



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

TO: Interested Parties / Applicant

DATE: July 21, 2010

RE: Vigo Machine Shop / 167-28842-00052

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

Vigo Machine Shop, Inc.
3920 Locust Street
Terre Haute, Indiana 47803

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. 167-28842-00152	
Issued by:  Alfred C. Dumauval, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: July 21, 2010

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 miscellaneous steel parts fabrication and surface coating operation.

Source Address:	3920 Locust Street, Terre Haute, Indiana 47803
Mailing Address:	3920 Locust Street, Terre Haute, Indiana 47803
General Source Phone Number:	(812) 235-8393
SIC Code:	7692
County Location:	Vigo 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) coal-fired boiler, identified as 1, constructed in 1998, with a maximum heat capacity of 3.375 MMBtu per hour.
- (b) One (1) steel surface coating operation, identified as Grayco airless sprayer, constructed in 2004, with a maximum capacity of 500 gallons of coatings per year.
- (c) Arc welding process consisting of 10 stations, with a maximum electrode consumption of 3 pounds per hour per station.
- (d) One (1) Oxyacetylene flame cutting process, consisting of 1 station, with a maximum cutting rate of 5 inches per minute and maximum metal thickness of 2.5 inches.

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. 167-28842-00152 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

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

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

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

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

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

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

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

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

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

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

- (a) If required by specific condition(s) in Section D of this permit, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit 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 or potential to emit.
- (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).

Corrective Actions and Response Steps

C.3 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Registrant shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system);
or
 - (3) any necessary follow-up actions to return operation to normal or usual manner of operation.
- (c) A determination of whether the Registrant has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;

- (2) review of operation and maintenance procedures and records; and/or
- (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Registrant shall record the reasonable response steps taken.

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

C.4 General Record Keeping Requirements [326 IAC 2-5.1-2(g)][326 IAC 2-5.5-4(b)]

- (a) Records of all required monitoring data, reports and support information required by this permit 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 Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

**C.5 General Reporting Requirements [326 IAC 2-1.1-11][326 IAC 2-5.1-2(g)][326 IAC 2-5.5-4(b)]
[IC 13-14-1-13]**

- (a) Reports required by conditions in Section D of this permit 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 permit, any notice, report, or other submission required by this permit 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 permit 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 permit. For the purpose of this permit, "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) coal-fired boiler, identified as 1, constructed in 1998, with a maximum heat capacity of 3.375 MMBtu per hour.

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

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

D.1.1 Particulate Matter [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2(b)(1)(C), the particulate from the 3.375 MMBtu/hour coal-fired boiler shall not exceed 0.6 lb/MMBtu.

D.1.2 Compliance Schedule

The Registrant shall comply with the following Compliance Schedule to come into compliance with 326 IAC 6.5 and Condition D.1.1:

- (a) No later than forty-five (45) days after issuance of Registration No.: 167-28842-00152, the Registrant shall finalize contracts to install natural gas service at the source.
- (b) No later than November 1, 2010, the Registrant shall install the first phase of radiant gas heaters at the source.
- (c) The Registrant shall submit an application to operate the first phase of radiant heaters at the source no later than thirty (30) days prior to initial operation of the first phase of radiant heaters.
- (d) The coal-fired boiler shall only operate during production hours, Monday through Friday, 6 A.M. until 6 P.M. during the 2010-2011 heating season.
- (e) The Registrant shall install the second phase of gas heaters no later than October 31, 2011.
- (f) The Registrant shall submit an application to operate the second phase of radiant heaters at the source no later than thirty (30) days prior to initial operation of the second phase of radiant heaters.
- (g) The coal-fired boiler shall only operate for emergency reasons (e.g., an extended severe cold period) during the 2011-2012 heating season. The burning of coal for heating purposes shall make up less than 10% of heating sources during the 2011-2012 heating season.
- (h) The coal-fired boiler shall be removed from service no later than March 1, 2012.
- (i) The Registrant shall report to IDEM, OAQ at the address in Section C - General Reporting Condition the above items (a), (b), (e), (g) and (h) no later than five (5) business days of accomplishing each task.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

