



Mitchell E. Daniels, Jr.  
Governor

Thomas W. Easterly  
Commissioner

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

TO: Interested Parties / Applicant  
DATE: February 13, 2006  
RE: Whimet, Inc. / 085-21431-00103  
FROM: Paul Dubenetzky  
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, Room 1049, 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 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We make Indiana a cleaner, healthier place to live.*

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Governor

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Indianapolis, Indiana 46204  
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Chad D. Whitehead  
Whimet, Inc.  
2100 North Detroit Street  
Warsaw, IN 46580-2210

February 13, 2006

Re: Registered Construction and Operation Status  
085-21431-00103

Dear Mr. Whitehead,

The application from Whimet, Inc., received on June 15, 2005, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1, it has been determined that your emission source, a metal finishing operation located at 2100 North Detroit Street, Warsaw, IN 46580-2210, is classified as registered. The emission source consists of the following emission units and pollution control devices:

- (a) One (1) Blasting Process, with a maximum capacity of 320 pounds of stainless steel per hour, consisting of sixteen (16) blasting cabinets identified as BC1 through BC16. Particulate emissions are controlled by a baghouse identified as DC2, then exhaust back into the building.
- (b) One (1) Polishing, Buffing, Cleaning and Vibratory Process, with a maximum capacity of 24 pounds of aluminum per hour and 84 pounds of stainless steel per hour, consisting of:
  - (1) Twenty-four (24) polishing lathes, identified as PL1 through PL-24. Particulate emissions from polishing lathes PL7, PL13 and PL14 are controlled by a baghouse identified as DC1, then exhaust to the atmosphere. Particulate emissions from the remaining lathes are controlled by baghouse DC2, then exhaust back into the building.
  - (2) Thirteen (13) buffers, identified as BFR1 through BFR13. Particulate emissions are controlled by a baghouse identified as DC3, then exhaust back into the building.
  - (3) One (1) ultrasonic cleaner.
  - (4) Three (3) vibratory polishers.
- (c) One (1) Medical Electropolish and Passivation Process, with a maximum capacity of 80 pounds of stainless steel per hour, consisting of:
  - (1) One (1) wash tank, identified as TS1.
  - (2) Four (4) acid baths, identified as TN1, TN2, TN3 and TC1.
  - (3) One (1) electropolishing tank, identified as TE1.
  - (4) One (1) nitric acid rinse tank, identified as TN4.
  - (5) One (1) neutralization rinse tank, identified as TCA1.



Emissions from the wash tank, acid baths, electropolishing tank and nitric acid rinse tank are controlled by a mist eliminator identified as ME1.

(d) One (1) Industrial Electropolish Process, with a maximum capacity of 80 pounds of stainless steel per hour, consisting of:

- (1) One (1) wash tank, identified as TS3.
- (2) One (1) hydrochloric acid bath, identified as TH1.
- (3) One (1) electropolishing tanks, identified as TE2 and TE3.
- (4) One (1) nitric acid rinse tank, identified as TN5.
- (5) One (1) neutralization rinse tank, identified as TCA2.

Emissions from the wash tank, acid bath, electropolishing tanks and nitric acid rinse tank are controlled by a mist eliminator identified as ME3.

(e) One (1) Anodizing Process, with a maximum capacity of 40 pounds of aluminum per hour, consisting of:

- (1) One (1) wash tank, identified as TS2.
- (2) One (1) etch tank, identified as TET1.
- (3) Six (6) anodizing tanks, TA1 through TA6.
- (4) One (1) brightener tank, identified as TB1.
- (5) One (1) desmut tank, identified as TD1.
- (6) One (1) gold dye tank, identified as TDY1.
- (7) One (1) black dye tank, identified as TDY2.
- (8) One (1) seal tank, identified as TSL1.

Emissions from the wash tank, etch tank, anodizing tanks, brightener tank, desmut tank, gold dye tank, black dye tank and seal tank are controlled by a mist eliminator identified as ME2.

