**NORTH CAROLINA DIVISION OF AIR QUALITY**

# Air Permit Review

**Permit Issue Date:** Date, 2007

**Region:** Fayetteville Regional Office
**County:** Scotland
**NC Facility ID:** 8300019
**Inspector's Name:** Robert Hayden
**Date of Last Inspection:** 05/19/2006
**Compliance Code:** 4/In Compliance - Certification

## Facility Data

**Applicant (Facility's Name):** Railroad Friction Products Corp

**Facility Address:**
Railroad Friction Products Corp
13601 Airport Road
Maxton, NC 28352

**SIC:** 3743 / Railroad Equipment
**NAICS:** 33651 / Railroad Rolling Stock Manufacturing

**Facility Classification: Before:** Title V **After:** Title V
**Fee Classification: Before:** Title V **After:** Title V

## Permit Applicability (this application only)

**SIP:** 15A NCAC 2D .0614
**NSPS:**
**NESHAP:**
**PSD:**
**PSD Avoidance:**
**NC Toxics:** 15A NCAC 2Q .0705
**112(r):**
**Other:**

## Contact Data

| Facility Contact | Authorized Contact | Technical Contact |
|---|---|---|
| Greg Thompson<br>Mgr. Manufacturing Engineerin<br>(910) 844-9739<br>13601 Airport Road<br>Maxton NC, 28364 | Bruce Shute<br>Vice President and General Manager<br>(910) 844-9745<br>PO Box 1349<br>Laurinburg NC, 28353 | Greg Thompson<br>Mgr. Manufacturing Engineerin<br>(910) 844-9739<br>13601 Airport Road<br>Maxton NC, 28364 |

## Application Data

**Application Number:** 8300019.06A and 8300019.06B
**Date Received:** 08/25/2006 and 10/27/2006
**Application Type:** Renewal
**Application Schedule:** TV-Renewal and Last MACT/air toxics

**Existing Permit Data**
**Existing Permit Number:** 02941/T20
**Existing Permit Issue Date:** 11/10/2005
**Existing Permit Expiration Date:** 03/31/2007

**Review Engineer:** Mark Cuilla

**Review Engineer's Signature:**
**Date:** date, 2007

**Comments / Recommendations:**
**Issue** 02941/T21
**Permit Issue Date:** date, 2007
**Permit Expiration Date:** date, 2012

## 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 **(02941T20)** was issued on **November 10, 2005**, and is currently scheduled to expire on **March 31, 2007**. The renewal application was received on **August 25, 2006**. It should be noted that the permit application, per the cover page was due to DAQ nine months prior to permit expiration date; specifically **June 30, 2006** for an expiration date of **March 31, 2007**. The **August 25, 2006** submittal did not meet that requirement; therefore, the permit application WAS NOT received on time to have the permit application shield extended to it. The facility has entered into an SOC in order to continue to operate past the expiration date.

In addition, the permit is being modified to include the results of a facility-wide modeling demonstration in compliance with 15A NCAC 2Q .0705. This demonstration was submitted on **October 27, 2006** as application **(8300019.06B).**

## II. Facility Description

The facility produces brake shoes for much of the principal railroad lines in the US and many for various subways and trolleys. Steel shoes are supplied by a shop in Fayetteville, and are washed and modified as necessary, and sprayed with a compound that enhances adhesion. The raw materials are mixed with binders/resins, heated slightly and then pressed into pads under high pressure and temperature onto steel shoes. The pads/shoes are then trimmed to remove flash, cured, painted, packed, and shipped. Materials lost in the process (dust from bag houses, reject pads and fugitive hexane) are recycled wherever possible.

## III. History/Background/Application Chronology

**May 11, 2004** – Permit application **8300019.04A** received and processed as a 502(b)(10) modification for the addition of one silo **(ID No. ES-Silo)** bin vent **(ID No. CD-Silo)** and silo hopper **(ID No. ES-Silo Hopper)**.

**September 28, 2005** – Permit application **8300019.05A** received and processed as a 502(b)(10) modification for the replacement of an existing bagfilter **(ID No. CD-04)**, removal of equipment that is not MACT compliant **(ID Nos. F-02 through F-05 and ES-11 through ES-16)** and associated control device **(ID No. CD-06)**, removal of silo hopper **(ID No. ES-Silo Hopper)** as never installed, and modify description of sources **(ID Nos. F-09 and ES-12)**.

