



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

100 North Senate Avenue  
Indianapolis, Indiana 46204  
MC 61-53  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

TO: Interested Parties / Applicant  
DATE: February 15, 2008  
RE: Dexter Axle-Plant 18 / 169-25703-00044  
FROM: Matthew Stuckey, Deputy 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



*Mitchell E. Daniels, Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

100 North Senate Avenue  
MC 61-53 IGCN 1003  
Indianapolis, Indiana 46204-2251  
(317) 232-8603  
(800) 451-6027  
www.IN.gov/idem

## REGISTRATION OFFICE OF AIR QUALITY

**Dexter Axle Company - Plant 18  
11870 North 650 East  
North Manchester, IN 46962**

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. 169-25703-00044

Issued by: Original Signed By:

Issuance Date: February 15, 2008

Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

## 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 trailer axle and component manufacturing plant.

Source Address:	11870 North 650 East, North Manchester, IN 46962
Mailing Address:	11870 North 650 East, North Manchester, IN 46962
General Source Phone Number:	260-982-4047
SIC Code:	3714
County Location:	Wabash 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) electrostatic paint booth, identified as ESB-1, approved for construction in 2008, with a maximum capacity of 80 steel axles per hour, consisting of two (2) spray guns using electrostatic air atomized spray application, with particulate emissions controlled dry filters, and exhausting to stack ESB-1S.
- (b) One (1) flash tunnel, identified as FT-2, approved for construction in 2008, with a maximum capacity of 80 axles per hour, with particulate emissions controlled by dry filters, and exhausting to stack FT-2S.
- (c) Eleven (11) metal inert gas (MIG) welding stations, identified as TFW-01, each with a maximum welding wire usage rate of 0.375 pounds per hour (GMAW Wire Type ER70S) and exhausting to stack TRW-01.

## 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. 169-25703-00044 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 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.

**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) electrostatic paint booth, identified as ESB-1, approved for construction in 2008, with a maximum capacity of 80 steel axles per hour, consisting of two (2) spray guns using electrostatic air atomized spray application, with particulate emissions controlled dry filters, and exhausting to stack ESB-1S.
- (b) One (1) flash tunnel, identified as FT-2, approved for construction in 2008, with a maximum capacity of 80 axles per hour, with particulate emissions controlled by dry filters, and exhausting to stack FT-2S.

(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 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9, for the metal surface coating operations in the electrostatic paint booth ESB-1, the owner or operator shall not allow the discharge into the atmosphere VOC in excess of:

- (a) Three and five-tenths (3.5) pounds per gallon of coating, excluding water, delivered to a coating applicator, in a coating application system that is air dried.
- (b) Three and five-tenths (3.5) pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings.

#### D.1.2 Volatile Organic Compound (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), all solvents sprayed from equipment used in the in the electrostatic paint booth ESB-1, during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

#### D.1.3 Particulate [326 IAC 6-3-2(d)]

- (a) Particulate from the electrostatic paint booth ESB-1 shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.
- (b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:
  - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
  - (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (c) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

**D.1.4 Preventive Maintenance Plan [326 IAC 1-6-3]**

---

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

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

**D.1.5 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]**

---

Compliance with the VOC content and usage limitations contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) using formulation data supplied by the coating manufacturer. However, IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**Record Keeping and Reporting Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]**

**D.1.6 Record Keeping Requirements**

---

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC content and usage limitations established in Condition D.1.1. Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.
- (1) The VOC content of each coating material and solvent used;
  - (2) The amount of coating material and solvent less water used on a monthly basis;
    - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used; and
    - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
- (b) To document compliance with Condition D.1.3 the Permittee shall maintain a record of any actions taken if overspray is visibly detected.
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE 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).

<b>Company Name:</b>	Dexter Axle Company - Plant 18
<b>Address:</b>	11870 North 650 East
<b>City:</b>	North Manchester, IN 46962
<b>Phone Number:</b>	260-982-4047
<b>Registration No.:</b>	169-25703-00044

- I hereby certify that Dexter Axle Company - Plant 18 is :  still in operation.  
 no longer in operation.
- I hereby certify that Dexter Axle Company - Plant 18 is :  in compliance with the requirements of Registration No. 169-25703-00044.  
 not in compliance with the requirements of Registration No. 169-25703-00044.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Phone Number:</b>
<b>Date:</b>

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.

