

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Permit Issue Date:

Region: Mooresville Regional Office
County: Lincoln
NC Facility ID: 5500075
Inspector's Name: Carlotta Adams
Date of Last Inspection: 01/09/2008
Compliance Code: C / In Compliance With
Procedural Reqr

Facility Data			Permit Applicability (this application only)
Applicant (Facility's Name): Wireway/Husky Systems Facility Address: Wireway/Husky Systems 6146 Denver Indust Park Circle Denver, NC 28037 SIC: 3499 / Fabricated Metal Products, Nec NAICS: 332999 / All Other Miscellaneous Fabricated Metal Product Manufacturing Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V			SIP: NSPS: NESHAP: PSD: PSD Avoidance: NC Toxics: 112(r): Other:
Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	Application Number: 5500075.06A & 5500075.08A Date Received: 06/16/2006 Application Type: Renewal Application Schedule: TV-Renewal Existing Permit Data Existing Permit Number: 06182/T08 Existing Permit Issue Date: 04/03/2002 Existing Permit Expiration Date: 03/31/2007
Ketan Patel Engineering and Safety Manager (704) 483-5629 6146 Denver Industrial Park Circle Denver NC, 28037	Ron Young President (704) 483-1900 6146 Denver Industrial Park Circle Denver NC, 28037	Ketan Patel Engineering and Safety Manager (704) 483-5629 6146 Denver Industrial Park Circle Denver NC, 28037	
Review Engineer: Gautam Patnaik Review Engineer's Signature: Date:		Comments / Recommendations: Issue 06182/T09 Permit Issue Date: Permit Expiration Date:	

1. Facility Description.

This facility manufactures wire screen security panels and pallet rack components

2. Purpose of Application

This application (5500075.06A) is for the renewal for their Title V permit. The current Air Permit No. 06182T08, expired on March 31, 2007. However, the applicant submitted the required renewal application at least nine months prior to the expiration date and are therefore covered under the Title V application shield pursuant to 15A NCAC 2Q .0512(b)(1). In accordance with 15A NCAC 2Q .0513(c) Permit No. 06182T08 shall not expire until the renewal permit has been issued or denied.

The RACT applicability (5500075.08A) is addressed below in Section 5., of this review.

3. Application Chronology

This renewal application was received on June 26, 2006. The table below outlines the modifications to their permit starting from their initial title V permit.

Application #	Changes Made to the Permit	Permit Issued
550075A5.A	Initial title V application	06182 T08
5500075.08A	RACT compliance (incorporated into .06A)	06182 T09

4. Regulatory Review

The facility is subject to the following regulations:

- i. 15A NCAC 2D .0515: “Particulates from Miscellaneous Industrial Processes.”

The emissions of particulate matter from the propane-fired type VI waste, multiple chamber burn-off oven (ID No. 206), baffle/filter-type paint spray booth (ID No. 200), and baffle/filter-type, paint spray booth (ID No. 208) are limited by the equation below:

$$E = 4.10 \times P^{0.67} \text{ (For process rates up to 30 tons per hour)}$$

Since each of the above sources process materials less than 30 tons per hour the above equation is valid.

Monitoring/Recordkeeping

The applicant shall maintain production records for oven (ID No. 206). The particulate matter emissions from the spray booths (ID Nos. 200 and 208) shall be controlled by adequate ductwork and properly designed collectors. As a minimum, the applicant shall perform inspections and maintenance to include weekly inspection of the spray booth filters noting the condition and annual inspection of the associated ductwork for structural integrity.

The results of inspection and maintenance for the above spray booth shall be maintained in a log (written or electronic format) on-site and made available to DAQ.

Reporting

The current permit does not require any reporting for oven (ID No. 206). The applicant shall submit the results of any maintenance performed on the filters or ductwork for the spray booths (ID Nos. 200 and 208) within 30 days of a written request by the DAQ. The applicant shall also submit a semi annual summary report of monitoring and record keeping activities.

The latest inspection report did not cite any violation of this regulation and continued compliance is expected.

- ii. 15A NCAC 2D .0516: “Sulfur Dioxide Emissions from Combustion Sources.”

