

**NORTH CAROLINA DIVISION OF  
AIR QUALITY**

**Air Permit Review**

Permit Issue Date: July **XX**, 2008

**Region:** Mooresville Regional Office  
**County:** Lincoln  
**NC Facility ID:** 5500083  
**Inspector's Name:** Jennifer Manning  
**Date of Last Inspection:** 12/19/2007  
**Compliance Code:** C/In Compliance With Procedural Reqr

<b>Facility Data</b>			<b>Permit Applicability (this application only)</b>		
<b>Applicant (Facility's Name):</b> RSI Home Products  <b>Facility Address:</b> RSI Home Products 350 North Generals Boulevard Lincolnton, NC 28092  <b>SIC:</b> 3088 / Plastics Plumbing Fixtures <b>NAICS:</b> 326191 / Plastics Plumbing Fixture Manufacturing  <b>Facility Classification: Before:</b> Title V <b>After:</b> Title V <b>Fee Classification: Before:</b> Title V <b>After:</b> Title V			<b>SIP:</b> <b>NSPS:</b> <b>NESHAP:</b> Remove Subpart WWWW Placeholder <b>PSD:</b> <b>PSD Avoidance:</b> Amended Avoidance Condition <b>NC Toxics:</b> Remove Condition for 2Q .0711, Remove Condition for 2Q .0705 <b>112(r):</b> <b>Other:</b> RACT Review and Permit Shield		
<b>Contact Data</b>			<b>Application Data</b>		
<b>Facility Contact</b>	<b>Authorized Contact</b>	<b>Technical Contact</b>	<b>Application Number:</b> 5500083.06B <b>Date Received:</b> 10/11/2006 <b>Application Type:</b> Renewal <b>Application Schedule:</b> TV-Renewal <b>Existing Permit Data</b> <b>Existing Permit Number:</b> 06883/T11 <b>Existing Permit Issue Date:</b> 06/08/2006 <b>Existing Permit Expiration Date:</b> 06/30/2007		
Jim Spinks Product Engineer for Semi-Custom Div (704) 732-5043 350 North Generals Blvd Lincolnton NC, 28092	Jeff Hoeft VP of Engineering & Manufacturing (714) 578-2570 400 E. Orangethorpe Ave. Anaheim CA, 92801	Chas Andrews QA Tech (828) 428-5155 838 Lincoln County Parkway Lincolnton NC, 28092			
<b>Review Engineer:</b> Charles Yirka  <b>Review Engineer's Signature:</b> _____ <b>Date:</b> July <b>XX</b> , 2008			<b>Comments / Recommendations:</b>		
			<b>Issue</b> 06883/T12 <b>Permit Issue Date:</b> July <b>XX</b> , 2008 <b>Permit Expiration Date:</b> June 30, 2013		

**1. Introduction**

RSI Furniture was permitted to manufacture wooden furniture at this Lincoln County site. The facility was subject to MACT or 2D .1111 Subpart WWWW (Reinforced Plastic Composites). All affected MACT sources have been removed from the facility. The facility remains subject to MACT or 2D .1111 Subpart JJ (Furniture Manufacturing Operations). RSI is currently operating under Title V permit No. 06883T11.

According to RSI, the cultured marble operations became a major source prior to April 21, 2003 and were MACT Subpart WWWW (Reinforced Plastic Composites) affected. The cultured marble operations previously included affected sources such as; open molding, continuous casting, and HAP material storage. As the cultured marble operations have been removed entirely, RSI requested the equipment be removed from the permit. Furthermore, RSI requested and DAQ granted removal of MACT WWWW.

In addition RSI is located in the Metrolina nonattainment area and is considered a VOC major source with a PTE of greater than 100 tons per year. As such RACT applicability was also addressed. The RACT application was combined with the renewal application.

## 2. Statement of Compliance

Based on the latest inspection on December 21, 2007 the facility appeared to be operating in compliance with all applicable air quality standards and regulations.

The five-year compliance history is detailed in the inspection report.

