



# Indiana Department of Environmental Management

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

**Michael R. Pence**  
Governor

**Carol S. Comer**  
Commissioner

To: Interested Parties

Date: August 18, 2016

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

Source Name: Howden Roots LLC

Permit Level: Registration

Permit Number: 041-37407-00010

Source Location: 900 W Mount Street

Type of Action Taken: Modification at an existing source

## 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 matter referenced above.

The final decision is available on the IDEM website at: <http://www.in.gov/apps/idem/caats/>  
To view the document, select Search option 3, then enter permit 37407.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201  
100 North Senate Avenue, MC 50-07  
Indianapolis, IN 46204  
Phone: 1-800-451-6027 (ext. 4-0965)  
Fax (317) 232-8659

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).

*(continues on next page)*

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.



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Michael R. Pence  
Governor

Carol S. Comer  
Commissioner

Rachel Anderson  
Howden Roots, LLC  
900 West Mount Street,  
Connersville, IN 47331

August 18, 2016

Re: 041-37407-00010  
Registration Revision to  
R041-26358-00010

Dear Ms. Anderson:

Howden Roots, LLC was issued a Registration No. R041-26358 on June 3, 2008, for a stationary industrial and commercial blower and fan manufacturing source, located at 900 W Mount Street, Connersville, IN 47331. On July 18, 2016, the Office of Air Quality (OAQ) received an application from the source requesting to add emission units and replace existing units.

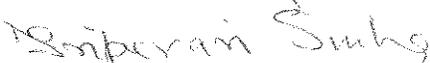
This Registration is being revised through a Registration Revision pursuant to 326 IAC 2-5.5-6(g), because the revision involves the construction of emission units with total potential to emit (PTE) VOC greater than the thresholds in 326 IAC 2-1.1-3(e)(1) (Exemptions).

The source shall continue to operate according to 326 IAC 2-5.5 (Registrations). All other conditions of the registration shall remain unchanged and in effect. Please find attached the entire registration as amended.

A copy of the registration is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Kendra Sutherland, at (800) 451-6027, press 0 and ask for Kendra Sutherland or extension 4-5401, or dial (317) 234-5401.

Sincerely,

  
Tripurari P. Sinha, Ph.D., Section Chief  
Permits Branch  
Office of Air Quality

TS/KS

Attachment: Revised Registration and Appendix A (Emissions Calculations)

cc: File - Fayette County  
Fayette County Health Department  
Compliance and Enforcement Branch  
IDEM Southeast Regional Office



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## REGISTRATION OFFICE OF AIR QUALITY

**Howden Roots, LLC  
900 West Mount Street  
Connersville, Indiana 47331**

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. R041-26358-00010	
Issued by: /Original Signed By: Alfred C. Dumauval, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: June 3, 2008

Registration Revision No. 041-34029-00010, issued on April 10, 2014.  
Administrative Amendment No.: 041-36189-00010, issued on September 18, 2015

Registration Revision No.: 041-37407-00010	
Issued by:  Tripurari P. Sinha, Ph.D., Section Chief Permits Branch Office of Air Quality	Issuance Date: August 18, 2016

## 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 industrial and commercial blower and fan manufacturing source.

Source Address:	900 West Mount Street, Connersville, Indiana, 47331
General Source Phone Number:	(765) 827-9272
SIC Code:	3564 (Industrial and Commercial Fans and Blowers and Air Purification Equipment)
County Location:	Fayette 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) natural gas-fired boiler identified as b4, installed in 2012, with a maximum heat input capacity of 1.5 million British thermal units (mmBtu) per hour.
- (b) One (1) paint booth, identified as p.b. 1, constructed in 1990, with a maximum capacity of 0.37 large cast iron blowers per hour with an unknown capacity for various sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stacks 1A, 1B, 1C and 1D.
- (c) One (1) paint booth, identified as p.b. 4, constructed in 2016, with a maximum capacity of 0.2 large cast iron blowers per hour with an unknown capacity for various sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stack 2.
- (d) One (1) monorail Paint booth identified as p.b. 5, constructed in 2016, with a maximum capacity of 3.3 large cast iron blowers per hour with an unknown capacity for various sized blowers, using down draft as control and equipped with a curing oven with a maximum capacity of 1.0 MMBtu/hr.
- (e) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (f) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations.