Only the propane-fired burn-off oven (ID No. 206) is subject to this regulation since emission of sulfur dioxide from combustion at this source is discharged through the stack. The primary fuel burned in this source is propane and the emissions of sulfur dioxide by the combustion of this fuel is small and shall not exceed 2.3 pounds per million Btu heat input. When burning propane the source is always expected to be in compliance with this regulation.

Monitoring/Recordkeeping/Reporting

No monitoring/recordkeeping/reporting is required for sulfur dioxide emissions from propane burned in this source.

iii. 15A NCAC 2D .0521: “Control of Visible Emissions.”

The emissions from burn-off oven (ID No. 206) and spray booths (ID No. 200 and 208) are subject to an opacity standard which requires the opacity to be no more than 20 percent when averaged over a six-minute period.

Monitoring

The applicant shall observe weekly for oven (ID No. 206) and monthly for spray booths (ID No. 200 and 208) the emission points of these sources for any visible emissions above normal. The applicant is required to take appropriate action to correct the above-normal emissions as soon as practicable. The applicant now also has to demonstrate compliance when required using Method 9 for 12 minutes.

Recordkeeping/Reporting

The results of the monitoring shall be maintained in a log and provided to DAQ upon request. The applicant shall submit a semi-annual summary report to DAQ.

There has been no violation of this regulation during past few inspections and continued compliance is expected.

iv. 15A NCAC 2D .0524 (40 CFR 60, Subpart EE): New Source Performance Standards - Standards of Performance for Surface Coating of Metal Furniture”

The baffle/filter-type paint spray booth (ID No. 200) with the paint filtration system (ID No. CD300) is subject to this standard. As per this regulation the VOC emissions from any metal furniture surface coating operation is limited to less than 0.90 kilograms VOC per liter of coating solids applied. Since the initial testing required has been conducted the testing stipulation has been removed from the permit.

Monitoring/Recordkeeping

The applicant shall record and maintain records of the volume-weighted average of the total mass of VOCs consumed per unit volume of coating solids applied during each calendar month. The monthly calculations shall be in accordance with 40 CFR 60.313. All records shall be maintained for a period of five years.

Reporting

The applicant shall submit a quarterly summary report to DAQ.

There has been no violation of this regulation during past few inspections and continued compliance is expected.

- v. 15A NCAC 2D .0958: “Work Practices for Sources of Volatile Organic Compounds”

The sources in this facility are subject to the work practices of this regulation. As per the applicant control devices were never used to demonstrate compliance with the former 02D.0518 regulation and thus, is not subject to the 02D .0958(e) requirement and no additional monitoring or record keeping is required to show compliance with the former 02D.0518. There has been no violation of this regulation cited during the past few inspections and continued compliance is expected.

5. NSPS, NESHAPS, PSD, Attainment Status, 112(r), CAM, Application Classification:

NSPS

The baffle/filter-type paint spray booth (ID No. 200) is the only source subject to any NSPS regulation pursuant to 15A NCAC 2D .0524, Subpart EE regulation. (See Section 4. of this review above).

NESHAP/MACT

While doing a MACT Subpart M “National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products” applicability determination for this facility the facility responded “our facility is not subject to NESHAP because our facility is not a major source of any single HAP at a rate of 10 TPY or any combination of HAP at a rate of 25 TPY.”

On checking the status of this facility as per 2007 emissions summary, the actual emissions of Polycyclic Organic Matter (POM) (CAS # 83329/POMTV) were 20.47 tons per year and the actual emissions of methylene diphenyl diisocyanate (MDI) (CAS # 101-68-8) was 20.38 tons per year. There was no emissions data for 2008 on IBEAM. Regarding MDI the applicant stated “Our catalyst contains Diphenylmethane Diisocyanate (101-68-8, 100% by weight). However, according to the Manufacturer, it is completely reacted during application and thus no emission.”

The applicant further clarified “MDI is used in reactive coating systems as a catalyzing reagent (activator) in urethane coating systems. MDI is a very non-volatile chemical and is also very reactive in urethane coating systems, allowing it to fully react rather than evaporate during painting operations.” To substantiate their claim the applicant also provided verification from a coating manufacturer that only 0.01% of the MDI evaporates during the coating process and an excerpt from a publication produced by the Alliance for the Polyurethane Industry used for estimating MDI emissions for Toxic Release Inventory (TRI) reporting under Section 313 of SARA. Based on the assumption that the majority of MDI reacts in the process, the applicant’s conclusion that MDI emissions are below the 10 tpy major source threshold.

