



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: February 12, 2013

RE: Sky Fab, LLC/003-32693-00080

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FN-REGIS.dot 1/2/08



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REGISTRATION OFFICE OF AIR QUALITY

Sky Fab, LLC
1615 Fletcher Avenue
Fort Wayne, IN 46803

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 003-32693-00080	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: February 12, 2013

SECTION A

SOURCE SUMMARY

This registration is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Registrant to obtain additional permits pursuant to 326 IAC 2.

A.1 General Information

The Registrant owns and operates a stationary sheet metal powder coating facility.

Source Address:	1615 Fletcher Avenue, Fort Wayne, IN 46803
General Source Phone Number:	(260) 459-1703
SIC Code:	3479 (Coating, Engraving, and Allied Services, Not Elsewhere Classified)
County Location:	Allen County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) powder coating line, identified as PCL 1, purchased from Coating Consultants, LLC dba NuTec Coatings in 2012, approved for construction and operation in 2013, with a maximum throughput of 5,063 pounds of sheet metal per hour, and consisting of the following:
- (1) One (1) hot water rinse exhausting to Stack 1;
 - (2) Three (3) water spray rinses;
 - (3) One (1) iron phosphate rinse exhausting to Stack 2;
 - (4) One (1) ionized water spray rinse;
 - (5) One (1) dry-off and cure oven with a maximum heat input capacity of 3.5 million Btu per hour and exhausting to Stack 3; and
 - (6) One (1) powder coating booth, identified as EU-PC 1, with a maximum capacity of 5.74 pounds of powder per hour, using an integral powder recovery system with cartridge filters, as control, and exhausting indoors.
- (b) One (1) powder coating line, identified as PCL 2, constructed in 1997, purchased from Coating Consultants, LLC dba NuTec Coatings in 2012, approved for operation in 2013, with a maximum throughput of 5,063 pounds of sheet metal per hour, and consisting of the following:
- (1) One (1) hot water rinse;
 - (2) Three (3) water spray rinses;
 - (3) One (1) iron phosphate rinse;
 - (4) One (1) ionized water spray rinse;

- (5) One (1) dry-off oven with a maximum heat input capacity of 2.5 million Btu per hour and exhausting to Stack 4;
 - (6) One (1) powder coating booth, identified as EU-PC 2, with a maximum capacity of 5.74 pounds of powder per hour, using an integral powder recovery system with cartridge filters, and exhausting indoors; and
 - (7) One (1) cure oven with a maximum heat input capacity of 3.5 million Btu per hour and exhausting to Stack 5.
- (c) One (1) boiler, identified as EU-B, constructed in 1964, approved for operation in 2013, with a maximum heat input capacity of 25.5 million Btu per hour; and
- (d) One (1) backup boiler, identified as EU-BB, constructed in 2006, approved for operation in 2013, with a maximum heat input capacity of 1.0 million Btu per hour.
- (e) Paved roads and parking lots with public access.

SECTION B

GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this registration shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Effective Date of Registration [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this registration is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

B.3 Registration Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation), this registration to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to Registration No. 003-32693-00080 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this registration.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003

Indianapolis, IN 46204-2251

- (c) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

B.7 Registrations [326 IAC 2-5.1-2(i)]

Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

B.8 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this registration, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this registration or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant notifies:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The Registrant shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this registration:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

SECTION D.1

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (a) One (1) powder coating line, identified as PCL 1, purchased from Coating Consultants, LLC dba NuTec Coatings in 2012, approved for construction and operation in 2013, with a maximum throughput of 5,063 pounds of sheet metal per hour, and consisting of the following:
 - (1) One (1) hot water rinse exhausting to Stack 1;
 - (2) Three (3) water spray rinses;
 - (3) One (1) iron phosphate rinse exhausting to Stack 2;
 - (4) One (1) ionized water spray rinse;
 - (5) One (1) dry-off and cure oven with a maximum heat input capacity of 3.5 million Btu per hour and exhausting to Stack 3; and
 - (6) One (1) powder coating booth, identified as EU-PC 1, with a maximum capacity of 5.74 pounds of powder per hour, using an integral powder recovery system with cartridge filters, as control, and exhausting indoors.