**August 25, 2006 –** Permit application **8300019.06A** was received as a renewal application. It should be noted that the permit application, per the cover page was due to DAQ nine months prior to permit expiration date; specifically **June 30, 2006** for an expiration date of **March 31, 2007**. The **August 25, 2006** submittal did not meet that requirement; therefore, the permit application WAS NOT received on time to have the permit application shield extended to it. The FRO was made aware of this situation in an **October 19, 2006** email to Jim Moser.

**September 18, 2006** – I sent an email to the Permittee requesting that additional information concerning permitted equipment questions, CAM applicability, and last MACT/air toxics modeling demonstration requirements be submitted. The Permittee responded on **September 19, 2006**. See Section IX of this Document for a discussion

**October 26, 2006 –** The Permittee provided via email, a corrected equipment list including all control device associations. They noted two incorrect linkages for ES-03 and ES-07b. These have been fixed throughout the permit.

**October 27, 2006** – The Permittee submitted the required last MACT/air toxics demonstration **(8300019.06B)** indicating compliance with NC air toxics per 15A NCAC 2Q .0705. This application was consolidated into the renewal application. The renewed permit has been amended to include the shell language for this demonstration.

**Date, 2006** – DRAFT sent to 30-day public notice and 45-day EPA review prior to issuance.

## IV. Permit Modifications/Changes and ESM Discussion

The following table describes the modifications to the current permit as part of the renewal process.

| Page(s) | Section | Description of Change(s) |
|---|---|---|
| Attachment | Insignificant Activities | -placed information in proper tabular format<br>-added equipment ID nos. |
| Cover | - | -amended all dates and permit revision numbers |
| TOC | - | -removed reference to Part II |
| All | Header | -amended permit revision number |

| Page(s) | Section | Description of Change(s) |
|---|---|---|
| 3-4 | Equipment table | -reorganized equipment per Permittee (corrected equipment/control device relationships where needed)<br>-removed asterisks and associated language |
| 5 | 2.1 A<br>2.1 A (table)<br><br>2.1 A.1.a | -clarified equipment listing<br>-updated shell listing<br>-added reference to CAM requirements<br>-updated shell language and added ID nos. |
| 6 | 2.1 A.1.b<br>2.1 A.1.c<br>2.1 A.1.d<br>2.1 A.1.e<br>2.1 A.1.f<br>2.1 A.2.a | -updated shell language<br>-updated shell language and added ID nos.<br>-updated shell language<br>-added ID nos.<br>-updated shell language<br>-added ID nos. |
| 7 | 2.1 A.2.c<br>2.1 A.2.d<br>2.1 A.2.e | -updated shell language and added ID nos.<br>-updated shell language<br>-updated shell language |
| 7-9 | 2.1 A.3 | -added CAM requirements with a requirement for the submittal of an administrative amendment to clarify monitoring requirements |
| 9 | 2.1 B (table) | -updated shell language<br>-added MACT citation |
| 10 | 2.1 B.1.a<br>2.1 B.1.b<br>2.1 B.1.c<br>2.1 B.1.d<br>2.1 B.2.a<br>2.1 B.2.c | -updated shell language and added ID nos.<br>-updated shell language<br>-updated shell language<br>-added “no reporting” reference<br>-added ID nos.<br>-updated shell language and added ID nos. |
| 11 | 2.1 B.2.d<br>2.1 B.2.e<br>2.1 C.1.a<br>2.1 C.1.c | -updated shell language<br>-updated shell language<br>-added ID nos.<br>-updated shell language and added ID nos. |
| 12 | 2.1 C.1.d<br>2.1 C.1.e<br>2.1 A (table) | -updated shell language<br>-updated shell language<br>-corrected rule citations<br>-added MACT references |
| 13 | 2.2 A.1.e | -updated shell language |
| 14 | 2.2 A.2<br>2.2 A.2.a<br>2.2 A.2.b<br>2.2 A.2.c<br>2.2 A.3 | -corrected rule title<br>-added reference to recently modeled hexane isomers and n-hexane<br>-updated shell language<br>-changed semi-annual reporting to quarterly<br>-corrected rule citation |
| 15 | 2.2 A.4 | -added modeling requirements for last MACT/air toxics per 2Q .0705 |
| 15-16 | 2.2 A.5 | -reorganized odor rule requirements |
| 16 | 2.2 A.6<br><br>2.2 A.7 | -brought MACT requirements from 2.3 “Other Applicable Requirements”<br>-brought MACT requirements from 2.3 “Other Applicable Requirements” |
| 17-25 | General Conditions | -updated shell language using shell language 2:18 |