With respect to POM, formally known as polycyclic organic matter, is a class of HAP compounds. POM is defined as any organic compound composed of more than one benzene ring, having a boiling point of more than 100 °C. MDI has a chemical structure composed of 2 compounds and has a very high boiling point and is therefore considered POM.

POM is comprised of only MDI at the Wireway facility. MDI reacts completely to form hardened "polyurethane coatings." Polyurethane coatings" is actually a generic term to define the class of compounds formed isocyanate and hydroxyl groups. Complete reaction is easy to achieve and happens within a few seconds to a few minutes. Moreover, the volatility of MDI is so low, that it cannot volatilize before reacting. The product urethane is completely nonvolatile. MDI itself is very nonvolatile and by the time it becomes involved in the urethane matrix, it will have an immeasurably small vapor pressure (essentially that of dry paint). Any emissions that come from any subsequent drying process are the volatile solvents in the paint base and not the reacted urethane coating.

Wireway/Husky has therefore reported all MDI emissions as also being emitted as POM; thus, previous emissions estimates for the facility have shown both MDI and POM emissions as being equal. Since MDI emissions were overestimated, POM emissions were overestimated by the same amount. In the past, Wireway/Husky Systems had very conservatively overestimated emissions of MDI and POM, assuming all the products used in the process were emitted to the atmosphere. In discussion with the applicant they plan to recalculate their HAPs emissions for the past years and notify DAQ using corrected emissions from the facility.

The potential emissions of HAPs from the facility is very unlikely to exceed 10 tons per year of a single HAP and exceed 25 tons per year for a combination of HAPs. Thus, this facility has been provided a permit shield for the non-applicability of MACT Subpart M because the MACT only applies to major sources. This shield is provided in Section 2.4. B., of the new permit.

PSD

The facility currently has no PSD avoidance conditions.

Attainment Status

This facility is located in Lincoln County, which is currently designated as non-attainment area for Ozone. However, some of the sources are subject to RACT as mentioned below.

112(r)

This 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.

CAM

None of the control devices at this facility are currently subject to a Compliance Assurance

Monitoring Plan (CAM).

The Compliance Assurance Monitoring (CAM) Rule (40 CFR Part 64) applies to pollutant-specific emissions units (PSEU) that are pre-control major sources and use a control device to comply with an emissions limit.

To be subject to CAM a source must be subject to an emission limit and uses a control device to achieve compliance with this limit and the before control emissions from this source are greater than 100 tons per year of any criteria pollutant or more than 10 tons per year of any HAPs or more than 25 tons per year for a combined emissions of HAPs.

The applicant has determined that spray booths (ID Nos. 200 and 2008) controlled by duo-pad fiberglass paint filtration systems (ID Nos. 300 and 302) are subject particulate matter emissions standard and that the before controls emissions of PM10 from each of the sources are above 100 tons per year. Thus all these control devices controlling the emissions of particulate matter from these sources are subject to a (CAM) plan as per the requirement of 2D .0614.

The applicant has selected to change the filter of the control devices (ID Nos. 300 and 302) once per shift (a shift is an eight hour period) and inspect the new filter before the change. As per 40 CFR § 64.3(a)(1), specifies “indicators of performance may include, **but are not limited to**, direct or predicted emissions ... or recorded findings of inspection and maintenance activities conducted by the owner.” In the definition of the CAM plan defined under 40 CFR § 64.1 “data means the results of any type of monitoring or method, including the results of instrumental or **non-instrumental** monitoring, ... recordkeeping procedures, or any other form of information collection procedure used in connection with any type of monitoring or method.” Thus, this work practice approach selected by the applicant is consistent with the monitoring design criteria of the CAM plan.

Monitoring

The applicant has proposed to change and inspect the filters of the filtration systems (ID Nos. 300 and 302) in every eight hour or less, to comply with the CAM plan. The key element of the monitoring approach are outlined in a table in Section 2.3 1.(b), of the new permit.

Changing and inspection of the filters every eight hour or less fulfils the monitoring approach defined in 40 CFR § 64.6(c)(1)(ii) to include “ the means or device to be used to measure the indicator(s)”

Definition of an excursion as per 40 CFR § 64.6(c)(2) occurs when any filter for the filtration systems (ID Nos. 300 and 302) are used for more than eight hours of operation.

