



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
Governor

*Thomas W. Easterly*  
Commissioner

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

TO: Interested Parties / Applicant

DATE: December 21, 2012

RE: Paul's Welding, Inc. / 085-32448-00128

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

**Paul's Welding, Inc.**  
**7930 W 1000 N**  
**Nappanee, Indiana 46550**

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. 085-32448-00128

Issued by:

  
Iryn Calilung, Section Chief  
Permits Branch  
Office of Air Quality

Issuance Date: December 21, 2012

## 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

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The Registrant owns and operates a stationary steel I-beam manufacturing operation.

Source Address:	7930 W 1000 N, Nappanee, Indiana 46550
General Source Phone Number:	574-646-2015
SIC Code:	1796 (Installation or Erection of Building Equipment Not Elsewhere Classified)
County Location:	Kosciusko County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

### A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) One (1) Paint Booth, identified as PF-1, constructed in 2005, equipped with one air-assist airless spray paint gun, and dry filters to control particulate overspray, exhausting to stack S-8, capacity: 1315 pounds of metal beams and parts per hour (which is considered as one unit, using 1/2 gallon per hour per unit.
- (b) Weld Shop, collectively identified as F-1, constructed in 1979, with a maximum capacity of 1,315 lb/hour, using return air filter- recycle air as control, and exhausting indoors, consisting of the following units:
  - (1) One (1) TIG station, identified as ET-1, installed in 1988,
  - (2) One (1) MIG station, identified as EM-1, installed in 1988
  - (3) One (1) MIG station, identified as EM-2, installed in 1988
  - (4) One (1) MIG station, identified as EM-3, installed in 1988
  - (5) One (1) MIG station, identified as EM-4, installed in 1988
  - (6) One (1) MIG station, identified as EM-5, installed in 1988
  - (7) One (1) MIG station, identified as EM-6, installed in 1988
  - (8) One (1) stick welder, identified as ES-1, installed in 1988
  - (9) One (1) stick welder, identified as ES-2, installed in 1988
  - (10) One (1) portable plasma cutter, identified as EP-1, installed in 1988
  - (11) One (1) portable plasma cutter, identified as EP-2, installed in 1988
  - (12) One (1) table plasma cutter, identified as EP-3, installed in 1995,
  - (13) One (1) oxygen acetylene torch-repair set, identified as EO-1, installed in 1988
  - (14) One (1) oxygen acetylene torch-repair set, identified as EO-2, installed in 1988
  - (15) One (1) oxygen acetylene torch-repair set, identified as EO-3, installed in 1988
  - (16) One (1) axetylene torch set

Note: Most material used is already cut to size, otherwise band saws are used for cutting. They weld a frame from cut to size steel material and mount wheels to build trolleys for overhead cranes. The trolley carries product from place to place.

- (c) Natural gas heaters, identified as S-1 to S-7, with a combined capacity of 1.60 MMBtu/hour, with no control, consisting of the following:
  - (1) One (1) natural gas-fired space heater, identified as S-1, constructed in 1988, with a maximum heat capacity of 0.25 MMBtu/hr.
  - (2) One (1) natural gas-fired space heater, identified as S-2, constructed in 1988, with a maximum heat capacity of 0.40 MMBtu/hr.
  - (3) One (1) natural gas-fired space heater, identified as S-3, constructed in 1988, with a maximum heat capacity of 0.20 MMBtu/hr.
  - (4) One (1) natural gas-fired space heater, identified as S-4, constructed in 1988, with a maximum heat capacity of 0.20 MMBtu/hr.
  - (5) One (1) natural gas-fired space heater, identified as S-5, constructed in 1988, with a maximum heat capacity of 0.06 MMBtu/hr.
  - (6) One (1) natural gas-fired space heater, identified as S-6, constructed in 1988, with a maximum heat capacity of 0.30 MMBtu/hr.
  - (7) One (1) natural gas-fired space heater, identified as S-7, constructed in 1988, with a maximum heat capacity of 0.20 MMBtu/hr.
  