- (b) One (1) powder coating line, identified as PCL 2, constructed in 1997, purchased from Coating Consultants, LLC dba NuTec Coatings in 2012, approved for operation in 2013, with a maximum throughput of 5,063 pounds of sheet metal per hour, and consisting of the following:
 - (1) One (1) hot water rinse;
 - (2) Three (3) water spray rinses;
 - (3) One (1) iron phosphate rinse;
 - (4) One (1) ionized water spray rinse;
 - (5) One (1) dry-off oven with a maximum heat input capacity of 2.5 million Btu per hour and exhausting to Stack 4;
 - (6) One (1) powder coating booth, identified as EU-PC 2, with a maximum capacity of 5.74 pounds of powder per hour, using an integral powder recovery system with cartridge filters, and exhausting indoors; and
 - (7) One (1) cure oven with a maximum heat input capacity of 3.5 million Btu per hour and exhausting to Stack 5.

- (c) One (1) boiler, identified as EU-B, constructed in 1964, approved for operation in 2013, with a maximum heat input capacity of 25.5 million Btu per hour; and

- (d) One (1) backup boiler, identified as EU-BB, constructed in 2006, approved for operation in 2013, with a maximum heat input capacity of 1.0 million Btu per hour.

(The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 Particulate Emissions [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate matter emission rate from powder coating booth (EU-PC 1) shall not exceed 7.64 when operating at a process weight rate of 5,068 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate matter emission rate from powder coating booth (EU-PC 2) shall not exceed 7.64 when operating at a process weight rate of 5,068 pounds per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 * P^{0.67}$$

Where: E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.2 Particulate [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Limitations for Sources of Indirect Heating) the PM emissions from the 25.5 MMBtu/hr boiler, identified as EU-B, shall be limited to 0.232 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{C * a * h}{76.5 * Q^{0.75} * N^{0.25}}$$

Where: C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter (μ/m^3) for a period not to exceed a sixty (60) minute time period.

Pt = Pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).

Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's operation permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used. (25.5 MMBtu)

N = Number of stacks in fuel burning operation.(1 Stack)

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBtu/hr heat input.

h = Stack height in feet (6 ft.)

D.1.3 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the 1.0 MMBtu/hr boiler, identified as EU-BB, shall be limited to 0.6 pounds per MMBtu heat input.

D.1.4 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan is required for the two (2) powder coating booths, identified as EU-PC 1 and EU-PC 2, and the one (1) boiler, identified as EU-B. Section B - Preventive Maintenance Plan contains the Registrant's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Monitoring Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

D.1.5 Particulate Control

In order to comply with Condition D.1.1, the powder recovery systems shall be in operation at all times when the powder coating booths (EU-PC 1 and EU-PC 2) are in operation.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH**

**REGISTRATION
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	Sky Fab, LLC
Address:	1615 Fletcher Avenue
City:	Fort Wayne, Indiana 46803
Phone Number:	(260) 459-1703
Registration No.:	003-32693-00080

I hereby certify that Sky Fab, LLC is:

- still in operation.
- no longer in operation.
- in compliance with the requirements of Registration No.003-32693-00080.
- not in compliance with the requirements of Registration No. 003-32693-00080.

I hereby certify that Sky Fab, LLC is:

Authorized Individual (typed):
Title:
Signature:
Phone Number:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for Registration

Source Description and Location
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Source Name:	Sky Fab, LLC
Source Location:	1615 Fletcher Avenue, Fort Wayne, Indiana 46803
County:	Allen
SIC Code:	3479 (Coating, Engraving, and Allied Services, Not Elsewhere Classified)
Registration No.:	003-32693-00080
Permit Reviewer:	Ryan Graunke

On December 27, 2012, the Office of Air Quality (OAQ) received an application from Sky Fab, LLC related to the construction and operation of a new stationary sheet metal powder coating facility.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Allen County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective February 12, 2007, for the Fort Wayne area, including Allen County, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM _{2.5} .	