The following table indicates the modifications to ESM as a result of this permit renewal:

| Current Description | Change resulting from permit renewal |
|---|---|
| One dry mix room **(ID No. ES-02)** | One dry mix room (miscellaneous capture hoods; **ID No. ES-02**) |
| One wet mix room **(ID No. ES-03)** | One wet mix room (miscellaneous capture hoods; **ID No. ES-03**) |
| **ES-03** with associated bagfilter **(ID No. CD-01)** | **ES-03** with associated bagfilter **(ID No. CD-03)** |
| **ES-07b w**ith associated bagfilter **(ID No. CD-03)** | **ES-07b** with associated bagfilter **(ID No. CD-01)** |
| **ES-10** with associated glycol condenser **(ID No. CD-05a)** | **ES-10** with associated glycol condensers **(ID Nos. CD-05a and CD-05b)** |
| **F-01** with associated glycol condenser **(ID No. CD-05b)** | **F-01** uncontrolled |

## 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 .1111, Maximum Achievable Control Technology
15A NCAC 2D .1806, Control and Prohibition of Odorous Emissions
15A NCAC 2Q .0711, Emission Rates Requiring a Permit

A regulatory review for these existing requirements will not be included in this document. However, as part of this permit renewal, the following regulation(s) have been added to the permit:

15A NCAC 2D .0614, Compliance Assurance Monitoring
15A NCAC 2Q .0705, Existing Sources and SIC Calls

## VI. NSPS, NESHAPS/MACT, PSD, 112(r), CAM

**NSPS –** The facility is not currently subject to any New Source Performance Standards. There are no modifications to the permitted equipment associated with this renewal; therefore, this permit renewal does not affect this status.

**NESHAPS/MACT** – The facility is subject to the following Maximum Achievable Control Technology Standards (MACT):

**40 CFR 63, Subpart MMMM, National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts.** The facility operates one uncontrolled backing plate spray/dip application **(ID No. ES-17)** and one uncontrolled wedge casting hand spray operation **(ID No. ES-18)** that are both subject to this MACT. These existing sources are required to comply with this MACT by **January 2, 2007** [63.3883(b)]. Robert Hayden of FRO indicates in his latest inspection report that:

> "the backing plate operation bonds the friction materials (mixture containing rubber) to the metal brake shoes, and falls under the Rubber-to-metal coatings standard, with an emission limit of 37.7 pounds HAP per gallon of solids applied. The facility is currently in the process of identifying the appropriate coating type (for existing affected sources general use coatings). The wedge casting hand spray application process is subject to the general use coatings, with an emission limit of 2.6 pounds HAP per gallon of solids applied. Based on trials and input from the coating and adhesives manufacturer, the MACT-compliant version of the product will be ready well before the compliance date."

The following language has been included in the renewed permit for compliance with this regulation:

*7. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY*

*a. For the Backing Plate Spray/Dip Operation **(ID No. ES-17)** and the Wedge Casting Hand Spray Process **(ID No. ES-18)**, the Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart MMMM including the applicable emission limitations of 63.3890 through 63.3893 and applicable monitoring, recordkeeping, and reporting requirements of 63.3910 through 63.3931. In addition to these requirements:*

*i. a Permittee that demonstrates compliance with this Subpart through the use of the compliant material option shall be in compliance with the applicable requirements of 63.3940 through 63.3942;*

*ii. a Permittee that demonstrates compliance with this Subpart through the use of emission rate without add-on controls option shall be in compliance with the applicable requirements of 63.3950 through 63.3952; or*

*iii. a Permittee that demonstrates compliance with this Subpart through the use of emission rate with add-on controls option shall be in compliance with the applicable requirements of 63.3960 through 63.3968.*

*Compliance with these requirements for your existing sources **(ID Nos. ES-17 and ES-18)** shall be demonstrated beginning from **January 2, 2007**.*

**40 CFR 63, Subpart QQQQQ, National Emission Standards for Hazardous Air Pollutants for Friction Materials Manufacturing Facilities.** The facility operates one sigma mixer line **(ID No. ES-10)** controlled by two glycol condensers **(ID Nos. CD-05a and CD-05b)** that is subject to this MACT. This existing source has been in compliance with this standard since October 18, 2005. This mixer is classified as a large solvent mixer (with capacities greater than 2000 pounds) and therefore is required to limit HAP solvent emissions to the atmosphere to no more than 30 percent of that which would otherwise be emitted in the absence of solvent recovery and/or solvent substitutions based on a 7-day block average [63.9500(a)]. This reduction can be achieved by hexane recovery or solvent substitution. Robert Hayden of FRO indicates in his latest inspection report that:

> "the initial MACT compliance demonstration was performed between Sunday October 16 and Sunday October 23, 2005. The final report was provided to DAQ on November 8, 2005. The compliance percentage was 12.6%, demonstrating initial compliance with the MACT."