## 3. Purpose of Application

Application is made for application for the following:

1. Removal all cultured marble operations (ID No. 005) in other words all MACT WWW affected sources. As this was the final MACT for the facility, RSI was required to be in compliance with 2D .1100 per 2Q .0705. Permit conditions removed included MACT WWW "placeholder" condition. Therefore the requisite 2D .1100 condition and 2Q .0711 were also removed. 2D .1100 had required the calculation of styrene emissions, as the modeled emission rate for styrene was 111.6 lb/hr. 2Q .0711 had also required a list of TPERs be inserted in the permit. The emissions of styrene and all of the TAPs on TPERs list 2Q .0711 were all associated with the cultured marble operations (ID No. 005).

As the only MACT that applies is MACT JJ, RSI is now exempt from the state enforceable toxics rule. As per the following:

### **15A NCAC 02Q .0702 EXEMPTIONS**

(a) A permit to emit toxic air pollutants shall not be required under this Section for:  
(23) wood furniture manufacturing operations as defined in 40 CFR63.801(a) that comply with the emission limitations and other requirements of 40 CFR Part 63 Subpart JJ, provided that the terms of this exclusion shall not affect the authority of the Director under 15A NCAC 02Q .0712;

The authority of Director under 2Q .0712 is NOT affected, as the facility has not previously triggered a toxics review for the furniture operations. See the following:

### **15A NCAC 02Q .0712 CALLS BY THE DIRECTOR**

Notwithstanding any other provision of this Section or 15A NCAC 2D .1104, upon a written finding that a source or facility emitting toxic air pollutants presents an unacceptable risk to human health based on the acceptable ambient levels in 15A NCAC 2D .1104 or epidemiology studies, the Director may require the owner or operator of the source or facility to submit a permit application to comply with 15A NCAC 2D .1100 for any or all of the toxic air pollutants emitted from the facility.

Furthermore the following rule will no longer apply:

### **15A NCAC 2D .0958 WORK PRACTICES FOR SOURCES OF VOLATILE ORGANIC COMPOUNDS**

(a) This Rule applies to all facilities that use volatile organic compounds as solvents, carriers, material processing media, or industrial chemical reactants, or in other similar uses, or that mix, blend, or manufacture volatile organic compounds, or emit volatile organic compounds as a product of chemical reactions.

(b) This Rule does not apply to:

(2) sources subject to 40 CFR Part 63, Subpart JJ.

2. The PSD avoidance condition limiting total VOC emissions (less than 250 tpy) pursuant to 2D .0530 was modified. Effectively only the furniture operations remain. The condition had included a calculation methodology

for calculating styrene/organic HAP emissions from the cultured marble operations AND the emissions from the furniture manufacturing operations as determined by mass balance and throughput. The revised 250 ton per year avoidance limit applies only to the remaining furniture operations. The calculation methodology for the cultured marble operations was removed from the 2D .0530 avoidance condition while the furniture operations VOC emissions calculation methodology remains.

3. Implement existing source RACT as applicable. RSI is located in the Metrolina nonattainment area and appeared to be a VOC major source with a PTE of greater than 100 tons per year. RSI was notified that RACT might apply. RSI submitted additional information that indicated they were considered a major source of VOC emissions (by definition the facilities PTE was greater than 250 tons per year since the permit contains 2Q .0317 for 2D .0530 avoidance).

RSI first indicated that RACT would not apply, as the remaining VOC sources would be subject to MACT Subpart JJ as EPA has indicated MACT controls are usually considered superior to RACT. After internal review the DAQ decided that the miscellaneous VOC RACT rule 2D .0951 (specifically RACT rule 2D .0951(c)(1)) would apply, however, agreed with RSI; that is, the MACT Subpart JJ meets the requirements of the RACT. This approach allows permitting authorities to streamline their RACT reviews when a particular MACT (e.g., Subpart JJ) is effective at controlling VOCs<sup>1</sup>. The MACT JJ (which requires compliant coatings with 1.0 lb VHAP/lb solids or less and emission averaging with compliant coatings not to exceed 1.0 lb VHAP/lb solids, and work practices).

All remaining sources of VOC required evaluating as well. The remaining sources all have emissions of less than 15 pounds per day each therefore "exempt" as allowed by 2D .0902. Remaining sources subject to a RACT review include boilers and two spray booths utilizing water-based latex coatings, which will NOT be subject to RACT as emissions are less than 15 pounds per day each as per 2D .0902(d).

In addition, this engineer confirmed RSI's NOx PTE; the PTE is much less than 100 tons per year from all combustion sources therefore a NOx RACT review is not required.