- (a) **Ozone Standards**
 Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Allen County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM_{2.5}**
 Allen County has been classified as attainment for PM_{2.5}. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

- (c) Other Criteria Pollutants
Allen County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by Sky Fab, LLC on December 27, 2012, relating to the construction and operation of a new stationary sheet metal powder coating facility.

Sky Fab, LLC bought this coating facility in 2012 from Coating Consultants, LLC (Plant ID 003-00329). Most of the operations were initially permitted under FESOP F003-18344-00329, issued on April 23, 2004. However, Coating Consultants, LLC did not renew its permit and therefore it expired in 2009. These operations are now being permitted as new units under Sky Fab LLC.

In addition, to differentiate the permitting of Sky Fab LLC from Coating Consultants, LLC, Sky Fab LLC has been assigned Plant ID 003-00080 for permitting purposes.

The source consists of the following emission units:

- (a) One (1) powder coating line, identified as PCL 1, purchased from Coating Consultants, LLC dba NuTec Coatings in 2012, approved for construction and operation in 2013, with a maximum throughput of 5,063 pounds of sheet metal per hour, and consisting of the following:
- (1) One (1) hot water rinse exhausting to Stack 1;
 - (2) Three (3) water spray rinses;
 - (3) One (1) iron phosphate rinse exhausting to Stack 2;
 - (4) One (1) ionized water spray rinse;
 - (5) One (1) dry-off and cure oven with a maximum heat input capacity of 3.5 million Btu per hour and exhausting to Stack 3; and
 - (6) One (1) powder coating booth, identified as EU-PC 1, with a maximum capacity of 5.74 pounds of powder per hour, using an integral powder recovery system with cartridge filters, as control, and exhausting indoors.
- (b) One (1) powder coating line, identified as PCL 2, constructed in 1997, purchased from Coating Consultants, LLC dba NuTec Coatings in 2012, approved for operation in 2013, with a maximum throughput of 5,063 pounds of sheet metal per hour, and consisting of the following:
- (1) One (1) hot water rinse;
 - (2) Three (3) water spray rinses;
 - (3) One (1) iron phosphate rinse;
 - (4) One (1) ionized water spray rinse;

- (5) One (1) dry-off oven with a maximum heat input capacity of 2.5 million Btu per hour and exhausting to Stack 4;
 - (6) One (1) powder coating booth, identified as EU-PC 2, with a maximum capacity of 5.74 pounds of powder per hour, using an integral powder recovery system with cartridge filters, and exhausting indoors; and
 - (7) One (1) cure oven with a maximum heat input capacity of 3.5 million Btu per hour and exhausting to Stack 5.
- (c) One (1) boiler, identified as EU-B, constructed in 1964, approved for operation in 2013, with a maximum heat input capacity of 25.5 million Btu per hour; and
 - (d) One (1) backup boiler, identified as EU-BB, constructed in 2006, approved for operation in 2013, with a maximum heat input capacity of 1.0 million Btu per hour.
 - (e) Paved roads and parking lots with public access.

“Integral Part of the Process” Determination

The applicant has submitted the following information to justify why the powder recovery system should be considered an integral part of the powder coating line:

The powder recovery system is integral to the powder coating process because it acts as a product recovery device.

- (a) Cost analysis of the powder:

The estimated actual annual powder usage is 50,282 pounds at a cost of \$4.00 per pound of powder.

$$\text{Annual cost of the powder} = (50,282)(\$4) = \$201,128$$

The transfer efficiency is estimated at 65% and the remaining 35% is collected on the powder reclamation component's cartridge filters. The control efficiency of the filters is 99.96%.

The filters are blasted with a reverse jet pulse that knocks the collected powder down where it is recovered and sent to the hopper. Approximately 95% of the powder that is collected is re-circulated and applied.