## **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. R041-26358-00010 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 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.

## SECTION D.1

## OPERATION CONDITIONS

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

- (b) One (1) paint booth, identified as p.b. 1, constructed in 1990, with a maximum capacity of 0.37 large cast iron blowers per hour with an unknown capacity for various sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stacks 1A, 1B, 1C and 1D.
- (c) One (1) paint booth, identified as p.b. 4, constructed in 2016, with a maximum capacity of 0.2 large cast iron blowers per hour with an unknown capacity for various sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stack 2.
- (d) One (1) monorail Paint booth identified as p.b. 5, constructed in 2016 with a maximum capacity of 3.3 large cast iron blowers per hour with an unknown capacity for various sized blowers, using down draft as control and equipped with a curing oven with a maximum capacity of 1.0 MMBtu/hr.
- (e) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.
- (f) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations.

(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 Emission Limitations [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2(d) (Particulate Emission Limitations for Manufacturing Processes), p.b.1, p.b. 4, and p.b. 5 shall be controlled by a dry particulate filter, waterwash, or an equivalent control device.
- (b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:
  - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
  - (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (c) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

**D.1.2 Particulate emission limitations, work practices, and control technologies [326 IAC 6-3-2]**

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Pursuant to 326 IAC 6-3-2(e)(2), the particulate from the brazing equipment, cutting torches, soldering equipment, welding equipment, Grinding and machining: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations, shall not exceed 0.551 pounds per hour when the process weight rate is less than 100 pounds per hour.

**D.1.3 Volatile Organic Compound (VOC) [326 IAC 8-2-9]**

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- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicators at the three (3) paint booths (p.b.1, p.b. 4, and p.b. 5), including hand touchup, shall be limited to 3.5 pounds of VOCs per gallon of coating less water.
  
- (b) Solvent sprayed from application equipment during cleanup or color changes shall be directed into containers. Such containers shall be closed as soon as such solvent spraying is complete, and the waste solvent shall be disposed of in such a manner that evaporation is minimized.

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

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A Preventive Maintenance Plan is required for these facilities and their control devices. Section B - Preventive Maintenance Plan contains the Permittee'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 Volatile Organic Compounds (VOC)[326 IAC 8-1-2] [326 IAC 8-1-4]**

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Compliance with the VOC content contained in Condition D.1.3 (a) shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]**

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Compliance with the VOC content limit in condition D. 1.3(a) shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis. This volume weighted average shall be determined by the following equation:

$$A = [ \sum (c \times U) / \sum U ]$$

Where:

A is the volume weighted average in pounds VOC per gallon less water as applied;

C is the VOC content of the coating in pounds VOC per gallon less water as applied; and

U is the usage rate of the coating in gallons per day.

**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.1.3(a), the Registrant shall maintain records in accordance with (1) and (2) below. Records maintained for (1) and (2) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC content limitation established in Condition D.1.3(a).

- (1) The VOC content of each coating material and solvent used less water.

- (2) The amount of each coating material and solvent used on 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 contains the Registrant's obligation 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)]:

- (a) One (1) natural gas-fired boiler identified as b4, installed in 2012, with a maximum heat input capacity of 1.5 million British thermal units (mmBtu) per hour.

(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 Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the particulate emissions from the one (1) natural gas-fired boiler, identified as b4, shall not exceed 0.6 pound per million Btu heat input (lb/MMBtu).