- (d) Unpaved roads.

## SECTION B

## GENERAL CONDITIONS

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

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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]

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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]

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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]

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- (a) All terms and conditions of permits established prior to Registration No. 085-32448-00128 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)]

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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)]**

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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)]**

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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]**

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- (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).

### **Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)]**

#### **C.3 General Record Keeping Requirements [326 IAC 2-5.1-3(e)(2)]**

- (a) Records of all required monitoring data, reports and support information required by this registration shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Registrant, the Registrant shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this registration, for all record keeping requirements not already legally required, the Registrant shall be allowed up to ninety (90) days from the date of registration issuance or the date of initial start-up, whichever is later, to begin such record keeping.

#### **C.4 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-5.1-3(e)(2)] [IC 13-14-1-13]**

- (a) Reports required by conditions in Section D of this registration shall be submitted to:

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

- (b) Unless otherwise specified in this registration, any notice, report, or other submission required by this registration 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.
  
- (c) The first report shall cover the period commencing on the date of issuance of this registration or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this registration. For the purpose of this registration, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

## 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) Paint Booth, identified as PF-1, constructed in 2005, equipped with one air-assist airless spray paint gun, and dry filters to control particulate overspray, exhausting to stack S-8, capacity: 1315 pounds of metal beams and parts per hour (which is considered as one unit), using 1/2 gallon per hour per unit.

(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 [326 IAC 6-3-2(d)]

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- (a) Particulate from the paint booth shall be controlled by a dry particulate filter, and the Registrant 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 Registrant 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 Registrant 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.1.2 Volatile Organic Compounds (VOC) [326 IAC 8-2-9]

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Pursuant to 326 IAC 8-2-9, the Registrant shall not allow the discharge into the atmosphere VOC in excess of three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator for air dried or forced warm air dried coatings.

#### D.1.3 Volatile Organic Compounds (VOC), Clean-up Requirements [326 IAC 8-2-9]

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Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not limited to, the following:

- (a) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.
- (b) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

- (c) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.
- (d) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.
- (e) Minimize VOC emissions from the cleaning application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

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

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A Preventive Maintenance Plan is required for this facility and its control device. Section B - Preventive Maintenance Plan contains the Registrant's obligation with regard to the preventive maintenance plan required by this condition.

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

#### D.1.5 Particulate Control

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In order to comply with Condition D.1.1, the dry filters for particulate control shall be in operation at all times when the surface coating booth is in operation.

#### D.1.6 Volatile Organic Compounds

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Compliance with the VOC content and usage limitations contained in Condition D.1.2 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.1.7 Record Keeping Requirements

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- (a) To document the compliance status with Condition D.1.2, the Registrant shall maintain records in accordance with (1) through (2) below. Records maintained for (1) through (2) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC content limits established in Condition D.1.2. Records necessary to demonstrate compliance shall be available no later than 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.
    - (B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.
- (b) Section C - General Record Keeping Requirements of this registration contains the Registrant's obligations with regard to the records required by this condition.

**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).

<b>Company Name:</b>	<b>Paul's Welding, Inc.</b>
<b>Address:</b>	<b>7930 W 1000 N</b>
<b>City:</b>	<b>Nappanee, Indiana 46550</b>
<b>Phone Number:</b>	<b>574-646-2015</b>
<b>Registration No.:</b>	<b>085-32448-00128</b>

I hereby certify that Paul's Welding, Inc. is:

- still in operation.
- no longer in operation.
- in compliance with the requirements of Registration No. **085-32448-00128**.
- not in compliance with the requirements of Registration No. **085-32448-00128**.

I hereby certify that Paul's Welding, Inc. is:

<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 a Registration

**Source Description and Location**

**Source Name:** Paul's Welding, Inc.  
**Source Location:** 7930 W 1000 N, Nappanee, Indiana 46550  
**County:** Kosciusko  
**SIC Code:** 1796 (Installation or Erection of Building Equipment not elsewhere classified)  
**Registration No.:** 085-32248-00128  
**Permit Reviewer:** Janet Mobley

On October 25, 2012, the Office of Air Quality (OAQ) received an application from Paul's Welding, Inc. related to the construction and operation of a steel I-beam manufacturing operation.