The following conditions shall be applicable:

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:
  - (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.
2. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions shall be limited by the following equation for process weight rates greater than one hundred (100) pounds per hour up to sixty thousand (60,000) pounds per hour:
- $$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$
- (a) For the blasting process, with a process weight rate of 0.16 tons per hour, the emission limit is 1.20 pounds per hour.
- (b) For the polishing lathes and buffers, with a process weight rate of 0.054 tons per hour, the emission limit is 0.58 pounds per hour. Baghouses DC1, DC2 and DC3 shall be in operation at all times when an emission unit that they control is in operation, in order to comply with this limit.
3. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), for the Medical Electropolish and Passivation Process, with a process weight rate less than 100 pounds per hour, the emission limit is 0.551 pounds per hour. Mist Eliminator ME1 shall be in operation at all times when an emission unit that it controls is in operation, in order to comply with this limit.
4. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), for the Industrial Electropolish Process, with a process weight rate less than 100 pounds per hour, the emission limit is 0.551 pounds per hour. Mist Eliminator ME3 shall be in operation at all times when an emission unit that it controls is in operation, in order to comply with this limit.

This registration is the first air approval issued to this emission source. The source may operate according to 326 IAC 2-5.5.

An authorized individual shall provide an annual notice to the Office of Air Quality that the source is in operation and in compliance with this registration pursuant to 326 IAC 2-5.1-2(f)(3). The annual notice shall be submitted to:

Compliance Data Section  
Office of Air Quality  
100 North Senate Avenue  
Indianapolis, IN 46204

no later than March 1 of each year, with the annual notice being submitted in the format attached.

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.

Sincerely,

Original signed by  
Nisha L. Sizemore, Section Chief  
Permits Branch  
Office of Air Quality

ARD

cc: File - Kosciusko County  
Kosciusko County Health Department  
IDEM – Northern Regional Office  
Air Compliance Section Inspector - Doyle Houser  
Permit Tracking  
Compliance Data Section

|   |
|---|
| <b>Registration<br/>Annual Notification</b> |
|---|

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

|                               |                                  |
|-------------------------------|----------------------------------|
| <b>Company Name:</b>          | <b>Whimet, Inc.</b>              |
| <b>Address:</b>               | <b>2100 North Detroit Street</b> |
| <b>City:</b>                  | <b>Warsaw, IN 46580-2210</b>     |
| <b>Authorized individual:</b> | <b>Chad D. Whitehead</b>         |
| <b>Phone #:</b>               | <b>574-267-8062</b>              |
| <b>Registration #:</b>        | <b>085-21431-00103</b>           |

I hereby certify that Whimet, Inc. is still in operation and is in compliance with the requirements of Registration 085-21431-00103.

|                      |
|----------------------|
| <b>Name (typed):</b> |
| <b>Title:</b>        |
| <b>Signature:</b>    |
| <b>Date:</b>         |

# Indiana Department of Environmental Management Office of Air Quality

## Technical Support Document (TSD) for a Registration

### Source Background and Description

|                          |  |
|--------------------------|--|
| <b>Source Name:</b>      | Whimet, Inc.                                     |
| <b>Source Location:</b>  | 2100 North Detroit Street, Warsaw, IN 46580-2210 |
| <b>County:</b>           | Kosciusko  |
| <b>SIC Code:</b>         | 3471   |
| <b>Registration No.:</b> | 085-21431-00103                                  |
| <b>Permit Reviewer:</b>  | Allen R. Davidson                                |

The Office of Air Quality (OAQ) has reviewed an application from Whimet, Inc. relating to the construction and operation of a metal finishing operation located at 2100 North Detroit Street, Warsaw, IN 46580-2210.