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

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

D.1.4 Visible Emissions Notations

- (a) Visible emission notations of the boiler stack exhaust shall be performed once per day during normal daylight operations when burning coal. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Registrant shall take a reasonable response. Section C – Response to Excursions and Exceedances contains the Registrant's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.5 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.2(g), the Registrant shall maintain records of coal-fired boiler hours of operation during the 2011-2012 heating season. The Registrant shall notify IDEM, OAQ, if coal use exceeds 10% of total heating sources.
- (b) To document the compliance status with Condition D.1.4, the Registrant shall maintain daily records of visible emission notations of the boiler stack. The Registrant shall include in its daily record when a visible emission notation is not taken and the reason for the lack of visible emission notation (e.g. the boiler did not operate that day).
- (c) Section C - General Record Keeping Requirements contains the Registrant's obligations with regard to the records required by this condition.

SECTION D.2

OPERATION CONDITIONS

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

- (b) One (1) steel surface coating operation, identified as Grayco airless sprayer, constructed in 2004, with a maximum capacity of 500 gallons of coatings per year.
- (c) Arc welding process consisting of 10 stations, with a maximum electrode consumption of 3 pounds per hour per station.
- (d) One (1) Oxyacetylene flame cutting process, consisting of 1 station, with a maximum cutting rate of 5 inches per minute and maximum metal thickness of 2.5 inches.

(The information describing the process contained in this facility 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.2.1 Particulate Matter [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2(a), the particulate matter emissions from the surface coating operations and the welding and flame cutting operations shall not exceed 0.03 grain per dry standard cubic foot (gr/dscf), each.

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

**REGISTRATION
ANNUAL NOTIFICATION**

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

Company Name:	Vigo Machine Shop, Inc
Address:	3920 Locust Street
City:	Terre Haute, Indiana 47803
Phone Number:	(812) 235-8393
Registration No.:	167-28842-00152

I hereby certify that Vigo Machine Shop, Inc. is :

- still in operation.
- no longer in operation.
- in compliance with the requirements of Registration No. 167-28842-00152.
- not in compliance with the requirements of Registration No. 167-28842-00152.

I hereby certify that Vigo Machine Shop, Inc. is :

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

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

Noncompliance:

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

Technical Support Document (TSD) for a Registration

Source Description and Location
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Source Name:	Vigo Machine Shop, Inc.
Source Location:	3920 Locust St., Terre Haute, Indiana 47803
County:	Vigo
SIC Code:	3599
Registration No.:	R167-28842-00152
Permit Reviewer:	Anne-Marie C. Hart

On December 31, 2009, the Office of Air Quality (OAQ) received an application from Vigo Machine Shop, Inc., related to the operation of an existing miscellaneous steel parts fabrication and surface coating operation.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Vigo County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective February 6, 2006, for the Terre Haute area, including Vigo County, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.

¹Unclassifiable 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 PM2.5.

- (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. Vigo 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) **PM2.5**
Vigo County has been classified as attainment for PM2.5. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules was July 15, 2008. Indiana has three years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008 rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

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

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants 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 Vigo Machine Shop, Inc. on December 31, 2009, relating to the operation of an existing miscellaneous steel parts fabrication and surface coating operation.

The source consists of the following existing emission units:

- (a) One (1) steel surface coating operation, identified as Grayco airless sprayer, constructed in 2004, with a maximum capacity of 500 gallons of coatings per year.

Unpermitted Emission Units and Pollution Control Equipment

The source consists of the following unpermitted emission units:

- (a) One (1) coal-fired boiler, identified as 1, constructed in 1998, with a maximum heat capacity of 3.375 MMBtu per hour.
- (b) Arc welding process consisting of 10 stations, with a maximum electrode consumption of 3 pounds per hour per station.
- (c) One (1) Oxyacetylene flame cutting process, consisting of 1 station, with a maximum cutting rate of 5 inches per minute and maximum metal thickness of 2.5 inches.