<b>Noncompliance:</b>

## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for an Exemption Transitioning to a Registration

#### Source Description and Location

<b>Source Name:</b>	<b>Dexter Axle Company - Plant 18</b>
<b>Source Location:</b>	<b>11870 North 650 East, North Manchester, IN 46962</b>
<b>County:</b>	<b>Wabash</b>
<b>SIC Code:</b>	<b>3714</b>
<b>Registration No.:</b>	<b>169-25703-00044</b>
<b>Permit Reviewer:</b>	<b>Nathan C. Bell</b>

On December 18, 2007, the Office of Air Quality (OAQ) received an application from Dexter Axle Company - Plant 18 related to the transition of an Exemption to a Registration.

#### Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Exemption No. 169-17244-00044 issued on July 23, 2003.
- (b) Construction Permit - Registration No. 169-9374-00044, issued on September 1, 1998.
- (c) Construction Permit - Exemption No. 169-8791-00044, issued on September 12, 1997.
- (d) Construction Permit - Exemption No. 169-7102-00044, issued on November 25, 1996.
- (e) Construction Permit - Exemption No. 169-5276-00044. issued on February 8, 1996.
- (f) Construction Permit - Registration No. 169-4306-00044, issued on February 16, 1995.

Due to this application, the source is transitioning from an Exemption to a Registration.

#### County Attainment Status

The source is located in Wabash County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. <sup>1</sup>
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Not designated.
<sup>1</sup> 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 <sub>2.5</sub> .	

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On September 6, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Allen, Clark, Elkhart, Floyd, LaPorte, St. Joseph as attainment for the 8-hour ozone standard.
- (3) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (4) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 NOx emissions are considered when evaluating the rule applicability relating to ozone. Wabash County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) Wabash County has been classified as attainment for PM2.5. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM2.5 emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM2.5 emissions, it has directed states to regulate PM10 emissions as a surrogate for PM2.5 emissions.

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

<b>Fugitive Emissions</b>
---------------------------

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-5.5 (Registrations) applicability.

<b>Background and Description of Emission Units and Pollution Control Equipment</b>
---

The Office of Air Quality (OAQ) has reviewed an application, submitted by Dexter Axle Company - Plant 18 on December 18, 2007, relating to the modification of the existing HVLP paint spray booth TF-01 to a an electrostatic paint booth, re-designated as ESB-1, with a connected flash tunnel (FT-2) and construction of nine (9) additional welders at their existing stationary trailer axle and component manufacturing plant.

The source consists of the following existing emission units:

- (a) Two (2) metal inert gas (MIG) welding stations, identified as TFW-01, each with a maximum welding wire usage rate of 0.375 pounds per hour (GMAW Wire Type ER70S) and exhausting to stack TRW-01.

The following is a list of the new and modified emission units and pollution control devices:

- (a) One (1) electrostatic paint booth, identified as ESB-1, approved for construction in 2008, with a maximum capacity of 80 steel axles per hour, consisting of two (2) spray guns using electrostatic air atomized spray application, with particulate emissions controlled dry filters, and exhausting to stack ESB-1S.
- (b) One (1) flash tunnel, identified as FT-2, approved for construction in 2008, with a maximum capacity of 80 axles per hour, with particulate emissions controlled by dry filters, and exhausting to stack FT-2S.
- (c) Nine (9) metal inert gas (MIG) welding stations, identified as TFW-01, each with a maximum welding wire usage rate of 0.375 pounds per hour (GMAW Wire Type ER70S) and exhausting to stack TRW-01.

**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	PM10*	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
Paint Booth (ESB-1) and Flash Tunnel (FT-2)	4.85	4.85	0	0	10.86	0	2.7E-3	2.7E-3 (xylene)
Welding Operations (TFW-01)	0.10	0.10	0	0	0	0	6.8E-3	5.7E-3 (manganese)
Total PTE of Entire Source	4.95	4.95	0	0	10.86	0	8.5E-3	5.7E-3 (manganese)

negl. = negligible  
 \* 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". US EPA has directed states to regulate PM10 emissions as surrogate for PM2.5 emissions.

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of VOC is within the range listed in 326 IAC 2-5.5-1(b)(1)(C). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.5-1(b)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.5 (Registrations). A Registration will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) 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.