The annual amount of powder reclaimed and reused by this system is approximately 16,712 pounds. The powder recovery system captures and reapplies approximately \$66,848 worth of powder coatings per year.

$$\text{Annual savings of the powder} = (16,712)(\$4) = \$66,848$$

- (b) Cost analysis of the control

The estimated annualized capital cost and annual operation and maintenance cost of the powder recovery system are \$30,000 and \$10,000, respectively, per twelve (12) month period. This results in a net annual benefit of \$26,848 per twelve (12) month period for using powder reclamation. Therefore, the recovery and reuse of powder coatings is a significant economic benefit for the source because it reduces the amount of coating the source has to purchase.

Cost of control	
Annualized Capital Cost	\$ 30,000/year
Operation and Maintenance	\$ 10,000/year
Savings of Powder	
Powder coating recovery*	16712 lb/year
Cost of powder	\$ 4.00/lb
Savings of recovered powder	\$ 66,848/year
Net benefit of operating control device	\$ 26,848/year

Notes:

* Based on estimated usage of 50,282 lb/year with 65% transfer efficiency, 99.96% control efficiency, and 95% collected powder reuse.
Costs and savings are for both powder coating lines.

Methodology: Net Benefit = Savings of recovered powder – Cost of Control

IDEM, OAQ has evaluated the information submitted and agrees that the powder recovery system should be considered an integral part to each of the powder coating lines. This determination is based on the fact that powder recovery and reuse represents a significant cost savings. Therefore, the permitting level will be determined using the potential to emit after the powder recovery system. Operating conditions in the proposed registration will specify that this powder recovery system shall operate at all times when the powder coating lines are in operation.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Registration

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM ₁₀ *	PM _{2.5}	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Powder Coat Booth 1 *** (EU-PC1)	0.0062	0.0062	0.0062	-	-	-	-	-	-	-
Powder Coat Booth 2 *** (EU-PC2)	0.0062	0.0062	0.0062	-	-	-	-	-	-	-
Natural Gas Combustion	0.29	1.17	1.17	0.09	15.46	0.85	12.99	18,663	0.29	0.28 (Hexane)
Fugitive Emissions - Paved Roads	0.013	0.0003	0.0006	-	-	-	-	-	-	-
Total PTE of Entire Source	0.31	1.19	1.19	0.09	15.46	0.85	12.99	18,663	0.29	0.28 (Hexane)
Exemptions Levels**	5	5	5	10	10	10	25	100,000	25	10
Registration Levels**	25	25	25	25	25	25	100	100,000	25	10
*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". **The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD. *** PTE after the control because control is considered integral to the process. Permit level was based on the PTE after control. PTE before control are less than 250 tons/year, therefore, there are no limits to render 326 IAC 2-2 not applicable.										

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of NO_x are within the ranges listed in 326 IAC 2-5.1-2(a)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.1-2(a)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2 (Registrations). A Registration will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.
- (c) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in the permit because the one (1) boiler (EU-B) with a maximum heat input capacity of 25.5 million BTU per year was constructed prior to June 9, 1989, and the one (1) backup boiler (EU-BB) has a maximum heat input capacity less than ten (10) million BTU per hour.
- (b) The requirements of the New Source Performance Standards (NSPS) for Surface Coating of Metal Furniture, 40 CFR 60, Subpart EE (326 IAC 12), are not included in the permit are not included in the permit because the source does not perform surface coating of metal furniture.

- (c) The requirements of the New Source Performance Standards (NSPS) for Industrial Surface Coating: Large Appliances, 40 CFR 60, Subpart SS (326 IAC 12), are not included in the permit because the source does not perform surface coating of large appliances, as defined in 40 CFR 60.451.
- (d) The requirements of the New Source Performance Standards (NSPS) for Metal Coil Surface Coating, 40 CFR 60, Subpart TT (326 IAC 12), are not included in the permit because the source does not perform surface coating of metal coil, as defined in 40 CFR 60.461.
- (e) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63, Subpart MMMM (326 IAC 20-80), are not included in the permit because the source performs powder coating that does not emit HAPs.
- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (326 IAC 20-95), are not included in the permit because the source is not a major source of HAPs.
- (h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHH, are not included in the permit because the source does not perform paint stripping using methylene chloride (MeCl), spray application of coatings to motor vehicles and mobile equipment, or spray application of coatings that contain a target HAP (compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd)).
- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ, are not included in the permit because, pursuant to 40 CFR 63.11195(e), gas-fired boilers, as defined in 40 CFR 63.11237, are not subject to this NESHAP.
- (j) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (k) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following state rules are applicable to the source:

Entire Source

- (a) 326 IAC 2-5.1-2 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.

- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (d) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the paved roads have the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (f) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.

Individual facilities - Powder Coating Booths

- (m) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 6-3-2, the particulate matter (PM) emission rate from each powder coating booth (EU-PC 1 and EU-PC2) shall not exceed 7.64 when operating at a process weight rate of 5,068 pounds per hour.

The pounds per hour limitations were calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 * P^{0.67}$$

Where: E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour = 0.0029 tons of powder used per hour +
2.53 tons of metal coated per hour

The integral powder recovery component shall be in operations at all times when these facilities are in operation, in order to comply with this limit.

Individual facilities - Natural Gas Combustion

(g) 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

- (1) The one (1) boiler (EU-B) was constructed prior to June 8, 1972; therefore, pursuant to 326 IAC 6-2-3(d), the particulate emission limitation shall be calculated as following:

$$Pt = \frac{C * a * h}{76.5 * Q^{0.75} * N^{0.25}}$$

Where: C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter (μ/m^3) for a period not to exceed a sixty (60) minute time period.

Pt = Pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).

Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's operation permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBtu/hr heat input.

h = Stack height in feet

If: C = 50 μ/m^3
Q = 25.5 MMBtu
N = 1 (Stack 1 for Hot Water)
a = 0.67
h = 6 ft (Stack 1 for Hot Water)

Then: Pt = 0.232 lb PM/MMBtu

- (2) The one (1) backup boiler (EU-BB) was constructed after September 21, 1983 and has a maximum operating capacity less than 10 MMBtu per hour; therefore, pursuant to 326 IAC 6-2-4(a), the particulate emissions shall not exceed 0.6 pounds of PM per MMBtu.

The estimated PM emissions for the boiler are calculated as follows:
1.9 lb PM/MMCF (AP-42 Ch. 1.4 Emission Factor) * 1 MMCF/1020 MMBtu (High Heat Value) =
0.0019 lb PM/MMBtu

Therefore, both boilers are able to comply with these limits.

(m) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)

The natural gas-fired combustion units are exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight.

- (n) 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)
This source is not subject to 326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations) because the potential to emit sulfur dioxide from each natural gas-fired combustion unit is less than twenty-five (25) tons per year and ten (10) pounds per hour.
- (o) 326 IAC 9-1-1 (Carbon Monoxide Emission Limits)
The natural gas-fired combustion units are not subject to 326 IAC 9-1-1 (Carbon Monoxide Emission Limits) because there are no applicable emission limits for the source under 326 IAC 9-1-2.
- (p) 326 IAC 10-1-1 (Nitrogen Oxides Control)
The natural gas-fired combustion units are not subject to 326 IAC 10-1-1 (Nitrogen Oxides Control) because they have potential to emit NO_x less than forty (40) tons per year.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on December 27, 2012.

The construction and operation of this source shall be subject to the conditions of the attached proposed Registration No.003-32693-00080. The staff recommends to the Commissioner that this Registration be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Ryan Graunke at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5374 or toll free at 1-800-451-6027 extension 4-5374.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

Company Name: Sky Fab, LLC
Address City IN Zip: 9230 Conservation Way, Fort Wayne, IN 46809
Permit Number: 003-32693-00080
Reviewer: Ryan Graunke

Unlimited Potential to Emit (tons/yr)