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 ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Coal-fired Boiler	10.08	10.08	10.08	11.46	6.38	0.87	7.39	0.91	0.81 (HCl)
Surface Coating Operation	0.80	0.80	0.80	0.00	0.00	3.41	0.00	1.23	0.59 (Methanol)
Welding and Flame Cutting	5.26	5.26	5.26	0.00	0.00	0.00	0.00	1.45	1.45 (Manganese)
Total PTE of Entire Source	15.74	9.82	9.82	11.46	6.38	2.37	7.39	2.80	1.45 (Manganese)
Exemptions Levels	5	5	5	10	10	5 or 10	25	25	10
Registration Levels	25	25	25	25	25	25	100	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".									

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of PM, PM10, PM2.5 and SO₂ are within the ranges listed in 326 IAC 2-5.1-2(a)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.1-2(a)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2 (Registrations). A Registration will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(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 Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in the permit, since the coal-fired boiler has a maximum heat capacity less than 10 MMBtu per hour.
- (b) The requirements of the New Source Performance Standard for Surface Coating of Metal Furniture, 40 CFR 60, Subpart EE (326 IAC 12), are not included in the permit, since the source does not coat metal furniture.
- (c) The requirements of the New Source Performance Standard for Metal Coil Surface Coating, 40 CFR 60, Subpart TT (326 IAC 12), are not included in the permit, since the source does not coat metal coils.

- (d) 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)

- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Metal Cans, 40 CFR 63, Subpart KKKK (326 IAC 20-86), are not included in the permit, since this source does not coat metal cans.
- (f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63, Subpart MMMM (326 IAC 20-80), are not included in the permit, since this source is not a major source of HAPs.
- (g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Metal Furniture, 40 CFR 63, Subpart RRRR (326 IAC 20-78), are not included in the permit, since this source does not coat metal furniture.
- (h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Metal Coil, 40 CFR 63, Subpart SSSS (326 IAC 20-64), are not included in the permit, since this source does not coat metal coil.
- (i) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63, Subpart HHHHHH, are not included in the permit, since this source does not engage in any of the activities listed in 40 CFR 63.11169(a) through (c).
- (j) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) Area Source Standards for Nine Metal Fabrication and Finishing Source Categories, 40 CFR 63, Subpart XXXXXX, are not included in the permit, since the source is not one of the nine metal fabrication and finishing source categories as defined in this rule.
- (k) 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)

- (l) 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:

326 IAC 2-5.1-2 (Registrations)

Registration applicability is discussed under the Permit Level Determination – Registration section above.

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.

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.

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.

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.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

The potential particulate matter emissions at the source exceed 10 tons per year but the source is not specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10. Therefore, the source is subject to the requirements of 326 IAC 6.5-2. The emission unit applicability is discussed below.

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.

Coal-Fired Boiler

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-2(b)(1)(C), the particulate from the 3.375 MMBtu/hour coal-fired boiler shall not exceed 0.6 lb/MMBtu. The potential particulate emissions from the coal-fired boiler exceed 0.6 lb/MMBtu. The source is transitioning to natural gas-fired heating units pursuant to Condition D.1.2 of Registration 167-28842-00152.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

The potential to emit sulfur dioxide from the coal-fired boiler does not exceed 25 tons per year or 10 pounds per hour. Therefore, the coal-fired boiler is not subject to the requirements of 326 IAC 7-1.1.

Surface Coating Operation

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

The surface coating operations use less than 5 gallons per day. Therefore, the surface coating operations are not subject to the requirements of 326 IAC 6-3.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-2(a), the particulate matter emissions from the surface coating operations shall not exceed 0.03 grain per dry standard cubic foot (gr/dscf).

326 IAC 8-2-9 (Miscellaneous Metal Coating Operations)

The actual VOC emissions from the miscellaneous metal surface coating operation, which was constructed in 2004 and is located in Vigo County, are less than 15 pounds per day. Therefore, the miscellaneous metal surface coating operation is not subject to the requirements of 326 IAC 8-2-9.

Welding and Flame Cutting Operations

326 IAC 6-3 (Particulate Emissions for Manufacturing Processes)

The particulate emission limitation established in 326 IAC 6.5 is more stringent than the limit established by 326 IAC 6-3. Pursuant to 326 IAC 6-3-1(c)(3), the requirements of 326 IAC 6-3 do not apply.