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for the boiler. Section B - Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan 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>	Howden Roots, LLC
<b>Address:</b>	900 West Mount Street
<b>City:</b>	Connersville, Indiana 47331
<b>Phone Number:</b>	(765) 827-9272
<b>Registration No.:</b>	R041-26358-00010

I hereby certify that Howden Roots, LLC is :

still in operation.

I hereby certify that Howden Roots, LLC is :

no longer in operation.

in compliance with the requirements of Registration No. 041-26358-00010.

not in compliance with the requirements of Registration No. 041-26358-00010.

<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 Revision

<b>Source Description and Location</b>
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<b>Source Name:</b>	<b>Howden Roots, LLC</b>
<b>Source Location:</b>	<b>900 West Mount Street, Connerville, Indiana, 47331</b>
<b>County:</b>	<b>Fayette</b>
<b>SIC Code:</b>	<b>3564</b>
<b>Registration No.:</b>	<b>041-26358-00010</b>
<b>Registration Issuance Date:</b>	<b>June 3, 2008</b>
<b>Registration Revision No.:</b>	<b>041-37407-00010</b>
<b>Permit Reviewer:</b>	<b>Kendra Sutherland</b>

On July 18, 2016, the Office of Air Quality (OAQ) received an application from Howden Roots, LLC, related to a modification to an existing stationary industrial and commercial blower and fan manufacturing source.

<b>Existing Approvals</b>
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The source was issued Registration No. 041-26358-00010 on June 3, 2008. The source has since received the following approvals:

- (a) Registration Revision No. 041-34029-00010, issued on April 10, 2014; and
- (b) Administrative Amendment No. 041-36189-00010, issued on September 18, 2015.

<b>County Attainment Status</b>
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The source is located in Fayette County.

Pollutant	Designation
SO <sub>2</sub>	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O <sub>3</sub>	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. <sup>1</sup>
PM <sub>2.5</sub>	Unclassifiable or attainment effective April 5, 2005, for the annual PM <sub>2.5</sub> standard.
PM <sub>2.5</sub>	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM <sub>2.5</sub> standard.
PM <sub>10</sub>	Unclassifiable effective November 15, 1990.
NO <sub>2</sub>	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

<sup>1</sup>Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.

- (a) **Ozone Standards**  
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. Fayette 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.

- (b) **PM<sub>2.5</sub>**  
 Fayette County has been classified as attainment for PM<sub>2.5</sub>. Therefore, direct PM<sub>2.5</sub>, SO<sub>2</sub>, and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) **Other Criteria Pollutants**  
 Fayette County has been classified as attainment or unclassifiable in Indiana for all other regulated 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 regulated pollutants, and hazardous air pollutants are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

**Status of the Existing Source**

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

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	Total HAPs	Worst Single HAP
Paint Booth 1	1.15	1.15	1.15	0.00	0.00	5.31	0.00	1.83	0.75 Butyl-OH
Paint Booth 3	1.33	1.33	1.33	0.00	0.00	4.76	0.00	1.08	0.55 Butyl-OH
Natural Gas Combustion	0.01	0.05	0.05	0.00	0.26	0.04	0.55	0.01	Negl. Hexane
Welding and Cutting Operations	7.92	7.92	7.92	0.00	0.00	0.00	0.00	1.01	0.22 Manganese
Total PTE of Entire Source	10.41	10.45	10.45	0.00	0.26	10.11	0.55	3.92	<10
Exemptions Levels**	< 5	< 5	< 5	< 10	< 10	< 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), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant".									

**Description of Proposed Revision**

The Office of Air Quality (OAQ) has reviewed an application, submitted by Howden Roots, LLC, on July 18, 2016, relating to the replacement and addition of emission units.

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

- (a) One (1) paint booth, identified as p.b. 4, constructed in 2016, with a maximum capacity of 0.2 large cast iron blowers per hour with an unknown capacity for various sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stack 2.