The following language has been included in the renewed permit for compliance with this regulation:

*6. 15A NCAC 2D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY*

*a. For the Sigma Mixer Line **(ID No. ES-10)**, the Permittee shall comply with all applicable provisions contained in Environmental Management Commission Standard 15A NCAC 2D .1111, "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR Part 63, Subpart QQQQQ including the applicable emission limits of 63.9500, applicable initial compliance demonstration requirements of 63.9510 through 63.9525, applicable continuous compliance requirements of 63.9530, and applicable monitoring, recordkeeping, and reporting requirements of 63.9535 through 63.9550. Compliance with these requirements for your existing source **(ID No. ES-10)** shall be demonstrated beginning from **October 18, 2005**.*

**PSD** – The facility is a pre-existing major stationary source for PSD, with actual and potential VOC emissions greater than 250 tons per year. Any modification would be evaluated for PSD significance levels. The PSD VOC bottleneck is the adhesive spray operations. This permit renewal does not affect this status.

**112(r)** – The facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in the Rule. This permit renewal does not affect this status.

**CAM** – 40 CFR 64 requires that a continuous 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's emission source/control device orientation is as follows:

| Emission Source ID No. | Emission Source Description | Control Device ID No. | Control Device Description |
|---|---|---|---|
| ES-02,<br><br>ES-04A.L1 through ES-04A.L9, ES-04B.L10 and ES-04B.L11, ES-05A through ES-05F, and ES-07B | One Dry Mix Room (miscellaneous capture hoods),<br>Nine Mold Lines<br><br>Two Mold Lines<br><br>Six Trim/Scrap Saws<br><br>One Dry Mixer (70.6 cubic feet capacity) | CD-01 | One bagfilter (11,700 square feet of filter area) |
| ES-Silo | Storage silo for reclaimed brake material | CD-Silo | Bin vent cartridge-type (285 square feet of filter area) |
| ES-06 | Reclaim Scrap Grinder (625 pounds per hour maximum capacity) | CD-02 | One bagfilter (2,040 square feet of filter area) |
| ES-03,<br><br>ES-07A, and ES-08 | One Wet Mix Room (miscellaneous capture hoods),<br>Weigh Out Area,<br>One Trim/Scrap Saw | CD-03 | One bagfilter (12,800 square feet of filter area) |
| ES-09 | Sigma Mixer Batch Hopper | CD-04 | One bagfilter (150 square feet of filter area) |
| ES-10 **(MACT, Subpart QQQQQ)** | One Sigma Mixer (78.6 cubic feet max capacity) | CD-05a<br>CD-05b | One Glycol Condenser<br>One Glycol Condenser |

The renewal application contained a CAM plan for the two large bagfilters **(ID Nos. CD-01 and CD-03)**. The Permittee suggested a CAM plan compliance strategy based on a daily check of differential pressure as "a worthwhile maintenance activity." Because no direct correlation between particulate matter and differential pressure has been established through testing, a secondary compliance requirement has also been included. The final CAM plan requires that both a daily visible emissions reading using a Method 22-like procedure as well as a daily differential pressure reading be required. The following language has been included in the renewed permit as Section 2.1 A.3:

***3. 15A NCAC 2D .0614: COMPLIANCE ASSURANCE MONITORING***

*a. Per 40 CFR 64 and 15A NCAC 2D .0614, the Permittee shall comply with the following.*

*b.* ***Background***

*i.* *Emission Unit(s).*

*(A) Description. Dry mix room (miscellaneous capture hoods**; ID No. ES-02**)*
*Wet mix room (miscellaneous capture hoods**; ID No. ES-03**)*
*Mold areas **(ID Nos. ES-04A.L1 through ES-04A.L9, ES-04B.L10, and ES-04B.L11)***
*Trim/scrap saws **(ID Nos. ES-05A through ES-05F)***
*Weigh out area **(ID No. ES-07A)***
*Dry mixer **(ID No. ES-07B)***
*Trim/scrap saw **(ID No. ES-08)***