### Emission Units and Pollution Control Equipment

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

- (a) One (1) Blasting Process, with a maximum capacity of 320 pounds of stainless steel per hour, consisting of sixteen (16) blasting cabinets identified as BC1 through BC16. Particulate emissions are controlled by a baghouse identified as DC2, then exhaust back into the building.
- (b) One (1) Polishing, Buffing, Cleaning and Vibratory Process, with a maximum capacity of 24 pounds of aluminum per hour and 84 pounds of stainless steel per hour, consisting of:
  - (1) Twenty-four (24) polishing lathes, identified as PL1 through PL24. Particulate emissions from polishing lathes PL7, PL13 and PL14 are controlled by a baghouse identified as DC1, then exhaust to the atmosphere. Particulate emissions from the remaining lathes are controlled by baghouse DC2, then exhaust back into the building.
  - (2) Thirteen (13) buffers, identified as BFR1 through BFR13. Particulate emissions are controlled by a baghouse identified as DC3, then exhaust back into the building.
  - (3) One (1) ultrasonic cleaner.
  - (4) Three (3) vibratory polishers.
- (c) One (1) Medical Electropolish and Passivation Process, with a maximum capacity of 80 pounds of stainless steel per hour, consisting of:
  - (1) One (1) wash tank, identified as TS1.
  - (2) Four (4) acid baths, identified as TN1, TN2, TN3 and TC1.
  - (3) One (1) electropolishing tank, identified as TE1.
  - (4) One (1) nitric acid rinse tank, identified as TN4.
  - (5) One (1) neutralization rinse tank, identified as TCA1.

Emissions from the wash tank, acid baths, electropolishing tank and nitric acid rinse tank are controlled by a mist eliminator identified as ME1.

- (d) One (1) Industrial Electropolish Process, with a maximum capacity of 80 pounds of stainless steel per hour, consisting of:
- (1) One (1) wash tank, identified as TS3.
  - (2) One (1) hydrochloric acid bath, identified as TH1.
  - (3) One (1) electropolishing tanks, identified as TE2 and TE3.
  - (4) One (1) nitric acid rinse tank, identified as TN5.
  - (5) One (1) neutralization rinse tank, identified as TCA2.

Emissions from the wash tank, acid bath, electropolishing tanks and nitric acid rinse tank are controlled by a mist eliminator identified as ME3.

- (e) One (1) Anodizing Process, with a maximum capacity of 40 pounds of aluminum per hour, consisting of:
- (1) One (1) wash tank, identified as TS2.
  - (2) One (1) etch tank, identified as TET1.
  - (3) Six (6) anodizing tanks, TA1 through TA6.
  - (4) One (1) brightener tank, identified as TB1.
  - (5) One (1) desmut tank, identified as TD1.
  - (6) One (1) gold dye tank, identified as TDY1.
  - (7) One (1) black dye tank, identified as TDY2.
  - (8) One (1) seal tank, identified as TSL1.

Emissions from the wash tank, etch tank, anodizing tanks, brightener tank, desmut tank, gold dye tank, black dye tank and seal tank are controlled by a mist eliminator identified as ME2.

## History

This application is the first received for this emission source. Because no approvals were issued previously at this location, this location is being treated as a new emission source for purposes of this review.

## Enforcement Issues

IDEM is aware that emission units at this source have been constructed and operated prior to receipt of the proper approval. Construction commenced on the following emission units in December 2004 and operation commenced in March 2005:

- (a) Blasting cabinets BC10 through BC14.
- (b) Buffers BFR6 through BC11.
- (c) Polishing Lathes PL1 through PL3, and PL6.

Construction of the remaining emission units at the source commenced in February 2002. Operation of the remaining emission units commenced in 2002 except for polishing lathe PL19 which commenced operation in December 2004.

IDEM is reviewing this matter and will take the appropriate action.

## Recommendation

The staff recommends to the Commissioner that the emission source be issued a registration. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete application for the purposes of this review was received on June 15, 2005. Additional information was received on August 29, 2005.

## Emission Calculations

The applicant has submitted data on the inlet grain loading of Baghouses DC1, DC2 and DC3 and on the amount of material collected by the baghouses. In addition, the applicant has submitted data on the losses of liquids from the electropolish processes and the anodizing process. Emission calculations are based on the data submitted by the applicant.