- (b) One (1) monorail Paint booth identified as p.b. 5, constructed in 2016, with a maximum capacity of 3.3 large cast iron blowers per hour with an unknown capacity for various sized blowers, using down draft as control and equipped with a curing oven with a maximum capacity of 1.0 MMBtu/hr.

The following is a list of the removed emission unit and control device.

- (d) One (1) paint booth, identified as p.b. 3, constructed in 1991, with a maximum capacity of 0.37 large cast iron blowers per hour with an unknown capacity for various sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stack 2.

**Enforcement Issues**

There are no pending enforcement actions related to this revision.

**Emission Calculations**

See Appendix A of this TSD for detailed emission calculations.

**Permit Level Determination – Registration Revision**

The following table is used to determine the appropriate revision level under 326 IAC 2-5.5-6. This table reflects the PTE before controls of the proposed revision.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)								
	PM	PM10	PM2.5	SO <sub>2</sub>	NO <sub>x</sub>	VOC	CO	Total HAPs	Worst Single HAP
Natural Gas Curing Oven	0.01	0.03	0.03	0.00	0.43	0.02	0.36	0.01	0.01-Hexane
Paint Booth # 4	0.67	0.67	0.67	0.00	0.00	1.82	0.00	0.40	0.38 2-Butanol
Paint Booth #5	1.34	1.34	1.34	0.00	0.00	6.47	0.00	0.76	0.75 2-Butanol
Paint Booth #1 (Change in production line increase)	1.68	1.68	1.68	0.00	0.00	5.91	0.00	0.00	1.33 Ethylene
<b>Total PTE of Proposed Revision</b>	<b>3.69</b>	<b>3.71</b>	<b>3.71</b>	<b>0.00</b>	<b>0.43</b>	<b>14.22</b>	<b>0.36</b>	<b>1.17</b>	<b>1.33 Ethylene</b>
negl. = negligible									

This Registration is being revised through a Registration Revision pursuant to 326 IAC 2-5.5-6(g), because the revision involves the construction of emission units with total potential to emit (PTE) VOC greater than the thresholds in 326 IAC 2-1.1-3(e)(1) (Exemptions).

**PTE of the Entire Source After Issuance of the Registration Revision**

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	Total HAPs	Worst Single HAP
Paint Booth 1	<del>1.15</del> <b>2.83</b>	<del>1.15</del> <b>2.83</b>	<del>1.15</del> <b>2.83</b>	0.00	0.00	<del>5.31</del> <b>11.22</b>	0.00	<del>1.83</del> <b>1.33</b>	<del>0.75</del> <b>1.33</b> Butyl-OH Ethylene
<del>Paint Booth 3</del>	<del>1.33</del>	<del>1.33</del>	<del>1.33</del>	<del>0.00</del>	<del>0.00</del>	<del>4.76</del>	<del>0.00</del>	<del>1.08</del>	<del>0.55</del> Butyl-OH
Paint Booth 4	<b>0.67</b>	<b>0.67</b>	<b>0.67</b>	<b>0.00</b>	<b>0.00</b>	<b>1.82</b>	<b>0.00</b>	<b>0.40</b>	<b>0.38</b> 2-Butanol
Paint Booth 5	<b>1.34</b>	<b>1.34</b>	<b>1.34</b>	<b>0.00</b>	<b>0.00</b>	<b>6.47</b>	<b>0.00</b>	<b>0.76</b>	<b>0.75</b> 2-Butanol
Natural Gas Combustion	<del>0.01</del> <b>0.02</b>	<del>0.05</del> <b>0.08</b>	<del>0.05</del> <b>0.08</b>	<del>0.00</del> <b>0.01</b>	<del>0.26</del> <b>1.07</b>	<del>0.04</del> <b>0.06</b>	<del>0.55</del> <b>0.90</b>	<del>0.01</del> <b>0.02</b>	Negl. <b>0.02</b> Hexane
Welding and Cutting Operations	7.92	7.92	7.92	0.00	0.00	0.00	0.00	1.01	0.22 Manganese
Total PTE of Entire Source	<del>10.41</del> <b>12.77</b>	<del>10.45</del> <b>12.83</b>	<del>10.45</del> <b>12.83</b>	<del>0.00</del> <b>0.01</b>	<del>0.26</del> <b>1.07</b>	<del>10.11</del> <b>19.57</b>	<del>0.55</del> <b>0.90</b>	<del>3.92</del> <b>3.51</b>	<del>&lt;10</del> <b>1.33</b> Ethylene
Registration Levels**	< 25	< 25	< 25	< 25	< 25	< 25	< 100	< 25	< 10