### **Federal Rule Applicability Determination**

#### New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Automobile and Light Duty Truck Surface Coating Operations, 40 CFR 60, Subpart MM (40 CFR Parts 60.390 - 60.398) (326 IAC 12), are not included in the permit, since this source is not involved in the surface coating of automobiles or light duty trucks. This source manufactures trailer axles and components.
- (b) There are no New Source Performance Standards (NSPS)(40 CFR Part 60) included in the permit.

#### National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Automobiles and Light-Duty Trucks, 40 CFR Part 63, Subpart IIII (40 CFR Part 63.3080 - 63.3176), (326 IAC 20-85), are not included in the permit, since this source is not a major source of HAPs as defined in 40 CFR 63.2 and does not surface coat automobiles or light duty trucks as defined by 63.3176. This source manufactures trailer axles and components.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR Part 63, Subpart MMMM (40 CFR Part 63.3880 - 63.3981), (326 IAC 20-80), are not included in the permit, since this source is not a major source of HAPs as defined in 40 CFR 63.2.
- (e) 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)

- (f) 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:

- (a) 326 IAC 2-5.5 (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)  
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.

#### Welding Operation TFW-01

- (g) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)  
Pursuant to 326 IAC 6-3-1(b)(9), the thirteen (13) welding stations are each exempt from the requirements of 326 IAC 6-3, because the potential to consume welding wire is less than six hundred twenty-five (625) pounds per day.

#### Paint Booth ESB-1 and Flash Tunnel FT-2

- (h) 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)  
Application of surface coatings in the electrostatic paint booth ESB-1 has potential particulate emissions that are greater than five hundred fifty-one thousandths (0.551) pound per hour and has the potential to use greater than five (5) gallons per day of surface coatings. Therefore, the requirements of 326 IAC 6-3-2 are applicable to paint booth ESB-1. Pursuant to 326 IAC 6-3-2(d), particulate from the electrostatic paint booth ESB-1 shall be controlled by a dry particulate filter, and the Permittee shall operate the control device in accordance with manufacturer's specifications.

If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

- (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

Dexter Axle Company - Plant 18  
North Manchester, Indiana  
Permit Reviewer: Nathan C. Bell

Page 6 of 7  
TSD for Registration No. 169-25703-00044

- (i) 326 IAC 8-2-2 (Volatile Organic Compounds, Automobile and Light Duty Truck Coating Operations)  
The requirements of 326 IAC 8-2-2 are not applicable to this source, since this source does not perform surface coating of automobiles or light duty trucks as defined in 326 IAC 8-2-2(a). This source manufactures trailer axles and components.
- (j) 326 IAC 8-2-9 (Volatile Organic Compounds, Miscellaneous Metal Coating Operations)  
Pursuant to 8-2-1(a)(4) and 8-2-9(a)(5), the requirements of 326 IAC 8-2-9 are applicable to the metal surface coating operations in the electrostatic paint booth ESB-1, since this operation will be constructed after July 1, 1990 and have the actual VOC emissions greater than fifteen (15) pounds per day before add-on controls, and since each of the operation includes surface coating of metal parts or products under the Standard Industrial Classification Code of major group #37.

Pursuant to 326 IAC 8-2-9(d), no owner or operator of a facility engaged in the surface coating of miscellaneous metal parts and products may cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds in excess of the following:

- (1) Three and five-tenths (3.5) pounds per gallon of coating, excluding water, delivered to a coating applicator, in a coating application system that is air dried.
- (2) Three and five-tenths (3.5) pounds per gallon of coating, excluding water, delivered to a coating applicator that applies extreme performance coatings.

Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

The coating used in the electrostatic paint booth ESB-1 (Z Shield 7900) has a VOC content of 3.36 pounds per gallon, excluding water and non-VOCs, which is in compliance with 326 IAC 8-2-9.

### **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 18, 2007.

The construction and operation of this source shall be subject to the conditions of the attached proposed Registration No. 169-25703-00044. The staff recommends to the Commissioner that this Registration be approved.

### **IDEM Contact**

- (a) Questions regarding this proposed permit can be directed to Nathan C. Bell 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) 234-5372 or toll free at 1-800-451-6027 extension 45372.
- (b) A copy of the findings is available on the Internet at: [www.in.gov/idem/permits/air/pending.html](http://www.in.gov/idem/permits/air/pending.html).
- (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/permits/guide/](http://www.in.gov/idem/permits/guide/).