*ii.* *Applicable Regulation, Emission Limit, and Monitoring Requirements.*

*(A) Regulations. 15A NCAC 2D .0515 and 2D .0521.*

*(B) Emission limits*

1. *$E=4.10xP^{0.67}$*
*Where E = allowable emission rate in pounds per hour and P = process weight in tons per hour*
2. *20 percent opacity*

(C) *Control Technology. Two bagfilters (11,700 and 12,800 square feet of filter area, respectively; **ID Nos. CD-01 and CD-03**) as described above*

c. ***Monitoring Approach**. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criteria are presented in the following table.*

| | ***1*** | ***2*** |
|---|---|---|
| *I. Indicator* | *Visible emissions* | *Pressure drop* |
| *Measurement Approach* | *Visible emissions from the fabric filter will be monitored daily using EPA Reference Method 22-like procedures* | *Pressure drop across the fabric filter is measured with a differential pressure gauge* |
| *II. Indicator Range* | *An excursion is defined as the presence of visible emissions. Excursions trigger an inspection, corrective action, and a reporting requirement.* | *An excursion is defined as a pressure drop other than 2 to 8 inches of water for **CD-01** and **####** inches of water for **CD-03**. Excursions trigger an inspection, corrective action, and a reporting requirement.* |
| *QIP Threshold* | *The QIP threshold is five excursions in a 6-month reporting period.* | *None selected* |
| *III. Performance Criteria* | | |
| *A. Data Representativeness* | *Measurements are being made at the emission point (fabric filter outlet)* | *Pressure taps are located at the fabric filter inlet and outlet. The gauge has a minimum accuracy of 0.5 inches of water.* |
| *B. Verification of Operational Status* | *NA* | *NA* |
| *C. QA/QC Practices* | *The observer will be familiar with Reference Method 22 and follow Method 22-like procedures.* | *The pressure gauge is checked daily for operation.* |
| *D. Monitoring Frequency* | *Observations are done daily.* | *Pressure drop is monitored daily.* |
| *Data Collection Procedures* | *VE observations are documented by the observer.* | *Pressure gauge readings are manually recorded daily.* |
| *Averaging Periods* | *NA* | *NA* |

d. ***Justification***

i. *Background. The pollutant-specific emission unit is the wood dust system, which is used to collect and transfer the wood dust from the equipment in the plant to the dust silo. The equipment consists of saws, planers, sanders, etc. in the typical furniture manufacturing operation. The particular filter for this plan is a Pneumafil dust filter, 8.5 feet in diameter, 159 cloth bags eight feet long and can filter approximately 16,070 cubic feet per minute of air.*

ii. *Rationale for Selection of Performance Indicators. Visible emissions was selected as the performance indicator because it is a good indicator of the proper operation and maintenance of the filter unit. When the filter unit is operating properly, there will not be any visible emissions in the exhaust outlet. Any increase in visible emissions indicates reduced performance of the filter unit, therefore, the presence of visible emissions is used as a performance indicator.*

*In general, filters are designed to operate at a relatively constant pressure drop. Monitoring pressure drop provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged/broken, the bags are becoming blinded, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags, but this is also indicated by the presence of visible emissions, indicator No. 1. A pressure drop across the filter unit also serves to indicate that there is airflow through the control device.*

iii. *Rationale for Section of Indicator Ranges. The selected indicator range is no visible emissions. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported. An indicator range of no visible emissions was selected because: (1) an increase in visible emissions is indicative of an increase in particulate emissions; and (2) a monitoring technique which does not require a Method 9 certified observer is desired. Although Reference Method 22 applies to fugitive sources, the visible/no visible emissions observation technique of RM-22 can be applied to ducted emissions; i.e., Method 22-like observations.*

*The selected QIP threshold for fabric filter visible emissions is five excursions in a 6-month reporting period. This level is 3 percent of the total visible emissions observations. If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented.*

*The indicator range chosen for fabric filter **(ID No. CD-01)** is a pressure drop outside 2 to 8 inches water. The indicator range chosen for fabric filter **(ID No. CD-03)** is a pressure drop outside #### inches water. An excursion triggers an inspection, corrective action, and a reporting requirement. The pressure drop is recorded daily. As the pressure drop approaches "out of normal conditions" the bags are scheduled for replacement.*

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

e. *The Permittee shall install and operate a pressure gauge on the fabric filter **(ID No. CD-03)** by [30 days of issuance of this permit]. The Permittee shall establish "normal" for this fabric filter **(ID No. CD-03)** in the first 30 days following installation. The Permittee shall submit an administrative amendment request within 30 days of establishing normal to include this operating range in this condition.*

f. *The Permittee shall submit a summary report 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. All instances of deviations from the requirements of this permit must be clearly identified.*