negl. = negligible  
 \*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant".

The table below summarizes the potential to emit of the entire source after issuance of this revision, (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

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	Total HAPs	Worst Single HAP
Paint Booth 1	2.83	2.83	2.83	0.00	0.00	11.22	0.00	1.33	1.33 Ethylene
Paint Booth 4	0.67	0.67	0.67	0.00	0.00	1.82	0.00	0.40	0.38 2-Butanol
Paint Booth 5	1.34	1.34	1.34	0.00	0.00	6.47	0.00	0.76	0.75 2-Butanol
Natural Gas Combustion	0.02	0.08	0.08	0.01	1.07	0.06	0.90	0.02	0.02 Hexane
Welding and Cutting Operations	7.92	7.92	7.92	0.00	0.00	0.00	0.00	1.01	0.22 Manganese
<b>Total PTE of Entire Source</b>	<b>12.77</b>	<b>12.83</b>	<b>12.83</b>	<b>0.01</b>	<b>1.07</b>	<b>19.57</b>	<b>0.90</b>	<b>3.51</b>	<b>1.33 Ethylene</b>
Registration Levels**	< 25	< 25	< 25	< 25	< 25	< 25	< 100	< 25	< 10

negl. = negligible  
 \*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant".

- (a) This revision will not change the registration status of the source, because the uncontrolled/unlimited potential to emit of PM, PM10, PM2.5 and VOC from the entire source will still be within the ranges listed in 326 IAC 2-5.5-1(b)(1) and the PTE of all other regulated pollutants will still be less than the ranges listed in 326 IAC 2-5.5-1(b)(1). Therefore, the source will still be subject to the provisions of 326 IAC 2-5.5 (Registrations).
- (b) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be 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

The federal rules applicable to the existing emission units at this source will not change as a result of this revision.

#### New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

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

- (b) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, Subpart HHHHHH are not included in the permit for the paint booths. This source does not contain a paint stripping operation, an auto body refinishing operation, or make use of coatings containing compounds of chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd). Thus this source is not subject to this subpart as defined in 40 CFR 63.11169(a) through (c).
- (c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

#### Compliance Assurance Monitoring (CAM)

- (d) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the registration, because the potential to emit of the source is limited to 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 proposed revision:

- (a) 326 IAC 2-5.5 (Registrations)  
Registration applicability is discussed under the Permit Level Determination – Registration section above.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))  
None of the emission units the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new and modified units are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (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 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.
- (e) 326 IAC 12 (New Source Performance Standards)  
See Federal Rule Applicability Section of this TSD.

- (f) 326 IAC 20 (Hazardous Air Pollutants)  
See Federal Rule Applicability Section of this TSD.

### Individual Facility- State Rule Applicability Determination

#### Surface Coating Operation

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

Pursuant to 326 IAC 6-3-2(d) (Particulate Emission Limitations for Manufacturing Processes), surface coating processes shall be controlled by a dry particulate filter, waterwash, or an equivalent control device.

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

Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicators at the three (3) paint booths (p.b.1, p.b. 4 and p.b.5), including hand touchup, with a total potential to emit more than 15 pounds per day of VOC, shall be limited to 3.5 pounds of VOCs per gallon of coating less water.

