%

$300 \text{ acfm} \times 10 \text{ grains/cu ft} \times 60 \text{ min/hr} = 180,000 \text{ grains/hr}$ to each baghouse

$180,000/7000 = 25.71 \text{ lb/hr}$ to each baghouse
 $25.71 \times 2 = 51.42 \text{ lb/hr}$ dust emissions

$51.42 \times 4.38 \times 0.22 = \mathbf{49.6 \text{ tons/yr PM-10 potential before control}}$

ES-G-01

Based on 2D .0515 compliance:

Process rated at 1 lb/hr

$$E = 4.1(1)^{0.67} = 4.1 \text{ lb/hr}$$

$$4.1 * 4.38 = \mathbf{18 \text{ tons/yr PM potential before control}}$$

Since these sources have potential PM-10 emissions before control below major levels, CAM does not apply.

VII. Facility Wide Air Toxics

This facility has facility-wide modeled emission source limits for 2, 4 and 2, 6-toluene diisocyanate (mixed isomers). To demonstrate compliance, they must keep records noting less than 125,000 pounds per year of TDI usage and report this yearly.

This renewal has no effect on the requirements.

VIII. 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.

IX. Compliance History

This facility was inspected by Jennifer Manning of the MRO on 5/23/2007 and appeared to be in compliance with Air Quality Regulations. No apparent compliance problems have occurred in the last 5 years

X. Emissions Summary

Emissions are taken from the 2006 Emissions Inventory.

Pollutant	Actual emissions (tons/yr)
TSP	20.21
PM-10	20.21
SO2	0

NOX	0.23
CO	0.06
VOC	150.93
Largest single HAP (TDI)	0.27
Total HAPs	<1

XI. Conclusions, Comments, and Recommendations

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

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