The renewal application did not contain a CAM demonstration for the remaining control devices. I sent an email to the Permittee on September 18, 2006 asking for the additional information. The Permittee responded on September 19, 2006 as follows:

**CD-Silo** - Per the 2005 Emissions Inventory Supporting Calculations, Page 2, actual uncontrolled emissions from the CD-Silo source were 843 pounds (this is based on an AP-42 factor). Potential uncontrolled emissions are well below the major source threshold of 100 tons per year.
**CD-02** - Per a study performed in 2006 prior to submitting the renewal application, it was determined that uncontrolled emissions to CD-02 are approximately 60 pounds per day. This corresponds to approximately 11 tons per year of actual emissions, and because the site is operating well above 11% of capacity, potential emissions are below 100 tons per year.
**CD-04** - Emissions from this baghouse are very low and are not separately quantified. The baghouse has only 150 square feet of filter area and it is not possible that it could capture anywhere close to 100 tons of uncontrolled emissions.
**CD-05a and CD-05b** - These units control emissions from the Sigma Mixer and are both regulated by the applicable MACT standard (40 CFR Part 63 Subpart QQQQQ), and therefore, are not subject to the CAM provisions.

DAQ agrees with these demonstrations that CAM does not apply to the equipment as detailed above.

## VII. Facility Wide Air Toxics

The facility is currently subject to both 15A NCAC 2D .1100 for the modeled toxic air pollutants methyl ethyl ketone, ammonia, formaldehyde, phenol, and toluene and 15A NCAC 2Q .0711 for epichlorohydrin. This permit renewal does not affect this status. However, as part of the renewal, the reporting requirement for 15A NCAC 2D .1100 is being modified from semi-annually to quarterly per the requirements of the General Statutes. The following language will not appear as State-enforceable only Section 2.2 A.2:

***State-enforceable only***

***2. 15A NCAC 2D .1100: CONTROL OF TOXIC AIR POLLUTANTS***

*a. Pursuant to 15A NCAC 2D .1100 and in accordance with the approved application for an air toxic compliance demonstration, the following permit limit shall not be exceeded:*

| ***Emission Source(s)*** | ***Toxic Air Pollutant(s)*** | ***Emission Limit(s)*** |
|---|---|---|
| ***ES-17, ES-18, ES-20 through ES-24, ES-51, ES-25.1 through ES-25.4, ES-26.1 through ES-26.4, ES-27.1 through ES-27.4, ES-28.1 through ES-28.4, ES-29.1 through ES-29.4, ES-30.1 through ES-30.4, ES-31.1 through ES-31.5, ES-32.1 through ES-32.5, ES-33.1 through ES-33.5, ES-34.1 through ES-34.4, and ES-35.1 through ES-35.4*** | *Methyl Ethyl Ketone*<br>*Methyl Ethyl Ketone*<br>*Ammonia*<br>*Formaldehyde*<br>*Phenol*<br>*Toluene*<br>*Toluene* | *370.9 lbs/day*<br>*147.6 lbs/hr*<br>*15.82 lbs/hr*<br>*0.88 lbs/hr*<br>*5.56 lbs/hr*<br>*328 lbs/hr*<br>*660.8 lbs/day* |
| ***ES-10*** | *Hexane isomers*<br>*n-hexane* | *2162.89 lbs/hr*<br>*28.57 lbs/hr* |
| ***ES-31.1 through ES-31.5, ES-32.1 through ES-32.5, and ES-33.1 through ES-33.5*** | *Hexane isomers*<br>*n-hexane* | *662.07 lbs/hr*<br>*8.73 lbs/hr* |
| ***ES-34.1 through ES-34.4 and ES-35.1 through ES-35.4*** | *Hexane isomers*<br>*n-hexane* | *441.44 lbs/hr*<br>*5.87 lbs/hr* |
| ***ES-20 through ES-24 and ES-51*** | *Hexane isomers*<br>*n-hexane* | *220.72 lbs/hr*<br>*2.94 lbs/hr* |
| ***ES-9*** | *Hexane isomers*<br>*n-hexane* | *882.79 lbs/hr*<br>*11.67 lbs/hr* |
| ***ES-50*** | *Hexane isomers*<br>*n-hexane* | *44.13 lbs/hr*<br>*0.56 lbs/hr* |