Process	PM	PM₁₀	PM_{2.5}	SO₂	NO_x	VOC	CO	GHGs (as CO₂e)	Total HAPs	Worst single HAP	
Powder Coat Line 1	0.0062	0.0062	0.0062	-	-	-	-	-	-	-	-
Powder Coat Line 2	0.0062	0.0062	0.0062	-	-	-	-	-	-	-	-
Natural Gas Combustion	0.29	1.17	1.17	0.09	15.46	0.85	12.99	18,663	0.29	0.28	Hexane
Fugitive - Unpaved Roads	0.013	0.003	0.0006	-	-	-	-	-	-	-	-
Total	0.31	1.19	1.19	0.09	15.46	0.85	12.99	18,663	0.29	0.28	Hexane

**Appendix A: Emissions Calculations
Powder Coating Booths**

Company Name: Sky Fab, LLC
Address City IN Zip: 9230 Conservation Way, Fort Wayne, IN 46809
Permit Number: 003-32693-00080
Reviewer: Ryan Graunke

Emission Unit	Emission Unit ID	Material	Max usage (lb/hr)	Weight % Solids	Transfer efficiency	Control efficiency	Uncontrolled PTE of PM			Controlled PTE of PM		
							lb/hr	lb/day	ton/yr	lb/hr	lb/day	ton/yr
Powder Coat Booth 1	EU-PC 1	Vitacoat powders	5.74	100%	65%	99.93%	2.01	48.22	8.80	0.00141	0.03375	0.00616
Powder Coat Booth 2	EU-PC 2	Vitacoat powders	5.74	100%	65%	99.93%	2.01	48.22	8.80	0.00141	0.03375	0.00616

Note:

PM=PM₁₀=PM_{2.5}

An integral powder coating reclamation recovers and reclaims powder in each coating booth. Therefore, the permit level will be determined using the PTE after control

Methodology:

Uncontrolled PTE (lb/hr) = Max usage (lb/hr) * Weight % Solids * (1-Transfer efficiency)

Controlled PTE (lb/hr) = Uncontrolled PTE (lb/hr) * (1-Control efficiency)

PTE (lb/day) = PTE (lb/hr) * 24 hrs/day

PTE (ton/yr) = PTE (lb/hr) * 8760 hrs/yr * 1 ton/2000 lbs

Sheet Metal Throughput & 326 IAC 6-3 Limit (For each powder coating line)

Max sheet height (ft)	Max line speed (ft/min)	Max sheet throughput (ft ² /hr)	Weight of sheet metal (lb/ft ²)	Max throughput (lb/hr)	Process weight rate (ton/hr)	Allowable PM emissions (lb/hr)
2.5	6	900	5.625	5063	2.53	7.64

Notes:

Max sheet height, line speed, and gauge provided by the source

Max sheet thickness is 10 gauge

Weight of 10 gauge steel sheet metal taken from: http://www.engineeringtoolbox.com/gauge-sheet-d_915.html

The powder coating and natural gas-fired ovens are the only emission sources in the powder coating lines.

There are no emissions from the rinsing units in the powder coating lines.

Methodology:

Max sheet throughput (ft²/hr) = Max sheet height (ft) * Max line speed (ft/min) * 60 min/hr

Process weight rate (ton/hr) = (Max usage of powder (lb/hr) + Max throughput of metal (lb/hr)) * 1 ton/2000 lb

Allow PM emission calculated pursuant to 326 IAC 6-3-2(e) using the equation:

$$E = 4.10 * P^{0.67}$$

Where: E = Allowable PM emissions (lb/hr)

P = Process weight rate (ton/hr)

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

Company Name: Sky Fab, LLC
Address City IN Zip: 9230 Conservation Way, Fort Wayne, IN 46809
Permit Number: 003-32693-00080
Reviewer: Ryan Graunke

Emission unit	Emission Unit ID	Number of Unit	Heat Input Capacity Each (MMBtu/hr/unit)	Total Potential Throughput (MMCF/yr)
Powder Coat Line 1 Oven	EU-PC 1 Oven	1	3.500	30.1
Powder Coat Line 2 Dry-off oven	EU-PC 2 Oven	1	2.500	21.5
Powder Coat Line 2 Cure Oven	EU-PC 2 Oven	1	3.500	30.1
Boiler	EU-B	1	1.000	8.6
Back-up Boiler	EU-BB	1	25.500	219.0
Total			25.500	309.2