When applying noncompliant coatings, compliance with the VOC content limit shall be determined pursuant to 326 IAC 8 1-2(a)(7), using a volume weighted average of coatings on a daily basis. This volume weighted average shall be determined by the following equation:

$$A = [\Sigma (C \times U) / \Sigma U]$$

Where: A is the volume weighted average in pounds VOC per gallon less water as applied;

C is the VOC content of the coating in pounds VOC per gallon less water as applied;

and U is the usage rate of the coating in gallons per day.

#### Curing Oven

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

Pursuant to 326 IAC 1-2-59, the requirements of 326 IAC 6-3-2 are not applicable to the curing oven, since liquid and gaseous fuels and combustion air are not considered as part of the process weight.

##### **326 IAC 6-2-1 (Particulate Emission Limitations for Source of Indirect Heating)**

Pursuant to 326 IAC 6-2-1, the curing oven is not subject to the provisions of 326 IAC 6-2-4, since this is a source of direct heat.

### Proposed Changes

The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

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

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

\*\*\*

~~(c) One (1) paint booth, identified as p.b. 3, constructed in 1991, with a maximum capacity of 0.37 large cast iron blowers per hour with an unknown capacity for various sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stack 2.~~

**(c) One (1) paint booth, identified as p.b. 4, constructed in 2016, with a maximum capacity of 0.2 large cast iron blowers per hour with an unknown capacity for**

**various lower sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stack 2.**

- (d) **One (1) monorail Paint booth identified as p.b. 5, constructed in 2016 with a maximum capacity of 3.3 large cast iron blowers per hour with an unknown capacity for various sized blowers, using down draft as control and equipped with a curing oven with a maximum capacity of 1.0 MMBtu/hr**

\*\*\*

SECTION D.1

OPERATION CONDITIONS

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

- (b) One (1) paint booth, identified as p.b. 1, constructed in 1990, with a maximum capacity of 0.37 large cast iron blowers per hour with an unknown capacity for various sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stacks 1A, 1B, 1C and 1D.
- ~~(c) One (1) paint booth, identified as p.b. 3, constructed in 1991, with a maximum capacity of 0.37 large cast iron blowers per hour with an unknown capacity for various sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stack 2.~~
- (c) **One (1) paint booth, identified as p.b. 4, constructed in 2016, with a maximum capacity of 0.2 large cast iron blowers per hour with an unknown capacity for various sized blowers, equipped with high volume low pressure (HVLP), air assisted airless, or electrostatic spray guns, and dry filters as overspray control, and exhausting to stack 2.**
- (d) **One (1) monorail Paint booth identified as p.b. 5, constructed in 2016 with a maximum capacity of 3.3 large cast iron blowers per hour with an unknown capacity for various sized blowers, using down draft as control equipped with a curing oven with a maximum capacity of 1.0 MMBtu/hr**

(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 Emission Limitations [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2(d) (Particulate Emission Limitations for Manufacturing Processes), p.b.1 and ~~p.b.3~~ **p.b. 4, and p.b. 5** shall be controlled by a dry particulate filter, waterwash, or an equivalent control device.

\*\*\*

D.1.3 Volatile Organic Compound (VOC) [326 IAC 8-2-9]

- (a) Pursuant to 326 IAC 8-2-9 (Miscellaneous Metal Coating Operations), the volatile organic compound (VOC) content of coating delivered to the applicators at the ~~two (2)~~ **three (3)** paint booths (p.b.1 and ~~p.b.3~~ **p.b. 4, and p.b. 5**), including hand touchup, shall be limited to 3.5 pounds of VOCs per gallon of coating less water.