See Appendix A of this document for detailed emission calculations (4 pages).

## Potential to Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

The emission source's potential to emit, before controls, is as follows:

| Pollutant        | Potential to Emit (tons/yr) |
|------------------|-----------------------------|
| PM               | 21.7                        |
| PM <sub>10</sub> | 21.7                        |
| SO <sub>2</sub>  | 0.0                         |
| VOC              | 0.1                         |
| CO               | 1.8                         |
| NO <sub>x</sub>  | 2.1                         |

| HAPs   | Potential to Emit (tons/yr) |
|--------|-----------------------------|
| Hexane | 0.01                        |
| Total  | 0.01                        |

The potential to emit particulate matter (PM) and particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM<sub>10</sub>) are each less than 25 tons per year, but both are greater than five tons per year. Therefore, the source is classified as a registration under 326 IAC 2-5.1.

### County Attainment Status

The source is located in Kosciusko County.

| Pollutant         | Status     |
|-------------------|------------|
| PM <sub>10</sub>  | attainment |
| PM <sub>2.5</sub> | attainment |
| SO <sub>2</sub>   | attainment |
| NO <sub>2</sub>   | attainment |
| Ozone (1-hour)    | attainment |
| Ozone (8-hour)    | attainment |
| CO                | attainment |
| Lead              | attainment |

- (a) Kosciusko County has been classified as attainment or unclassifiable for PM<sub>2.5</sub>. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM<sub>2.5</sub> emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM<sub>2.5</sub> emissions, it has directed states to regulate PM<sub>10</sub> emissions as a surrogate for PM<sub>2.5</sub> emissions.
- (b) Volatile organic compounds (VOC) and nitrogen oxides (NO<sub>x</sub>) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO<sub>x</sub> 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 NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Kosciusko County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

See "State Rule Applicability – Entire Source" for more details regarding PSD applicability.

### **Federal Rule Applicability**

There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR 60) included in this review. 40 CFR 60.110, Subpart Kb "Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984" is not applicable to the wash tanks and rinse tanks because:

- (a) The tanks do not store volatile organic liquids; and
- (b) The capacities are each less than 75 cubic meters (19,183 gallons).

There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) included in this review.

### **State Rule Applicability – Entire Source**

#### 326 IAC 2-2 (Prevention of Significant Deterioration)

This new source is not a major source for Prevention of Significant Deterioration, 326 IAC 2-2, because no attainment regulated pollutant will be emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

#### 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants)

This source is not subject to 326 IAC 2-4.1-1 (New Source Toxics Control). The source does not have the potential to emit 10 tons per year of any single HAP or 25 tons per year of any combination of HAPs.

#### 326 IAC 2-6 (Emission Reporting)

This source is located in Kosciusko County, and is not required to have an operating permit under 326 IAC 2-7. Therefore, 326 IAC 2-6 does not apply.

#### 326 IAC 2-7 (Part 70 Permit Program)

This source is not subject to the Part 70 permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) any single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

#### 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 the permit:

- (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.

#### 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels)

This source is not subject to 326 IAC 8-9 (Volatile Organic Liquid Storage Vessels) because:

- (a) This source is located in Kosciusko County.
- (b) The tanks do not store volatile organic liquids.

#### State Rule Applicability – Blasting Process

##### 326 IAC 6-3-2 (Particulate Emissions Limitations)

The blasting cabinets are subject to 326 IAC 6-3-2. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions shall be limited by the following equation for process weight rates up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

For a process weight rate of 0.16 tons per hour, the emission limit is 1.20 pounds per hour. The control equipment (baghouse DC2) is required in order to comply with this limit.

#### State Rule Applicability – Polishing, Buffing, Cleaning and Vibratory Process

##### 326 IAC 6-3-2 (Particulate Emissions Limitations)

The polishing lathes and buffers are subject to 326 IAC 6-3-2. Pursuant to 326 IAC 6-3-2 (Particulate Emissions Limitations), particulate matter (PM) emissions shall be limited by the following equation for process weight rates up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

For a process weight rate of 0.054 tons per hour, the emission limit is 0.58 pounds per hour. The control equipment is not required in order to comply with this limit. However, baghouse DC2 is shared with other processes, and baghouse DC2 is required in order to comply with another limit imposed by this rule.