	Pollutant						
	PM*	PM ₁₀ *	direct PM _{2.5} *	SO ₂	NO _x	VOC	CO
Emission Factor (lb/MMCF)	1.9	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emission (tons/yr)	0.3	1.2	1.17	0.1	15.5	0.9	13.0

*PM emission factor is filterable PM only. PM₁₀ emission factor is filterable and condensable PM₁₀ combined. PM_{2.5} emission factor is filterable and condensable PM_{2.5} combined.

	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor (lb/MMCF)	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission (tons/yr)	3.246E-04	1.855E-04	1.159E-02	2.783E-01	5.256E-04

	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor (lb/MMCF)	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission (tons/yr)	7.729E-05	1.700E-04	2.164E-04	5.874E-05	3.246E-04
Total HAPs:					2.917E-01

	Greenhouse Gas		
	CO ₂	CH ₄	N ₂ O
Emission Factor (lb/MMSCF)	120,000	2.3	2.2
Potential Emission (tons/yr)	18,551	0.4	0.3
Summed Potential Emissions (tons/yr)	18,551		
CO ₂ e Total (tons/yr)	18,663		

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Total Heat Input Capacity = \sum (Heat Input Capacity Each (MMBtu/hr) * Number of Units)

Potential Throughput (MMCF) = Heat Input Capacity Each (MMBtu/hr) * Number of Units * 8,760 hrs/yr * High Heat Value (1 MMCF/1,020 MMBtu)

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

Emission (tons/yr) = Throughput (MMCF/yr) * Emission Factor (lb/MMCF) * 1 ton/2000 lbs

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

CO₂e (tons/yr) = CO₂ Potential Emission ton/yr x CO₂ GWP (1) + CH₄ Potential Emission ton/yr x CH₄ GWP (21) + N₂O Potential Emission ton/yr x N₂O GWP (310).

There are no other process emissions from the ovens because they are drying water and curing powdered-coated units.

**Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads**

Company Name: Sky Fab, LLC
Address City IN Zip: 9230 Conservation Way, Fort Wayne, IN 46809
Permit No.: 003-32693-00080
Reviewer: Ryan Graunke

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Information (provided by source)

Type	Max number of vehicles per day	Number of one-way trips per day per vehicle	Max one-way trips per day (trip/day)	Max weight loaded (tons/trip)	Total weight driven per day (ton/day)	Max one-way distance (feet/trip)	Max one-way distance (mi/trip)	Max one-way miles (mi/day)	Max one-way miles (mi/yr)
Truck (entering plant) (one-way trip)	2	1	2	15.0	30.0	50	0.009	0.02	6.9
Truck (leaving plant) (one-way trip)	2	1	2	30.0	60.0	50	0.009	0.02	6.9
Totals:			4		90.0			0.04	13.8

Average vehicle weight per trip =

22.5

 tons/trip
Average miles per trip =

0.01

 miles/trip

Unmitigated Emission Factor, $E_f = k * (sL)^{0.91} * (W)^{1.02}$ (Equation 1 from AP-42 13.2.1)

	PM	PM ₁₀	PM _{2.5}	
where k =	0.011	0.0022	0.00054	= particle size multiplier (lb/vehicle miles traveled) (AP-42 Table 13.2.1-1)
W =	22.5	22.5	22.5	= average vehicle weight (tons)
sL =	9.7	9.7	9.7	= silt loading value (g/m ²) for paved roads at iron and steel production facilities - (AP-42 Table 13.2.1-3)

Mitigated emission factor takes natural mitigation due to precipitation into consideration

Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p / 4 * N)]$ (Equation 2 from AP-42 13.2.1)

where p =

125

 days of rain greater than or equal to 0.01 inches (see AP-42 Figure 13.2.1-2)
N =