Process description: This source welds designed products for various companies. The operation consists of three buildings containing the Main Plant (A), the storage plant (B) and the Paint Operation (C).

**Existing Approvals**

There have been no previous approvals issued to this source.

**County Attainment Status**

The source is located in Kosciusko 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 as of 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**  
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. Kosciusko 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) **PM<sub>2.5</sub>**  
Kosciusko County has been classified as attainment for PM<sub>2.5</sub>. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM<sub>2.5</sub> 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<sub>2.5</sub> significant level at ten (10)

tons per year. This rule became effective, June 28, 2011. Therefore, direct PM<sub>2.5</sub> and SO<sub>2</sub> 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  
Kosciusko County has been classified as attainment or unclassifiable in Indiana for all other criteria air 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 Paul's Welding, Inc. on October 25, 2012, relating to the construction and operation of a steel I-beam manufacturing operation.

#### **Unpermitted Emission Units and Pollution Control Equipment**

The source consists of the following unpermitted emission units:

- (a) One (1) Paint Booth, identified as PF-1, constructed in 2005, equipped with one air-assist airless spray paint gun, and dry filters to control particulate overspray, exhausting to stack S-8, capacity: 1,315 pounds of metal beams and parts per hour (which is considered as one unit), using 1/2 gallon per hour per unit.
- (b) Weld Shop, collectively identified as F-1, constructed in 1979, with a maximum capacity of 1,315 lb/hour, using return air filter- recycle air as control, and exhausting indoors, consisting of the following units:
- (1) One (1) TIG station, identified as ET-1, installed in 1988,
  - (2) One (1) MIG station, identified as EM-1, installed in 1988
  - (3) One (1) MIG station, identified as EM-2, installed in 1988
  - (4) One (1) MIG station, identified as EM-3, installed in 1988
  - (5) One (1) MIG station, identified as EM-4, installed in 1988
  - (6) One (1) MIG station, identified as EM-5, installed in 1988
  - (7) One (1) MIG station, identified as EM-6, installed in 1988
  - (8) One (1) stick welder, identified as ES-1, installed in 1988
  - (9) One (1) stick welder, identified as ES-2, installed in 1988
  - (10) One (1) portable plasma cutter, identified as EP-1, installed in 1988
  - (11) One (1) portable plasma cutter, identified as EP-2, installed in 1988
  - (12) One (1) table plasma cutter, identified as EP-3, installed in 1995,
  - (13) One (1) oxygen acetylene torch-repair set, identified as EO-1, installed in 1988
  - (14) One (1) oxygen acetylene torch-repair set, identified as EO-2, installed in 1988
  - (15) One (1) oxygen acetylene torch-repair set, identified as EO-3, installed in 1988
  - (16) One (1) axetylene torch set

Note: Most material used is already cut to size, otherwise band saws are used for cutting. They weld a frame from cut to size steel material and mount wheels to build trolleys for overhead cranes in the sub assembly process. The trolley carries product from place to place.

- (c) Natural gas heaters, identified as S-1 to S-7, with a combined capacity of 1.60 MMBtu/hour, with no control, consisting of the following:
- (1) One (1) natural gas-fired space heater, identified as S-1, constructed in 1988, with a maximum heat capacity of 0.25 MMBtu/hr.
  - (2) One (1) natural gas-fired space heater, identified as S-2, constructed in 1988, with a maximum heat capacity of 0.40 MMBtu/hr.
  - (3) One (1) natural gas-fired space heater, identified as S-3, constructed in 1988, with a maximum heat capacity of 0.20 MMBtu/hr.
  - (4) One (1) natural gas-fired space heater, identified as S-4, constructed in 1988, with a maximum heat capacity of 0.20 MMBtu/hr.
  - (5) One (1) natural gas-fired space heater, identified as S-5, constructed in 1988, with a maximum heat capacity of 0.06 MMBtu/hr.
  - (6) One (1) natural gas-fired space heater, identified as S-6, constructed in 1988, with a maximum heat capacity of 0.30 MMBtu/hr.
  - (7) One (1) natural gas-fired space heater, identified as S-7, constructed in 1988, with a maximum heat capacity of 0.20 MMBtu/hr.
- (d) Unpaved roads.