**Appendix A: Emissions Calculations  
VOC, Particulate, HAPs  
Emission Summary**

**Company Name: Dexter Axle Company  
Address City IN Zip: 11870 N 650 E, North Manchester, IN 46962  
Registration Number: 169-25703-00044  
Reviewer: Nathan C. Bell**

<b>Uncontrolled Potential Emissions (tons/year)</b>				
Emissions Generating Activity				
Category	Pollutant	Electrostatic Paint Booth (ESB-1) and Flash Tunnel (FT-2)	Welding Operations (TFW-01)	<b>TOTAL</b>
Criteria Pollutants	PM	4.85	0.10	4.95
	PM10	4.85	0.10	4.95
	SO2			0.00
	NOx			0.00
	VOC	10.86		10.86
	CO			0.00
Hazardous Air Pollutants	Xylene	2.7E-03		2.7E-03
	Chromium		1.8E-05	1.8E-05
	Cobalt		1.8E-05	1.8E-05
	Manganese		5.7E-03	5.7E-03
	Nickel		1.8E-05	1.8E-05
	<b>Totals</b>	<b>2.7E-03</b>	<b>5.8E-03</b>	<b>8.5E-03</b>
			<b>Worst Single HAP</b>	<b>5.7E-03</b>

Total emissions based on rated capacity at 8,760 hours/year.

<b>Controlled Potential Emissions (tons/year)</b>				
Emissions Generating Activity				
Category	Pollutant	Electrostatic Paint Booth (ESB-1) and Flash Tunnel (FT-2)	Welding Operations (TFW-01)	<b>TOTAL</b>
Criteria Pollutants	PM	0.49	0.10	0.58
	PM10	0.49	0.10	0.58
	SO2			0.00
	NOx			0.00
	VOC	10.86		10.86
	CO			0.00
Hazardous Air Pollutants	Xylene	2.7E-03		2.7E-03
	Chromium		1.8E-05	1.8E-05
	Cobalt		1.8E-05	1.8E-05
	Manganese		5.7E-03	5.7E-03
	Nickel		1.8E-05	1.8E-05
	<b>Totals</b>	<b>2.7E-03</b>	<b>5.8E-03</b>	<b>8.5E-03</b>
			<b>Worst Single HAP</b>	<b>5.7E-03</b>

Total emissions based on rated capacity at 8,760 hours/year.

**Appendix A: Emissions Calculations  
VOCs, Particulate, HAPs  
From Surface Coating Operations  
Electrostatic Paint Booth ESB-1 and Flash Tunnel FT-2**

**Company Name:** Dexter Axle Company  
**Address City IN Zip:** 11870 N 650 E, North Manchester, IN 46962  
**Registration Number:** 169-25703-00044  
**Reviewer:** Nathan C. Bell

**Volatiles Organic Comounds (VOC) and Particulate Matter (PM)**

Operation and Material*	Primary Type of Surface Coated	Density (lb/gal)	Weight % Volatile (H2O & Organics)	Weight % Water + Non-VOCs	Weight % Solids	Weight % VOCs	Volume % Water + Non-VOCs	Volume % Solids	Usage (gal/unit)	Maximum Capacity (unit/hr)	Maximum Usage (gal/day)	Maximum Usage (lb/hr)	Pounds VOC per gallon of coating less water and non-	Pounds VOC per gallon of coating	PTE VOC (lb/hr)	PTE VOC (lb/day)	PTE VOC (tons/yr)	PTE PM/PM10 (lb/hr)	PTE PM/PM10 (tons/yr)	lb VOC per gal solids	Transfer Efficiency
Z Shield 7900	Metal	10.76	33.0%	3.0%	67.0%	30.0%	3.90%	56.0%	0.0096	80.0	18.43	8.26	3.36	3.23	2.48	59.5	10.86	1.11	4.85	5.76	80%

\* Transfer efficiency of electrostatic application conservatively estimated at 80%

<b>Total Uncontrolled Potential to Emit (PTE) =</b>	<b>2.48</b>	<b>59.5</b>	<b>10.86</b>	<b>1.11</b>	<b>4.85</b>
<b>Actual Emissions based on 8 hours per day =</b>	<b>2.48</b>	<b>19.83</b>			

**METHODOLOGY**

Maximum Usage (gal/day) = [Usage (gal/unit)] \* [Maximum Capacity (units/hour)] \* [24 hours/day]