365

 days per year

	PM	PM ₁₀	PM _{2.5}	
Unmitigated Emission Factor, E_f (lb/mi) =	2.082	0.416	0.1022	lb/mile
Mitigated Emission Factor, E_{ext} (lb/mi) =	1.904	0.381	0.0935	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM ₁₀ (tons/yr)	Unmitigated PTE of PM _{2.5} (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM ₁₀ (tons/yr)	Mitigated PTE of PM _{2.5} (tons/yr)
Truck (entering plant) (one-way trip)	0.007	0.001	0.0004	0.007	0.001	0.0003
Truck (leaving plant) (one-way trip)	0.007	0.001	0.0004	0.007	0.001	0.0003
Totals:	0.014	0.003	0.001	0.013	0.003	0.001

Methodology:

- Max one-way trips per day (trip/day) = Max number of vehicles per day * Number of one-way trips per day
- Total weight driven per day (ton/day) = Max weight loaded (tons/trip) * Max one-way trips per day (trip/day)
- Max one-way distance (mi/trip) = Max one-way distance (feet/trip) * 1 mi/5280 ft
- Max one-way miles (mi/day) = Max one-way trips per day (trip/day) * Max one-way distance (mi/trip)
- Max one-way miles (mi/yr) = Max one-way miles (mi/day) * 365 days/yr
- Average vehicle weight per trip (ton/trip) = \sum Total weight driven per day (ton/day) / \sum Max trips per day (trip/day)
- Average miles per trip (miles/trip) = \sum Max one-way distance (miles/day) / \sum Max trips per day (trip/day)
- Unmitigated PTE (tons/yr) = Max one-way miles (miles/yr) * Unmitigated emission factor (lb/mile) * (1 ton/2000 lbs)
- Mitigated PTE (tons/yr) = Max one-way miles (miles/yr) * Mitigated emission factor (lb/mile) * (1 ton/2000 lbs)



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Ajit Ramachandran
Sky Fab, LLC
9230 Conservation Way
Ft. Wayne, IN 46809

DATE: February 12, 2013

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Registration
003-32693-00080

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Chris Flick, Responsible Official
Jennifer Aselage, Consultant
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	PWAY 2/12/2013 Sky Fab, LLC 003-32693-00080 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender	 Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Ajit Ramachandran Sky Fab, LLC 9230 Conservation Way Ft Wayne IN 46809 (Source CAATS)										
2		Chris Flick CEO Sky Fab, LLC 9230 Conservation Way Ft Wayne IN 46809 (RO CAATS)										
3		Daniel & Sandy Trimmer 15021 Yellow River Road Columbia City IN 46725 (Affected Party)										
4		Duane & Deborah Clark Clark Farms 6973 E. 500 S. Columbia City IN 46725 (Affected Party)										
5		Fort Wayne City Council and Mayors Office 200 E Berry Street Ste 120 Fort Wayne IN 46802 (Local Official)										
6		Mr. Jeff Coburn Plumbers & Steamfitters, Local 166 2930 W Ludwig Rd Fort Wayne IN 46818-1328 (Affected Party)										
7		Norfolk & Western Railway Company 110 Franklin Road Roanoke VA 24042 (Affected Party)										
8		Allen Co. Board of Commissioners 200 E Berry Street Ste 410 Fort Wayne IN 46802 (Local Official)										
9		Fort Wayne-Allen County Health Department 200 E Berry St Suite 360 Fort Wayne IN 46802 (Health Department)										
10		Mrs. Jennifer Aselage Engineering & Environmental Consultant 7811 Honeywell Drive Fort Wayne IN 46825 (Consultant)										
11		ANYI Management 200 East Main Street Fort Wayne IN 46802 (Affected Party)										
12		City of Fort Wayne 1 East Main Street, Foom 710 Fort Wayne IN 46802 (Affected Party)										
13												
14												
15												

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See Domestic Mail Manual R900, S913, and S921 for limitations of coverage on inured and COD mail. See International Mail Manual for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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