**Enforcement Issues**

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

**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*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
Paint Booth (PF-1)	6.66	6.66	6.66	0.00	0.00	8.16	0.00	0.00		
Weld Shop (F-1)	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.01	Manganese
Natural gas units (S-1 through S-7)	0.01	0.05	0.05	0.00	0.69	0.04	0.58	834.67	1.30 E-02	1.24E-02

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM10*	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	GHGs as CO <sub>2</sub> e**	Total HAPs	Worst Single HAP
Unpaved roads	0.36	0.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Total PTE of Entire Source</b>	<b>7.17</b>	<b>6.94</b>	<b>6.86</b>	<b>0.00</b>	<b>0.69</b>	<b>8.20</b>	<b>0.58</b>	<b>834.67</b>	<b>0.02</b>	<b>0.01 Manganese</b>
Registration Levels**	25	25	25	25	25	25	100	100,000	25	10

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".  
 \*\*The 100,000 CO<sub>2</sub>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.

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of all criteria pollutants are within 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 CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e) 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 for Surface Coating of Metal Furniture (40 CFR 60, Subpart EE, 326 IAC 12) are not included in this permit because the source does not apply surface coatings to metal furniture.
- (b) The requirements of the New Source Performance Standards for Metal Coil Surface Coating (40 CFR 60, Subpart TT, 326 IAC 12) are not included in this permit because this source does not perform metal coil surface coating.
- (c) 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)

- (a) The requirements of the National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products, 40 CFR 63, Subpart QQQQ (326 IAC 20-79), are not included in this permit because the source is not a major source of HAPs.
- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Furniture, 40 CFR 63, Subpart RRRR (326 IAC 20-78), are not included in this permit because the source does not manufacture metal furniture and is not a major source of HAPs.

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (326 IAC 20-95), are not included in this permit because the source is not a major source of HAPs.
- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) Area Source Standards for Nine Metal Fabrication and Finishing Source Categories, Subpart XXXXXX are not included in the permit because this source is not primarily engaged in the operations in one of the nine source categories listed in paragraphs (a)(1) through (9) of 40 CFR 63.11514.

In addition, Paul's Welding, Inc. actually operates under SIC code 1796 "Installation or Erection of Building Equipment not elsewhere classified", which is not identified in the list of Standard Industrial Classification (SIC) codes included in Table 1 of the Federal Register (FR) publication of the final rule; therefore, the requirements of NESHAP Subpart XXXXXX are not applicable to the source.

- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants for Miscellaneous Metal Parts and Products Surface Coating (40 CFR 63, Subpart MMMM), are not included in this permit because the source is not a major source of HAP. This source has a potential to emit to less than 10 tons of a single HAP and less than 25 tons of any combination of HAPs.
- (f) 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 (6H), are not included in this registration, because although this source is an area source of hazardous air pollutants and performs surface coating operations, the source coatings and solvents do not contain any of the "target HAPS" (i.e.), compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).
- (g) 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)

- (a) 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.

<b>State Rule Applicability Determination</b>
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The following state rules are applicable to the 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 thirty percent (30%) 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.
- (g) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)  
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

Paint Booth ( PF-1)

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
Particulate from the surface coating booth shall be controlled by particulate filters, waterwash, or an equivalent control device, and the source shall operate each control device in accordance with manufacturer's specifications.

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

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

If overspray is visibly detected, the source 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.