*b. <u>Recordkeeping Requirements</u> - The Permittee shall keep records, in written or electronic format, of production rates, throughput, material usage, periods of excess emissions, and other process operational information, that allows for evaluation of compliance with the toxic air pollutant limits. These records shall be retained for a minimum of three years from the date of recording, and access to these records shall be provided to DAQ staff upon request.*

*c. <u>Reporting Requirements</u> – The Permittee shall submit a summary report of the recordkeeping activities within 30 days after each calendar year quarter, postmarked on or before January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year*

*for the preceding three-month period between July and September. The report shall contain the following:*

i. *Any and all exceedances of applicable toxic air pollutant limits during the previous three-month period.*
ii. *The maximum pound per 1-hour emission rate at any time during the previous three-month period for all applicable toxic air pollutants.*
iii. *The maximum pound per 24-hour emission rate at any time during the previous three-month period for all applicable toxic air pollutants.*
iv. *The yearly emission rate for the 12-month period ending with the previous calendar three-month period for all applicable toxic air pollutants.*

As 40 CFR 63, Subpart MMMM is the last applicable MACT to this facility, a demonstration is required to be submitted indicating compliance with NC Air Toxics by the same compliance date of that last MACT (January 2, 2006). The Permittee has indicated in its renewal application that a preliminary air toxics compliance analysis has already been performed. This involved using the ISCST3 dispersion model and compliance was indicated. It is expected that formal documentation of air toxics compliance will be submitted to DAQ prior to the compliance date of the MACT. The following permit language has been added to the renewed permit demonstrating compliance with the toxics modeling submittal results.

***State-enforceable only***

***4. 15A NCAC 2Q .0705: EXISITING FACILITIES AND SIC CALLS***

a. *As of **October 27, 2006**, emissions of toxic air pollutants have been demonstrated on a facility-wide basis (excluding those sources exempt under 15A NCAC 2Q .0702 "Exemptions") that each of the toxic air pollutants (TAPs) emitted from all sources at the facility are either below its respective toxic permit emission rates (TPER) listed in 15A NCAC 2Q .0711 "Emission Rates Requiring a Permit" or the TAPs are in compliance with 15A NCAC 2D .1100 "Control of Toxic Air Pollutants" as described in Section 2.2 A.2 above.*
b. *The facility shall be operated and maintained in such a manner that any new, existing or increased actual emissions of any TAP listed in 15A NCAC 2Q .0711 or in this permit from all sources at the facility (excluding those sources exempt under 15A NCAC 2Q .0702), including fugitive emissions and emission sources not otherwise required to have a permit, will not exceed its respective TPER listed in 15A NCAC 2Q .0711 without first obtaining an air permit to construct and operate.*
c. *PRIOR to exceeding any of the TPERs listed in 15A NCAC 2Q .0711, the Permittee shall be responsible for obtaining an air permit to emit TAPs and for demonstrating compliance with the requirements of 15A NCAC 2D .1100 "Control of Air Pollutants".*
d. *The Permittee shall maintain at the facility records of operational information sufficient for demonstrating to the Division of Air Quality staff that actual TAPs are less than the rate listed in 15A NCAC 2Q .0711.*
e. *The TPER table listed in Section 2.2 A.2 above, is provided to assist the Permittee in determining when an air permit is required pursuant to 15A NCAC 2Q .0711 and may not represent all TAPs being emitted from the facility. This table will be updated at such time as the permit is either modified or renewed.*

## VIII. Facility Emissions Review

There is no change in emissions for this renewal.

The following table represents the latest years emission inventory from the facility:

| Pollutant(s) | 2005 Actual Emissions (tpy) |
|---|---|
| CO | 0.84 |
| $NO_x$ | 1.01 |
| $PM_{10}$ | 1.91 |
| $SO_2$ | 0.01 |
| VOC | 234.67 |
| Total HAP/TAP | 223.28 |

## IX. Stipulation Review

There were no noted stipulation additions/deletions/corrections noted by the Regional Office in their latest inspection report.

The following comment/responses were via email correspondence during the drafting stage of the permit. Where necessary, these changes have all been included in either the permit or the review.