#### State Rule Applicability – Medical Electropolish and Passivate Process

##### 326 IAC 6-3-2 (Particulate Emissions Limitations)

The Medical Electropolish and Passivate Process is not subject to 326 IAC 6-3. Manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound

per hour are expressly exempted under 326 IAC 6-3-1(b)(14).

#### **State Rule Applicability – Industrial Electropolish Process**

##### **326 IAC 6-3-2 (Particulate Emissions Limitations)**

The Industrial Electropolish Process is not subject to 326 IAC 6-3. Manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour are expressly exempted under 326 IAC 6-3-1(b)(14).

#### **State Rule Applicability – Aluminum Anodizing Process**

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

The Aluminum Anodizing Process is not subject to 326 IAC 6-3. Manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour are expressly exempted under 326 IAC 6-3-1(b)(14).

#### **Conclusion**

The construction and operation of this emission source shall be subject to the conditions of Registration 085-21431-00103.

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

**Company Name:** Whimmet, Inc.  
**Address City IN Zip:** 2100 N. Detroit St., Warsaw, IN 46580-2210  
**ID:** 085-21431-00103  
**Reviewer:** Allen R. Davidson  
**Date:** 02/06/06

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

4.885

42.8

Pollutant

|                               | PM* | PM10* | SO <sub>2</sub> | NOx                  | VOC | CO   |
|-------------------------------|-----|-------|-----------------|----------------------|-----|------|
| Emission Factor in lb/MMCF    | 1.9 | 7.6   | 0.6             | 100.0<br>**see below | 5.5 | 84.0 |
| Potential Emission in tons/yr | 0.0 | 0.2   | 0.0             | 2.1                  | 0.1 | 1.8  |

\*PM emission factor is filterable PM only. PM10 emission factor is condensable and filterable PM10 combined.

\*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

HAPs - Organics

|                               | Benzene   | Dichlorobenzene | Formaldehyde | Hexane    | Toluene   |
|-------------------------------|-----------|-----------------|--------------|-----------|-----------|
| Emission Factor in lb/MMcf    | 2.1E-03   | 1.2E-03         | 7.5E-02      | 1.8E+00   | 3.4E-03   |
| Potential Emission in tons/yr | 4.493E-05 | 2.568E-05       | 1.605E-03    | 3.851E-02 | 7.275E-05 |

HAPs - Metals

|                               | Lead      | Cadmium   | Chromium  | Manganese | Nickel    |
|-------------------------------|-----------|-----------|-----------|-----------|-----------|
| Emission Factor in lb/MMcf    | 5.0E-04   | 1.1E-03   | 1.4E-03   | 3.8E-04   | 2.1E-03   |
| Potential Emission in tons/yr | 1.070E-05 | 2.354E-05 | 2.995E-05 | 8.131E-06 | 4.493E-05 |

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

**Methodology**

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98).

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

Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

**Company Name:** Whimmet, Inc.  
**Address City IN Zip:** 2100 N. Detroit St., Warsaw, IN 46580-2210  
**ID:** 085-21431-00103  
**Reviewer:** Allen R. Davidson  
**Date:** 02/06/06

### Polishing (aluminum) (PL7, PL13 & PL14 only)

The following calculations determine PM and PM<sub>10</sub> emissions from baghouse DC1 based on 8760 hours of operation per year and information supplied by the applicant:

Amount of material collected by baghouse: 0.09 lb/hr  
 Control efficiency of baghouse: 99.99%

$$0.09 \text{ lb collected/hr} * 8760 \text{ hr/yr} / 2000 \text{ lb/ton} = 0.3942 \text{ ton collected/yr}$$

$$\text{Before Controls: } 0.3942 \text{ ton/yr} / 99.99\% = 0.394239 \text{ ton/yr}$$

$$\text{After Controls: } 0.394239 \text{ ton/yr} * (100\% - 99.99\% \text{ efficiency}) = 0.0000 \text{ ton/yr}$$