- (b) 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)  
The surface coating booth is located in Kosciusko County, was constructed in 2005. Pursuant to 326 IAC 8-2-1(a)(4) and 326 IAC 8-2-9(a)(1)(E), the surface coating booth is subject to the requirements of 326 IAC 8-2-9 because it was constructed after July 1, 1990, has actual and potential emissions of greater than fifteen (15) pounds of VOC per day, and coats metal parts or products.
- (1) Pursuant to 326 IAC 8-2-9(c)(2), the volatile organic compound (VOC) content of the coatings utilized in the surface coating booth, shall be limited to three and five-tenths (3.5) pounds of VOC per gallon of coating, excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm air dried at temperatures up to ninety (90) degrees Celsius (one hundred ninety-four (194) degrees Fahrenheit).
- Based on the information submitted by the source, the worst coating used in this surface coating booth has a VOC content of 2.92 pounds per gallon. Therefore, compliance with 326 IAC 8-2-9 is expected.
- (2) Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not limited to, the following:
- (i) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.
  - (ii) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.
  - (iii) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.
  - (iv) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.
  - (v) Minimize VOC emissions from the cleaning application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

#### Welding Shop (F-1)

- (a) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)  
The total combined electrode usage for the welding stations is 72.55 pounds per day. Therefore, pursuant to 326 IAC 6-3-1(b)(9), the welding stations are not subject to the requirements of 326 IAC 6-3-2 because the welding stations consume less than 625 pounds of rod or wire per day.

#### Natural Gas Combustion Units (S1 through S-7)

Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit 100,000 tons per year or more of CO<sub>2</sub> equivalent emissions (CO<sub>2</sub>e). Therefore, CO<sub>2</sub>e emissions have been calculated for this source. Based on the calculations the unlimited potential to emit greenhouse gases from the entire source is less than 100,000 tons of CO<sub>2</sub>e per year.

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

This rule is not applicable to the seven (7) natural gas-fired heaters (S1 through S-7) because they are not sources of indirect heating. Therefore, the requirements of 326 IAC 6-2-4 do not apply to the natural gas fired combustion units.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-1(b)(14), the natural gas-fired heaters (S1 through S-7) are not subject to the requirements to 326 IAC 6-3 since they are not a "manufacturing process" as defined by 326 IAC 6-3-1.5.

326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)

The natural gas-fired heaters (S1 through S-7) are not subject to the requirements of 326 IAC 7-1.1 because they each have potential SO<sub>2</sub> emissions of less than 25 tons per year. Therefore, the requirements of this rule are not included in the permit for these facilities.

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 the source is not located in Clark or Floyd counties.

<b>Conclusion and Recommendation</b>
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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 October 25, 2012.

The construction and operation of this source shall be subject to the conditions of the attached proposed Registration No. 085-32448-00128. The staff recommends to the Commissioner that this Registration be approved.

<b>IDEM Contact</b>
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- (a) Questions regarding this proposed permit can be directed to Janet Mobley 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) 234-5373 or toll free at 1-800-451-6027 extension 4-5373.
- (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](http://www.in.gov/idem)

**Appendix A: Emission Calculations  
Emissions Summary**

**Company Name: Paul's Welding Inc.**  
**Address: 7930 W 1000 N, Nappanee, Indiana 46550**  
**Registration No.: 085-32448-00128**  
**Reviewer: Janet Mobley**

Uncontrolled Potential emissions (tons/year)											
Units	PM	PM10	PM2.5	SO <sub>2</sub>	NOx	VOC	CO	GHG as CO2e	Total HAPs	Single Hap	Worst Single Hap
Paint Booth (PF-1)	6.66	6.66	6.66	0.00	0.00	8.16	0.00	0.00			
Weld Shop (F-1)	0.13	0.13	0.13	0.00	0.00	0.00	0.00	0.00	0.01		
Natural gas units (S-1 through S-7)	0.01	0.05	0.05	0.00	0.69	0.04	0.58	834.67	1.30E-02	1.24E-02	Hexane
Unpaved roads	0.36	0.09	0.01	0.00	0.00	0.00	0.00	0.00	0.00		
<b>Total</b>	<b>7.17</b>	<b>6.94</b>	<b>6.86</b>	<b>0.00</b>	<b>0.69</b>	<b>8.20</b>	<b>0.58</b>	<b>834.67</b>	<b>0.02</b>		