\*\*\*

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

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

Compliance with the VOC content contained in Condition D.1.3 (a) shall be determined

pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the “as supplied” and “as applied” VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

**D.1.6 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]**

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Compliance with the VOC content limit in condition *D.1.3(a)* shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis. This volume weighted average shall be determined by the following equation:

$$A = [\sum (c \times U) / \sum U]$$

**Where:**

**A** is the volume weighted average in pounds VOC per gallon less water as applied;

**C** is the VOC content of the coating in pounds VOC per gallon less water as applied; and

**U** is the usage rate of the coating in gallons per day.

### 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 July 18, 2016.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed Registration Revision No. 041-37407-00010. The staff recommends to the Commissioner that this Registration Revision be approved.

### IDEM Contact

- (a) Questions regarding this proposed registration can be directed to Kendra Sutherland 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) 234-5401 or toll free at 1-800-451-6027 extension 4-5401.
- (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 Permit Guide on the Internet at: <http://www.in.gov/idem/5881.htm>; and the Citizens' Guide to IDEM on the Internet at: <http://www.in.gov/idem/6900.htm>.

**Appendix A: Emissions Calculations**  
Revision 37407

**Company Name:** Howden Roots, LLC  
**Address City IN Zip:** 900 West Mount Street, Connersville, Indiana 47331  
**Permit Number:** 041-37407-00010  
**Reviewer:** Kendra Sutherland

	Paint Booth #1 Before (Large Rotary and Centrifugal)	Paint Booth #1 After (Small Rotary Production Lines 10' and 12', Large	Total Increase from change in production lines at Paint Booth #1
PM	1.15	2.83	1.68
PM10	1.15	2.83	1.68
PM2.5	1.15	2.83	1.68
SO2	0.00	0.00	0.00
Nox	0.00	0.00	0.00
VOC	5.31	11.22	5.91
CO	0.00	0.00	0.00
Total HAP	1.83	1.33	0.00
Worst single HAP	0.75- Butyl-OH	1.33 Ethylene	1.33 Ethylene

Emission Unit	Registration Revision 37407 (tons/year)									
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAP	worst single HAP	
Paint Booth 1 (Small Rotary Production Lines 10' and 12', Large Rotary, Truck Mount and Centrifugal)*	1.68	1.68	1.68	0.00	0.00	5.91	0.00	0.00	1.33	Ethylene
New Paint Booth 4 (Dedicated to Small Rotary Production Lines Primarily Touch Up Prior to Shipments)*	0.67	0.67	0.67	0.00	0.00	1.82	0.00	0.40	0.38	2-Butanol
New Paint Booth 5 (Small Rotary - Monorail System -)*	1.34	1.34	1.34	0.00	0.00	6.47	0.00	0.76	0.75	2-Butanol
Low Natural Gas Curing Oven	0.01	0.03	0.03	0.00	0.43	0.02	0.36	0.01	0.01	Hexane
<b>Total</b>	<b>3.69</b>	<b>3.71</b>	<b>3.71</b>	<b>0.00</b>	<b>0.43</b>	<b>14.22</b>	<b>0.36</b>	<b>1.17</b>	<b>1.33</b>	<b>Ethylene</b>

\* Indicates worst-case coating

**Appendix A: Emissions Calculations  
Total Emissions**

**Company Name: Howden Roots, LLC**  
**Address City IN Zip: 900 West Mount Street, Connorsville, Indiana 47331**  
**Permit Number: 041-37407-00010**  
**Reviewer: Kendra Sutherland**