### Blasting, Polishing (except aluminum), Cleaning and Vibratory

The following calculations determine PM and PM<sub>10</sub> emissions from baghouse DC2 based on 8760 hours of operation per year and information supplied by the applicant:

Amount of material collected by baghouse: 4.24 lb/hr  
 Control efficiency of baghouse: 99.99%

$$4.24 \text{ lb collected/hr} * 8760 \text{ hr/yr} / 2000 \text{ lb/ton} = 18.5712 \text{ ton collected/yr}$$

$$\text{Before Controls: } 18.5712 \text{ ton/yr} / 99.99\% = 18.573057 \text{ ton/yr}$$

$$\text{After Controls: } 18.573057 \text{ ton/yr} * (100\% - 99.99\% \text{ efficiency}) = 0.0019 \text{ ton/yr}$$

### Buffing

The following calculations determine PM and PM<sub>10</sub> emissions from baghouse DC3 based on 8760 hours of operation per year and information supplied by the applicant:

Amount of material collected by baghouse: 0.25 lb/hr  
 Control efficiency of baghouse: 99.99%

$$0.25 \text{ lb collected/hr} * 8760 \text{ hr/yr} / 2000 \text{ lb/ton} = 1.0950 \text{ ton collected/yr}$$

$$\text{Before Controls: } 1.095 \text{ ton/yr} / 99.99\% = 1.095110 \text{ ton/yr}$$

$$\text{After Controls: } 1.095110 \text{ ton/yr} * (100\% - 99.99\% \text{ efficiency}) = 0.0001 \text{ ton/yr}$$

**Medical Electropolish and Passivate (ME1)**

The following calculations determine PM and PM<sub>10</sub> emissions from mist eliminator ME1 based on 8760 hours of operation per year and information supplied by the applicant:

|                   | PM/PM <sub>10</sub> |                        |                         |                        | Before Controls (ton/yr) | After Controls (ton/yr) |
|-------------------|---------------------|------------------------|-------------------------|------------------------|--------------------------|-------------------------|
|                   | Loss Rate (lb/hr)   | Control Efficiency (%) | Before Controls (lb/hr) | After Controls (lb/hr) |                          |                         |
| 815QR Cleaner     | 0.030               | 99.9%                  | 0.030                   | 0.000                  | 0.131                    | 0.000                   |
| Nitric Acid       | 0.278               | 99.9%                  | 0.278                   | 0.000                  | 1.218                    | 0.001                   |
| Phosphoric Acid * | 0.000               | 99.9%                  | 0.000                   | 0.000                  | 0.000                    | 0.000                   |
| Sulfuric Acid *   | 0.000               | 99.9%                  | 0.000                   | 0.000                  | 0.000                    | 0.000                   |
| <b>TOTAL</b>      | <b>0.308</b>        |                        | <b>0.308</b>            | <b>0.000</b>           | <b>1.349</b>             | <b>0.001</b>            |

\* Loss rate is less than 0.001 pounds per hour

**Industrial Electropolish (ME3)**

The following calculations determine PM and PM<sub>10</sub> emissions from mist eliminator ME3 based on 8760 hours of operation per year and information supplied by the applicant:

|                   | PM/PM <sub>10</sub> |                        |                         |                        | Before Controls (ton/yr) | After Controls (ton/yr) |
|-------------------|---------------------|------------------------|-------------------------|------------------------|--------------------------|-------------------------|
|                   | Loss Rate (lb/hr)   | Control Efficiency (%) | Before Controls (lb/hr) | After Controls (lb/hr) |                          |                         |
| Phosphoric Acid * | 0.000               | 99.9%                  | 0.000                   | 0.000                  | 0.000                    | 0.000                   |
| Sulfuric Acid *   | 0.000               | 99.9%                  | 0.000                   | 0.000                  | 0.000                    | 0.000                   |
| <b>TOTAL</b>      | <b>0.000</b>        |                        | <b>0.000</b>            | <b>0.000</b>           | <b>0.000</b>             | <b>0.000</b>            |