PM=PM10=PM2.5

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Surface Coating Operations**

**Company Name: Paul's Welding Inc.  
Address: 7930 W 1000 N, Nappanee, Indiana 46550  
Registration No.: 085-32448-00128  
Reviewer: Janet Mobley**

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/unit)	Maximum (unit/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Safety Yellow 5416	9.45	61.96%	47.84%	14.12%	54.3%	27.39%	0.500	1.000	2.92	1.33	0.67	16.01	2.92	1.97	4.87	75%
Red Primer 5407	9.56	60.69%	47.87%	12.82%	54.8%	28.24%	0.500	1.000	2.71	1.23	0.61	14.71	2.68	2.06	4.34	75%
Gray Primer 5349/5497	10.41	53.76%	43.39%	10.37%	54.1%	31.05%	0.500	1.000	2.35	1.08	0.54	12.95	2.36	2.64	3.48	75%
SuperClean 353	9.34	78.14%	78.14%	0.00%	78.1%	21.86%	0.050	1.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100%
SuperClean 164	9.33	77.40%	67.90%	9.50%	67.9%	22.60%	0.050	1.000	2.76	0.89	0.04	1.06	0.19	0.00	3.92	100%

1.86                      44.74                      **8.16**                      **6.66**

Note: water used as cleanup

**METHODOLOGY**

- Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)
- Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)
- Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)
- Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)
- Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)
- Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1- Weight % Volatiles) \* (1-Transfer efficiency) \*(8760 hrs/yr) \*(1 ton/2000 lbs)
- Pounds VOC per Gallon of Solids = (Density (lbs/gal) \* Weight % organics) / (Volume % solids)
- Total = Worst Coating + Sum of all solvents used

**Appendix A: Emission Calculations  
HAP Emission Calculations**

**Company Name: Paul's Welding Inc.  
Address City IN Zip: 7930 W 1000 N, Nappanee, Indiana 46550  
Registration No.: 085-32448-00128  
Reviewer: Janet Mobley**

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Formaldehyde	Weight % Benzene	Weight % Hexane	Weight % Glycol Ethers	Weight % Methanol	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Formaldehyde Emissions (ton/yr)	Benzene Emissions (ton/yr)	Hexane Emissions (ton/yr)	Glycol Ethers Emissions (ton/yr)	Methanol Emissions (ton/yr)
Safety Yellow 5416	9.45	0.500	1.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Red Primer 5407	9.56	0.500	1.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gray Primer 5349/5497	10.41	0.500	1.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SuperClean 353	9.34	0.050	1.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SuperClean 164	9.33	0.050	1.000	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00

<b>0.00</b>						
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**METHODOLOGY**

Source verified that there are no HAPs in the products used per the MSDS.

HAPS emission rate (tons/yr) = Density (lb/gal) \* Gal of Material (gal/unit) \* Maximum (unit/hr) \* Weight % HAP \* 8760 hrs/yr \* 1 ton/2000 lbs

**Appendix A: Emissions Calculations  
Welding and Thermal Cutting**

**Company Name: Paul's Welding Inc.  
Address City IN Zip: 7930 W 1000 N, Nappanee, Indiana 46550  
Registration No.: 085-32448-00128  
Reviewer: Janet Mobley**