Maximum Usage (lbs/hr) = [Maximum Usage (gal/day)] \* [Density (lb/gal)] / [24 hour/day]

Pounds of VOC per Gallon Coating less Water and non-VOCs = [Density (lb/gal)] \* [Weight % VOCs] / [1 - (Volume % water and non-VOCs)]

Pounds of VOC per Gallon Coating = [Density (lb/gal)] \* [Weight % VOCs]

PTE of VOC (lbs/hr) = [Maximum Usage (lb/hr)] \* [Weight % VOCs]

PTE of VOC (lbs/day) = [PTE of VOC (lbs/hr)] \* [24 hours/day]

PTE of VOC (tons/yr) = [PTE of VOC (lbs/day)] \* [(365 days/yr)] \* [1 ton/2000 lbs]

PTE of PM/PM10 (tons/yr) = [Density (lbs/gal)] \* [Maximum Usage (gal/day)] \* [(Weight % Solids) \* [1 - Transfer efficiency]] \* [365 days/yr] \* [1 ton/2000 lbs]

Pounds VOC per Gallon of Solids = [Density (lbs/gal)] \* [Weight % VOCs] / [Volume % solids]

Controlled PTE = [Uncontrolled PTE] \* [1 - Control Efficiency]

Actual Emissions of VOCs (lbs/day) = [Uncontrolled PTE of VOCs (lbs/hour)] \* [Actual Hours of Operation (hours/day)]

<b>Dry Filter Control Efficiency =</b>	<b>90.0%</b>
<b>Total Controlled Potential to Emit (PTE) (tons/yr) =</b>	<b>0.11</b> <b>0.49</b>

**Hazardous Air Pollutants (HAPs)**

Operation and Material	PTE of VOC (tons/yr)	Weight % Xylene*	PTE of Xylene (tons/yr)
Z Shield 7900	10.86	0.025%	2.7E-03
<b>TOTAL (tons/year)</b>			<b>2.7E-03</b>

**METHODOLOGY**

HAPS emission rate (tons/yr) = [PTE of VOC (tons/yr)] \* Weight % HAP

\*Z Shield 7900 contains 0.5% Aromatic 100 (CAS No. 64742-95-6), which is conservatively estimated to consist of 5% xylene, based on 40 CFR 63. Therefore, Z Shield 7900 will have a xylene content of (0.5%)\*(5.0%) = 0.025% by weight

**Appendix A: Emissions Calculations  
VOCs, Particulate, HAPs  
Welding Operations**

**Company Name: Dexter Axle Company  
Address City IN Zip: 11870 N 650 E, North Manchester, IN 46962  
Registration Number: 169-25703-00044  
Reviewer: Nathan C. Bell**

**Particulate Matter (PM) and Hazardous Air Pollutants (HAPs)**

PROCESS	Max. electrode consumption per station (lbs/hr)	Max. electrode consumption per station (lbs/day)	Number of Stations	Max. electrode consumption (lbs/year)	EMISSION FACTORS* (lb pollutant/lb electrode)					EMISSIONS (lbs/hr)					HAPS (lbs/hr)
					PM = PM10	Cr	Co	Mn	Ni	PM = PM10	Cr	Co	Mn	Ni	
WELDING															
Gas Metal Arc Welding (ER70S)	0.375	9.00	11	36,135	5.4E-03	1.0E-06	1.0E-06	3.2E-04	1.0E-06	2.2E-02	4.1E-06	4.1E-06	1.3E-03	4.1E-06	1.3E-03

**Abbreviations**

Cr = Chromium  
Co = Cobalt  
Ni = Nickel  
Mn = Manganese

<b>Total Potential Emissions lbs/hr</b>	2.2E-02	4.1E-06	4.1E-06	1.3E-03	4.1E-06	1.3E-03
<b>Total Potential Emissions lbs/day</b>	0.53	9.9E-05	9.9E-05	3.1E-02	9.9E-05	3.2E-02
<b>Total Potential Emissions tons/year</b>	0.10	1.8E-05	1.8E-05	5.7E-03	1.8E-05	5.8E-03

**METHODOLOGY**

Emission Factors are default values for Gas Metal Arc Welding (GMAW) (SCC 3-09-052) Electrode Type ER70S, AP-42  
Welding emissions, lb/hr: (# of stations) \* (max. lbs of electrode used/hr/station) \* (emission factor, lb. pollutant/lb. of electrode used)  
Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day  
Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.