4. Implement CAM if required. This renewal permit is for a Part 70 significant modification. CAM could apply to the small emissions units (PSEUs) with before control emissions of more than 100 tpy of criteria or major source amounts 10/25 tpy of HAP emissions. The application addressed the applicability of CAM. Woodworking machinery and woodwaste collection system ID No. 004 is controlled by one bagfilter (3,968 square feet of filter area, ID No. DCF-3). The potential before control emissions of PM10 were evaluated per application using a sieve analysis and found to be 5.7 tons per year. The particulate collection system (ID No. 006) is controlled by one bagfilter (10,260 square feet, ID No. MCA-1C). The potential before control emissions of PM 10 were evaluated per application using a sieve analysis and found to be 21.2 tons per year. Therefore CAM does not apply.

5. Finally, the applicant requested many of the sources be removed from the permit. With the removal of the cultured marble operations manufacturing will shift to furniture manufacturing. Much of the equipment associated with the manufacturing of furniture is no longer in operation: therefore, it appears that emissions will decrease markedly.

This permit is a combined RACT and renewal and was processed as a significant modification pursuant to 15A NCAC 2Q .0501(d). Therefore, will be subject to a concurrent 30 day public notice and 45 day EPA review.

### 3. Application Chronology

October 11, 2006	Application received in Mooresville Regional Office (MRO)
October 13, 2006	Application received in Raleigh Central Office (RCO)
October 24, 2006	Add info letter requesting CAM evaluation

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<sup>1</sup> See *Federal Register*/Vol .70, No. 288/Tuesday, November 29, 2005/Rules and Regulations/71653-71655

November 06, 2006	Letter from applicant requesting removal of MACT WWW
November 27, 2006	Amended application with missing CAM evaluation
December 1, 2006	Date of Inspection Report
December 12, 2007	Date of next Inspection Report
January 23, 2007	Letter from Director granting removal of MACT WWW
March 10, 2008	Application assigned to review engineer
April 15, 2008	Draft to Title V Supervisor
May 30, 2008	Draft to MRO
June 19, 2008	Draft to Applicant (to K. Hash for notice and RPA review)
XX XX, 2008	Comments received from applicant
XX XX, 2008	Comments received from EPA
August XX, 2008	Permit issued

#### 4. New Regulatory Requirements

In order to address the applicability of RACT to this facility, this combined RACT and renewal permit includes the following conditions:

The permit includes the following RACT permit condition:

#### B. Wood products finishing operations including;

**One wood panel (100% solids) finishing operation (ID No. WF-1) consisting of:**

Four single-head roller coaters (ID Nos. 5225.01, 5225.02, 5225.03, and 5225.04),

One stain drying oven (ID No. A91-7-3.5), and

**One wood panel (30% solids) finishing operation (ID No. WF-2) consisting of:**

One waterwash controlled rotary spray machine (ID No. RS-20-91-7-3),

One drying oven (ID No. A91-8024/P.1), and

**One wood furniture finishing spray coating line (ID No. ES-SPRAY) consisting of:**

Eight dry filter-type spray booths (ID Nos. SB1a/SB1b, SB2a/SB2b, SB3a/SB3b, SB4a/SB4b, SB5a/SB5b, SB6a/SB6b, SB7a/SB7b, and SB8a/SB8b),

One off-line dry filter-type spray booth (ID No. SB-9)

**One natural gas-fired bake oven (1.0 million Btu per hour heat input capacity, ID No. C01)**

#### **15A NCAC 02D .0951 MISCELLANEOUS VOLATILE ORGANIC COMPOUND EMISSIONS**

- a. This Rule applies to all facilities that use volatile organic compounds as solvents, carriers, material processing media, or industrial chemical reactants, or in other similar uses, or that mix, blend, or manufacture volatile organic compounds for which there is no other applicable 2D .0900 Rule.
- b. The Permittee has "installed and operates reasonable available control technology" as the MACT Subpart JJ meets the requirements of RACT<sup>2</sup> [15A NCAC 2D .0951(c)(1)].

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<sup>2</sup> See *Federal Register*/Volume 70, No. 288/Tuesday, November 29, 2005/Rules and Regulations/ 71653-71655

- i. Final compliance was demonstrated for existing source RACT no later than **April 1, 2009** [15A NCAC 2D .1403(c)(2)(F)]

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

- c. No monitoring/recordkeeping/reporting is required.