Quality Improvement Plan (QIP) threshold is for two excursions to occur within any 2-month period. (40 CFR § 64.8)

Quality assurance and control practices defined in 40 CFR § 64.3(b)(3) under monitoring design criteria requires the applicant to inspect the filters before they are installed on filtration systems (ID Nos. 300 and 302) and the monitoring frequency as per 40 CFR § 64.3(b)(4) requires the applicant to record the date and time when the filters are installed.

Recordkeeping and Reporting

The applicant must meet monitoring, recordkeeping and reporting requirements as specified in 40 CFR 64.7 through CFR 64.9

The Permittee must maintain the records on a monthly basis in accordance with the requirements of 40 CFR 63.10(b)(1). A semi annual compliance report must be submitted to DAQ.

RACT (Reasonably Available Control Technology)

The RACT (Reasonably Available Control Technology) applicability determination was made by Mr. Charlie Yirka of this Section (Memo to the applicant dated 10/22/08 - attached). Mr. Yirka determined that the sources baffle filter-type paint spray booth (ID No. 200), double paint system (ID No. 200a), four head system (ID No. 200b), and hand held spray system (ID No. 200c) and baffle filter-type paint spray booth (No. 208) are subject to RACT. The memo concluded though the paint spray booth (ID No. 200) is subject to NSPS Subpart EE, the emissions standard of this NSPS are not as stringent as the RACT and thus this source is subject to RACT regulations. The memo further concluded that the burn-off oven (ID No. 206) was not subject to RACT and a "Permit Shield" for this source for non applicability of the RACT was provided in Section 2.4. A., of the new permit.

As per the RACT regulation 15A NCAC 2D .0922 "Metal Furniture Coating" each of the affected sources will have an emissions limit where emissions shall not exceed 5.1 pounds of volatile organic compounds per gallon of solids delivered to the coating applicator from prime and topcoat or single coat operations and the final compliance demonstration was to be done before April 1, 2009 as per the requirement of 15A NCAC 2D .1403(c)(2)(F). The deadline for this regulation has already passed and the applicant has to demonstrate to DAQ how they complied with this regulation from the compliance date to the effective date of the new permit.

Monitoring

The applicant shall determine compliance on a line-by-line basis. Compliance shall be determined on a **daily basis** for each coating line using a weighted average as stipulated in the permit under Section 2.2 B. 1. f., of the new permit.

Recordkeeping

The applicant shall maintain daily in a logbook process monitoring procedures as necessary to comply with the requirements of this regulation.

Reporting

The applicant shall provide a semi annual summary report to DAQ

6. Facility Wide Air Toxics

The renewal of this permit did not require an air toxics analysis.

7. Statement of Compliance

The DAQ has reviewed the compliance status of this facility. The Regional Office did inform us that as per the latest inspection done on 5/13/2009 the facility was in likely compliance with all applicable requirements. The applicant has certified that the facility will be in compliance with all applicable requirements at the time of permit issuance and will continue to comply with these requirements.

8. Public Notice / EPA and Affected State Review

Pursuant to 2Q. 0521, a notice of the draft Title V Permit will 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 will be sent to persons on the Title V mailing list and EPA. Pursuant to 2Q .0522, a copy of each permit application, each proposed permit and each final permit pursuant will be provided to EPA. Also pursuant to 2Q .0522, a notice of the draft Title V Permit will be provided to each affected State at or before the time notice provided to the public under 2Q .0521 above.

9. Conclusions, Comments, and Recommendations

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

A consistency determination was not required for this renewal.

Regional Office and the applicant were provided a draft of this permit their comments were taken into account. Regional Office concurs with RCO recommendation to renew air permit.

10. Permit Modification/Changes

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

Page(s)	Section	Description of Change(s)
4, 5, 6, 7, 8, 9, and 11	Testing.	Change all testing reference
5	2.1 A.3. c. ii.	Monitoring includes Method 9 for 12 minutes
11 to 12	2.2. B.	RACT requirements
12 to 13	2.2. 3.	CAM plans
13	2.2. 4.	Permit Shield for Non-applicable Requirements
13 through 11	General Conditions	Updated