326 IAC 6.5 (Particulate Matter Limitations Except Lake County)

Pursuant to 326 IAC 6.5-1-2(a), the particulate matter emissions from the welding and flame cutting operations shall not exceed 0.03 grain per dry standard cubic foot (gr/dscf).

326 IAC 12 (New Source Performance Standards)

See Federal Rule Applicability Section of this TSD.

326 IAC 20 (Hazardous Air Pollutants)

See Federal Rule Applicability Section of this TSD.

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 31, 2009.

The operation of this source shall be subject to the conditions of the attached proposed Registration No. 167-28842-00152. The staff recommends to the Commissioner that this Registration be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Anne-Marie C. Hart 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) 234-5174 or toll free at 1-800-451-6027 extension 4-5174.
- (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.idem.in.gov

**Appendix A: Emissions Calculations
Emission Summary**

Company Name: Vigo Machine Shop, Inc.
Address City IN Zip: 3920 Locust St. Terre Haute, Indiana 47803
Permit No./Plt ID: 167-28842-00152
Reviewer: Anne-Marie C. Hart
Date: March 10, 2010

	Coal-fired Boiler	Surface Coating	Welding and Flame Cutting	Total (tons/year)
PM	10.08	0.39	5.26	15.74
PM10	4.17	0.39	5.26	9.82
PM2.5	4.17	0.39	5.26	9.82
SO2	11.46	0.00	0.00	11.46
NOx	6.38	0.00	0.00	6.38
VOC	0.87	1.49	0.00	2.37
CO	7.39	0.00	0.00	7.39
Total HAPs	0.91	0.44	1.45	2.80
Worst-Case Individual HAP	0.81 HCl	0.21 Methanol	1.45 Manganese	1.45 Manganese

Appendix A: Emissions Calculations
Coal combustion: Underfeed Stoker

Company Name: Vigo Machine Shop, Inc.
Address City IN Zip: 3920 Locust St. Terre Haute, Indiana 47803
Permit No./Plt ID: 167-28842-00152
Reviewer: Anne-Marie C. Hart
Date: March 10, 2010

Heat Input Capacity MMBtu/hr	Heat Content of Coal Btu/lb of Coal	Potential Throughput tons/year	Weight % Sulfur in Fuel
3.375	11,000	1,344	S = 0.55 %

Emission Factor in lb/ton	Pollutant							
	PM*	PM10/PM2.5*	SO2	NOx	VOC	CO	HCl	HF
Potential Emission in tons/yr	15.0	6.20	17.1 (31S)	9.5	1.30	11.00	1.20	0.15
Potential Emission in lbs/MMBtu	10.1	4.2	11.5	6.4	0.9	7.4	0.81	0.10
	0.68	0.28	0.78	0.43	0.06	0.50	0.05	0.01

Methodology

*The PM emission factor is filterable PM only. The PM10/PM2.5 emission factor is filterable and condensable PM10 combined VOC emission factor is from Table 1.1-19 (Total non-methane organic carbon).

Potential Throughput (tons/year) = Heat Input Capacity (MMBtu/hr) x 10⁶ Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2000 lb/ton x 8,760 hrs/yr

Emission Factors from AP-42, Chapter 1.1 for industrial overfeed stoker SCC 1-02-002-05/25 (Supplement E, 9/98)

Additional emission factors for commercial/institutional and electric generation boilers are available in AP-42, Chapter 1.1.

HAPs emission factors are available in AP-42, Chapter 1.1.

Emission (tons/yr) = Throughput tons per year x Emission Factor (lb/ton) / 2,000 lb/ton

Emissions (lbs/MMBtu) = 10⁶ Btu/MMBtu / Heat Content of Coal (Btu/lb) / 2000 lb/ton x Emission Factor (lb/ton)

HCl = Hydrogen Chloride

HF = Hydrogen Fluoride

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

**Company Name: Vigo Machine Shop, Inc.
Address City IN Zip: 3920 Locust St. Terre Haute, Indiana 47803
Permit Number: 167-28842-00152
Reviewer: Anne-Marie C. Hart
Date: March 10, 2010**