Also included is permit condition for the Permit Shield as authorized by 40CFR Part 70 and 2Q .0512:

**2.3 - Permit Shield for Non-applicable Requirements**

The Permittee is shielded from the following non-applicable requirements as of **(April 1, 2009)**, based on information furnished with all previous applications. This shield does not apply to future modifications or changes in the method of operation: [15A NCAC 2Q .0512(a)(1)(B)]

- A. RSI is as major source of VOC in an area classified as Moderate; however RSI is not subject to the 2D .0900 rules:
  - 1. The boilers and the two spray booths utilizing water-based latex coatings shall not be subject as emissions are less than 15 pounds per day each as per 2D .0902(d).
- B. RSI shall not be subject to 15A NCAC 2D .1111 [40 CFR Part 63, Subpart WWWW] as an existing affected source as all affected emissions units were removed from the site.

**5. NSPS, MACT, PSD, Attainment Status, and 112(r)**

There are no NSPS affected sources.

RSI Home Products is a major HAP source subject to MACT Subpart JJ. As stated above, the Subpart WWWW sources (cultured marble gel coat operations) have been removed.

With regards to PSD, RSI had previously taken a limit on VOC emissions (less than 250 tpy) to be classified as a minor source. This modification will not affect PSD status, however the facility is considered a NAA/NSR major source with a PTE of greater than 100 tpy of VOCs in a non-attainment area (Metrolina).

Lincoln County is not in attainment with the 8-hour ozone standard. The area was designated as nonattainment on June 15, 2004. The maximum attainment date is June 2010. RSI is not subject to RACT nor will the NAA Added Fee apply at this time.

According to previous applications, this facility does not use, make, or store any of the regulated substances in quantities above the 112(r) threshold.

**6. Changes to Existing Permit**

The following table summarizes changes made to the existing permit:

**ATTACHMENT**

Old Page #	New Page #	Section	Description of Change
N/A	N/A	N/A	Update cover letter, remove all references to Part I, Part II, renewal application due date, consistent with current shell v2.22.1
7- 8	3-4	Source list	Remove curing ovens and tank room, all

			WWWW from sources except shaping and table footnotes re: 502(b)(10)
10	NA	2.1 B.	Remove woodwaste system 001 and bagfilters DCF-1 and 2, all cyclones CYC-1 and 2
11	6	2.1 B.2.	Update .0521 monitoring
11	NA	2.1 C.	Remove three electric curing ovens, table footnotes re: 502(b)(10)
13	8	2.1 C.3.	Update .0521 monitoring
14	9	2.1 D.	Remove tank room, all WWWW from sources except shaping, all rules that no longer apply from table
15	10	2.1 D.2.	Update .0521 monitoring
17	NA	2.1 D.4.	Remove 2Q .0711 with HAPs associated with WWWW marble operations
18	9-10	2.2 A.	Remove note re 502(b)(10) for JJ affected booth SB-9
20	13	2.2 B.	Revise table; remove .0958 leave PSD avoidance for VOC
20-21	NA	2.2 B.1	Remove .0958 for JJ source exemption;
21	13	2.2 C.2.	Revise 2Q .0317 for PSD avoidance removing all re to WWWW sources and calculations
22	NA	2.2 C.	Remove table with re to WWWW and 2Q .0705
23	NA	2.2 C.2.	Remove 2Q .0705 language
NA	14	2.3	Add Permit Shield for Non-applicable requirements RACT and WWWW
NA	20	3	Replace general conditions with latest version 2.22.1

## 7. Application Fee, PE Seal, Zoning Consistency, Responsible Official

An application fee is not required for a title V renewal or RACT application.

As this modification does not involve the appropriateness and design of control equipment, a PE Seal is not required

This is an existing facility. As this modification does not involve expansion of the facility or an increase in emissions, a zoning consistency determination is not required.

Mr. Jeff Hoeft, Vice President, Engineering signed the application as the responsible official on November 17, 2006. IBEAM records indicate that Mr. Hoeft is the responsible official.

## 8. Comments and Recommendations

All comments and recommendations from the applicant, the MRO, and Title V Supervisors have been addressed. The 30-day public notice period was over on August XX, 2008 and 45-day EPA review was over on August XX, 2008. The RCO permits section recommends issuance of this permit revision. The MRO concurs with issuance of this permit revision.