1. The latest regional inspection report (Robert Hayden - May 19, 2006) comments that "there continues to be minor inaccuracies in the permitted equipment list. These will be addressed in the next permit mod/renewal." Are you aware of any needed corrections to any of the equipment lists? I am especially interested in any additions, modifications, deletions to the equipment and any source/control device interactions. Now should be the time to update all equipment lists (permitted and insignificant). I do note some of the requested insignificant activities modifications already in the permit. *I believe Robert's note was with respect to the Insignificant Activities list. Requested changes to the Insignificant Activities list have been included in the* Introduction *section of the renewal application. One other very minor change that I believe we may have also discussed that just occurred to me was on the second page of the permitted sources table (Page 5 of the permit). At the top of this page, the Sigma Mixer Line (ES-10) is indicated, and in the same row the Granulator (F-01) is listed. The way this row of the table appears in the permit suggests that the Sigma Mixer is controlled by glycol condenser CD-05a and the Granulator is controlled by glycol condenser CD-05b. In reality, CD-05a and CD-05b are installed in series on the Sigma Mixer and emissions from the Granulator are uncontrolled. This could be corrected by simply creating a dedicated row for the Granulator source with no control device and moving both of the glycol condensers into the Sigma Mixer source's control device cell.*

2. A CAM plan was submitted for the two larger bagfilters –
   a. CD-01 controlling particulate matter emissions from the dry/wet mixing rooms and the mold area; and
   b. CD-03 controlling particulate matter emissions from the weigh out area/dry mixer and trim/scrap saw.

   I assume that it was found that precontrolled potential PM10 emissions were greater than 100 tons per year from these sources. However, there still exist source/control device relationships that were not specifically addressed in the application. Specifically the bin vent (CD-Silo), bagfilters (CD-02 and CD-04), and condensers (CD-05a and CD-05b). In order for me to accurately identify these control devices as "not CAM applicable" I will need calculations indicating that the criteria pollutants being controlled are each less than the major source thresholds (keeping in mind that particulate matter is based on the PM10 portion of total particulate matter only). *Each of the control devices is discussed below:*

   ***CD-Silo** - Per the 2005 Emissions Inventory Supporting Calculations, Page 2, actual uncontrolled emissions from the CD-Silo source were 843 pounds (this is based on an AP-42 factor). Potential uncontrolled emissions are well below the major source threshold of 100 tons per year.*

   ***CD-02** - Per a study performed in 2006 prior to submitting the renewal application, it was determined that uncontrolled emissions to CD-02 are approximately 60 pounds per day. This corresponds to*

*approximately 11 tons per year of actual emissions, and because the site is operating well above 11% of capacity, potential emissions are below 100 tons per year.*

***CD-04*** *- Emissions from this baghouse are very low and are not separately quantified. The baghouse has only 150 square feet of filter area and it is not possible that it could capture anywhere close to 100 tons of uncontrolled emissions.*

***CD-05a and CD-05b*** *- These units control emissions from the Sigma Mixer and are both regulated by the applicable MACT standard (40 CFR Part 63 Subpart QQQQQ), and therefore, are not subject to the CAM provisions.*

*It is worth mentioning that uncontrolled* ***PM10*** *emissions to CD-01 and particularly CD-03 may be less than the major source threshold. However, particulate collected in these baghouses is routed to a common location and the actual amounts from each baghouse cannot be differentiated, and a particle size distribution analysis to determine the percentage of particulate that is actually PM10 has not been conducted. Therefore, it was decided to simply assume that these units are subject to CAM being that a daily check of pressure drop across each baghouse was deemed a worthwhile maintenance activity anyhow.*

3. The permit application states that a last MACT/air toxics demonstration will be submitted prior to the compliance date of the last MACT to apply to your facility. The last compliance date I have for your facility is January 2, 2007. In order for you to be in compliance with 15A NCAC 2Q .0705, the demonstration must be submitted in time for DAQ to be assured of toxics compliance on that date. If for example you are relatively sure that you are in compliance by not needing to install any control devices then the demonstration could potentially be later in the year. But if you find that you are required to modify your permit to add any control devices, then that application would have to be completed and the device installed and tested prior to the compliance date of the last MACT. As you can see, this second option would require a much quicker turn around in any toxics demonstration that you were planning. I just point this out to avoid any potential noncompliance issues with 15A NCAC 2Q .0705. However, since no demonstration has been submitted, the renewed permit will be issued (once complete) with a requirement that the demonstration be submitted. *A preliminary air toxics compliance analysis has already been preformed. This involved using the ISCST3 dispersion model and compliance was indicated. It is expected that formal documentation of air toxics compliance will be submitted by the end of October.*

## X. 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. South Carolina is an affected State within 50 miles of this facility.

## XI. Conclusions, Comments, and Recommendations

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

A consistency determination was not required for his renewal.

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

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