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)		EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
WELDING												
Submerged Arc	0	0		0.036	0.011			0.000	0.000	0.000	0	0.000
Metal Inert Gas (MIG)(carbon steel)	6	0.497		0.0055	0.0005			0.016	0.001	0.000	0	0.001
Stick (E7018 electrode)	2	0.018		0.0211	0.0009			0.001	0.000	0.000	0	0.000
Tungsten Inert Gas (TIG)(carbon steel)	1	0.0048		0.0055	0.0005			0.000	0.000	0.000	0	0.000
Oxyacetylene(carbon steel)	0			0.0055	0.0005			0.000	0.000	0.000	0	0.000
FLAME CUTTING	Number of Stations	Max. Metal Thickness Cut (in.)	Max. Metal Cutting Rate (in./minute)	EMISSION FACTORS (lb pollutant/1,000 inches cut, 1" thick)**				EMISSIONS (lbs/hr)				HAPS (lbs/hr)
				PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr	
Oxyacetylene		2	15	0.1622	0.0005	0.0001	0.0003	0.000	0.000	0.000	0.000	0.000
Oxymethane	0			0.0815	0.0002		0.0002	0.000	0.000	0.000	0.000	0.000
Plasma**	1	0.375	150	0.0039				0.013	0.000	0.000	0.000	0.000
<b>EMISSION TOTALS</b>												
Potential Emissions lbs/hr								0.03				0.00
Potential Emissions lbs/day								0.73				0.04
Potential Emissions tons/year								0.13				0.01

**Methodology:**

\*Emission Factors are default values for carbon steel unless a specific electrode type is noted in the Process column.

\*\*Emission Factor for plasma cutting from American Welding Society (AWS). Trials reported for wet cutting of 8 mm thick mild steel with 3.5 m/min cutting speed (at 0.2 g/min emitted). Therefore, the emission factor for plasma cutting is for 8 mm thick rather than 1 inch, and the maximum metal thickness is not used in calculating the emissions.

Using AWS average values: (0.25 g/min)/(3.6 m/min) x (0.0022 lb/g)/(39.37 in./m) x (1,000 in.) = 0.0039 lb/1,000 in. cut, 8 mm thick

Plasma cutting emissions, lb/hr: (# of stations)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 8 mm thick)

Cutting emissions, lb/hr: (# of stations)(max. metal thickness, in.)(max. cutting rate, in./min.)(60 min./hr.)(emission factor, lb. pollutant/1,000 in. cut, 1" thick)

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.

**Appendix A: Emissions Calculations**

**Natural Gas Combustion Only  
MM BTU/HR <100**

**Company Name:** Paul's Welding Inc.  
**Address City IN Zip:** 7930 W 1000 N, Nappanee, Indiana 46550  
**Registration No.:** 085-32448-00128  
**Reviewer:** Janet Mobley

Unit and ID	MMBTU/hr
Heater S-1	0.25
Heater S-2	0.40
Heater S-3	0.20
Heater S-4	0.20
Heater S-5	0.06
Heater S-6	0.30
Heater S-7	0.20
<b>Total</b>	<b>1.61</b>

Heat Input Capacity MMBTU/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
1.61	1020	13.8

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100	5.5	84
					**see below		
Potential Emission in tons/yr	0.013	0.053	0.053	0.004	0.691	0.038	0.581

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.  
PM2.5 emission factor is filterable and condensable PM2.5 combined.  
\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.  
MMBTU = 1,000,000 Btu  
MMCF = 1,000,000 Cubic Feet of Gas  
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  
Potential Throughput (MMCF) = Heat Input Capacity (MMBTU/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu  
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	1.452E-05	8.296E-06	5.185E-04	1.244E-02	2.351E-05

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	3.457E-06	7.605E-06	9.679E-06	2.627E-06	1.452E-05
	<b>Total</b>				<b>1.305E-02</b>

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

Emission Factor in lb/MMcf	Greenhouse Gas		
	CO2	CH4	N2O
	120,000	2.3	2.2
Potential Emission in tons/yr	830	0.0	0.0
Summed Potential Emissions in tons/yr	830		
CO2e Total in tons/yr	<b>835</b>		

**Methodology**

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.  
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.  
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.  
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton  
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

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

**Company Name:** Paul's Welding Inc.  
**Address City IN Zip:** 7930 W 1000 N, Nappanee, Indiana 46550  
**Registration No.:** 085-32448-00128  
**Reviewer:** Janet Mobley