\* Loss rate is less than 0.001 pounds per hour

**Aluminum Anodizing (ME2)**

The following calculations determine PM and PM<sub>10</sub> emissions from mist eliminator ME2 based on 8760 hours of operation per year and information supplied by the applicant:

|                 | PM/PM <sub>10</sub> |                        |                         |                        | Before Controls (ton/yr) | After Controls (ton/yr) |
|-----------------|---------------------|------------------------|-------------------------|------------------------|--------------------------|-------------------------|
|                 | Loss Rate (lb/hr)   | Control Efficiency (%) | Before Controls (lb/hr) | After Controls (lb/hr) |                          |                         |
| 815QR Cleaner   | 0.035               | 99.0%                  | 0.035                   | 0.000                  | 0.153                    | 0.002                   |
| Sulfuric Acid * | 0.000               | 99.0%                  | 0.000                   | 0.000                  | 0.000                    | 0.000                   |
| MS-1 Sealer     | 0.003               | 99.0%                  | 0.003                   | 0.000                  | 0.013                    | 0.000                   |
| <b>TOTAL</b>    | <b>0.038</b>        |                        | <b>0.038</b>            | <b>0.000</b>           | <b>0.166</b>             | <b>0.002</b>            |

\* Loss rate is less than 0.001 pounds per hour

Total PM/PM<sub>10</sub> from fuel combustion (Page 1) 0.16 ton/yr

Total PM/PM<sub>10</sub> for all (before controls): 21.74 ton/yr

Total PM/PM<sub>10</sub> for all (after controls): 0.17 ton/yr

**Company Name:** Whimmet, Inc.  
**Address City IN Zip:** 2100 N. Detroit St., Warsaw, IN 46580-2210  
**ID:** 085-21431-00103  
**Reviewer:** Allen R. Davidson  
**Date:** 02/06/06

### ***Blasting***

The following calculations determine the emission limit under 326 IAC 6-3-2:

$$E = 4.1 * (0.16 ^ 0.67) = 1.201 \text{ lb/hr}$$

$$1.201 \text{ lb/hr} * 8760 \text{ hr/yr} / 2000 \text{ lb/ton} = 5.26 \text{ ton/yr}$$

### ***Polishing Buffing Cleaning and Vibratory***

The following calculations determine the emission limit under 326 IAC 6-3-2:

$$E = 4.1 * (0.054 ^ 0.67) = 0.580 \text{ lb/hr}$$

$$0.580 \text{ lb/hr} * 8760 \text{ hr/yr} / 2000 \text{ lb/ton} = 2.54 \text{ ton/yr}$$

### ***Medical Electropolish and Passivate***

The following calculations determine the emission limit under 326 IAC 6-3-2:

$$E = 4.1 * (0.04 ^ 0.67) = 0.551 \text{ lb/hr by default}$$

$$0.551 \text{ lb/hr} * 8760 \text{ hr/yr} / 2000 \text{ lb/ton} = 2.41 \text{ ton/yr}$$

### ***Industrial Electropolish***

The following calculations determine the emission limit under 326 IAC 6-3-2:

$$E = 4.1 * (0.04 ^ 0.67) = 0.551 \text{ lb/hr by default}$$

$$0.551 \text{ lb/hr} * 8760 \text{ hr/yr} / 2000 \text{ lb/ton} = 2.41 \text{ ton/yr}$$

### ***Aluminum Anodizing***

The following calculations determine the emission limit under 326 IAC 6-3-2:

$$E = 4.1 * (0.04 ^ 0.67) = 0.551 \text{ lb/hr by default}$$

$$0.551 \text{ lb/hr} * 8760 \text{ hr/yr} / 2000 \text{ lb/ton} = 2.41 \text{ ton/yr}$$