VOC and Particulate

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
Primer	11.3	31.00%	0.0%	31.0%	0.0%	47.00%	0.02000	1.000	3.51	3.51	0.07	1.69	0.31	0.17	7.47	75%
Safety Yellow	8.4	39.89%	0.0%	39.9%	0.0%	49.00%	0.04000	1.000	3.36	3.36	0.13	3.23	0.59	0.22	6.86	75%
Lacquer Thinner	6.8	100.00%	0.0%	100.0%	0.0%	0.00%	0.02000	1.000	6.80	6.80	0.14	3.26	0.60	0.00	na	100%
Total											0.34	8.18	1.49	0.39		

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 = Sum of all coatings used

HAPs

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Toluene	Weight % Methanol	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	Methanol Emissions (ton/yr)	Total (ton/yr)
Primer	11.3	0.020000	1.00	5.00%	0.01%	0.00%	0.05	0.00	0.00	0.05
Safety Yellow	8.4	0.040000	1.00	1.48%	0.00%	0.00%	0.02	0.00	0.00	0.02
Lacquer Thinner	6.8	0.020000	1.00	1.05%	26.05%	35.00%	0.01	0.16	0.21	0.37
Total							0.08	0.16	0.21	0.44

METHODOLOGY

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: Vigo Machine Shop, Inc.
Address City IN Zip: 3920 Locust St. Terre Haute, Indiana 47803
Permit Number: 167-28842-00152
Reviewer: Anne-Marie C. Hart
Date: March 10, 2010**

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	10	3		0.036	0.011			1.080	0.330	0.000	0	0.330
Metal Inert Gas (MIG)(carbon steel)	0	0		0.0055	0.0005			0.000	0.000	0.000	0	0.000
Stick (E7018 electrode)	0	0		0.0211	0.0009			0.000	0.000	0.000	0	0.000
Tungsten Inert Gas (TIG)(carbon steel)	0	0		0.0055	0.0005			0.000	0.000	0.000	0	0.000
Oxyacetylene(carbon steel)	0	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	1	2.5	5	0.1622	0.0005	0.0001	0.0003	0.122	0.000	0.000	0.000	0.001
Oxymethane	0	0	0	0.0815	0.0002		0.0002	0.000	0.000	0.000	0.000	0.000
EMISSION TOTALS												
Potential Emissions lbs/hr								1.20				0.33
Potential Emissions lbs/day								28.84				7.94
Potential Emissions tons/year								5.26				1.45

METHODOLOGY

*Emission Factors are default values for carbon steel.

**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



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

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

TO: Gary Michl
Vigo Machine Shop Inc
3920 Locust St
Terre Haute, IN 47803

DATE: July 21, 2010

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

SUBJECT: Final Decision
Registration
167-28842-00052

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:
OAQ Permits Branch Interested Parties List

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

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	DPABST 7/21/2010 Vigo Machine Shop Inc. 167-28842-00052 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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											Remarks
1		Gary P Michl Vigo Machine Shop Inc. 3920 Locust St Terre Haute IN 47803 (Source CAATS) (CONFIRM DELIVERY)									
2		Mr. Charles L. Berger Attorney Berger & Berger, Attorneys at Law 313 Main Street Evansville IN 47700 (Affected Party)									
3		Vigo County Board of Commissioners County Annex, 121 Oak Street Terre Haute IN 47807 (Local Official)									
4		Terre Haute City Council and Mayors Office 17 Harding Ave Terre Haute IN 47807 (Local Official)									
5		Vigo County Health Department 147 Oak Street Terre Haute IN 47807 (Health Department)									
6		J.P. Roehm PO Box 303 Clinton IN 47842 (Affected Party)									
7		Deb Reeves Vigo County Air Pollution Control 121 Oak Terre Haute IN 47807 (Local Official)									
8		Jadcore, Inc. 300 N. Fruitridge Ave Terre Haute IN 47803 (Affected Party)									
9		Farve Gunshop 520 North 42nd Street Terre Haute IN 47803 (Affected Party)									
10		Indiana Railroad 101 West Ohio Street, Suite 1600 Indianapolis IN 46204 (Affected Party)									
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