**Unpaved Roads at Industrial Site**

The following calculations determine the amount of emissions created by unpaved roads, based on 8,760 hours of use and AP-42, Ch 13.2.2 (11/2006).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Forklift - wheels	1.0	10.0	10.0	5.0	50.0	264	0.050	0.5	182.5
Truck - 6 wheels	1.0	1.0	1.0	20.0	20.0	264	0.050	0.1	18.3
			0.0		0.0		0.000	0.0	0.0
			0.0		0.0		0.000	0.0	0.0
<b>Totals</b>			<b>11.0</b>		<b>70.0</b>			<b>0.6</b>	<b>200.8</b>

Average Vehicle Weight Per Trip =  $\frac{6.4}{0.05}$  tons/trip  
Average Miles Per Trip =  $\frac{0.05}{0.05}$  miles/trip

Unmitigated Emission Factor, Ef =  $k[(s/12)^a][(W/3)^b]$  (Equation 1a from AP-42 13.2.2)

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	6.4	6.4	6.4	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext =  $E * [(365 - P)/365]$  (Equation 2 from AP-42 13.2.2)

Mitigated Emission Factor, Eext =  $E * [(365 - P)/365]$   
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	3.62	0.92	0.09	lb/mile
Mitigated Emission Factor, Eext =	2.38	0.61	0.06	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	0.33	0.08	0.01	0.22	0.06	0.01	0.11	0.03	0.00
Vehicle (leaving plant) (one-way trip)	0.03	0.01	0.00	0.02	0.01	0.00	0.01	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Totals</b>	<b>0.36</b>	<b>0.09</b>	<b>0.01</b>	<b>0.24</b>	<b>0.06</b>	<b>0.01</b>	<b>0.12</b>	<b>0.03</b>	<b>0.00</b>

**Methodology**

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] \* [Maximum trips per day (trip/day)]  
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]  
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] \* [Maximum one-way distance (mi/trip)]  
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]  
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]  
Unmitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Unmitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
Mitigated PTE (tons/yr) = (Maximum one-way miles (miles/yr)) \* (Mitigated Emission Factor (lb/mile)) \* (ton/2000 lbs)  
Controlled PTE (tons/yr) = (Mitigated PTE (tons/yr)) \* (1 - Dust Control Efficiency)

**Abbreviations**

PM = Particulate Matter  
PM10 = Particulate Matter (<10 um)  
PM2.5 = Particulate Matter (<2.5 um)  
PTE = Potential to Emit



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

*Mitchell E. Daniels Jr.*  
**Governor**

*Thomas W. Easterly*  
**Commissioner**

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

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

TO: Paul Miller  
Pauls Welding Inc  
7930 W 1000 N  
Nappanee, IN 46550

DATE: December 21, 2012

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

SUBJECT: Final Decision  
Registration  
085-32448-00128

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:  
Mr. Jack Wise  
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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 11/30/07

# Mail Code 61-53

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Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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1		Paul Miller Pauls Welding Inc 7930 W 1000 N Nappanee IN 46550 (Source CAATS)										
2		Nappanee City Council and Mayors Office P.O. Box 29 Nappanee IN 46550 (Local Official)										
3		Kosciusko County Board of Commissioners 100 W. Center St, Room 220 Warsaw IN 46580 (Local Official)										
4		Mr. Tim Thomas c/o Boilermakers Local 374 6333 Kennedy Ave. Hammond IN 46333 (Affected Party)										
5		Kosciusko County Health Department 100 W. Center Street, 3rd Floor Warsaw IN 46580-2877 (Health Department)										
6		Jack Wise 59085 Spearmint Drive Elkhart IN 46517 (Consultant)										
7		Wilma Yoder 10070 N SR 19 Nappanee IN 46550 (Affected Party)										
8		Lindale Mullet & Wilma Sherrill 7770 W 1000 N Nappanee IN 46550 (Affected Party)										
9		Paul Miller 10018 N SR 19 Nappanee IN 46550 (Affected Party)										
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