Emission Unit	tons/year									
	PM	PM10	PM2.5	SO2	NOx	VOC	CO	Total HAP	worst singleHAP	
Paint Booth 1 (Small Rotary Production Lines 10' and 12' , Large Rotary, Truck Mount and Centrifugal)*	2.83	2.83	2.83	0.00	0.00	11.22	0.00	1.33	1.33	Ethylene
Paint Booth 4 (Dedicated to Small Rotary Production Lines Primarily Touch Up Prior to Shipments )*	0.67	0.67	0.67	0.00	0.00	1.82	0.00	0.40	0.38	2-Butanol
Paint Booth 5 (Small Rotary - Monorail System)*	1.34	1.34	1.34	0.00	0.00	6.47	0.00	0.76	0.75	2-Butanol
Welding and Flame Cutting	7.92	7.92	7.92	0.00	0.00	0.00	0.00	1.01	0.22	Mn
Natural Gas Combustion	0.02	0.08	0.08	0.01	1.07	0.06	0.90	0.02	0.02	Hexane
<b>Total</b>	<b>12.77</b>	<b>12.83</b>	<b>12.83</b>	<b>0.01</b>	<b>1.07</b>	<b>19.57</b>	<b>0.90</b>	<b>3.51</b>	<b>1.33</b>	<b>Ethylene</b>

\* Indicates worst-case coating

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

**Company Name:** Howden Roots, LLC  
**Address City IN Zip:** 900 West Mount Street, Connersville, Indiana 47331  
**Permit Number:** 041-37407-00010  
**Reviewer:** Kendra Sutherland

Unit Type	Paint Booth Unit Per Hour	Maximum Number of Units Facility Can Make Per Year	Coating				Cleanup Solvent				Total VOC Emissions TPY*
			Gallons of Coating Per Unit	Maximum Coating Gallons	lbs/VOC Per Gallon of Coating (Worst Case from Each Unit Category in Tables Below)	Potential VOC Tons Per Year	Gallons per Unit Worst Case Cleanup Solvent	Maximum Cleanup Solvent Gallons	lbs/VOC Gallon Cleanup Solvent	Max /Cleanup Solvent VOC Emissions TPY	
Truck Mount	0.37	800	1.50	1200.00	3.46	2.08	0.25	200.00	6.52	0.65	2.73
Small Rotary ( Production Lines 2" to 8" - Stand Alone Touch Up Booth/Booth 4)	0.2	20000	0.20	800.00	2.91	1.16	0.01	200.00	6.52	0.65	1.82
Small Rotary (Production Lines 2" to 8" - Monorail Booth/Booth 5)	3.30	20000	0.20	4000.00	2.91	5.82	0.01	200.00	6.52	0.65	6.47
Small Rotary ( Production Lines 10" to 12")	0.37	800	2.50	2000.00	3.46	3.46	0.25	200.00	6.52	0.65	4.11
Large Rotary (All Rotary Over 12")	0.286	480	3.00	1440.00	3.46	2.49	0.50	240.00	6.52	0.78	3.27
Centrifugal	0.258	60	5.00	300.00	3.46	0.52	3.00	180.00	6.52	0.59	1.11
<b>Total</b>						<b>13.45</b>				<b>3.33</b>	<b>19.51</b>

Total VOC Emissions (tons/year)		
Paint Booth #1	Paint Booth #4	Paint Booth #5
11.22	1.82	6.47

\*Based on the maximum throughput of the facility for each type of unit produced

**Particulate Matter Summary**

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 Gallon Solids	Transfer Efficiency
<b>Paint Booth 1 - Dedicated to Small Rotary Production Lines 10" and 12", Large Rotary, Truck Mount and Centrifugal</b>																
WR - 9143	8.71	71.20%	58.0%	13.2%	60.6%	23.40%	1.0	0.33	2.92	1.15	0.38	9.10	1.66	0.91	4.91	75%
EM - 9304	8.69	41.03%	4.5%	36.6%	4.7%	48.96%	1.0	0.33	3.33	3.18	1.05	25.16	4.59	1.85	6.49	75%
EM - 9341	7.50	46.13%	0.0%	46.1%	0.0%	45.20%	1.0	0.33	3.46	3.46	1.14	27.40	5.00	1.46	7.65	75%
EM - 9330	7.85	43.26%	0.0%	43.3%	0.0%	45.74%	1.0	0.33	3.40	3.40	1.12	26.90	4.91	1.61	7.42	75%
AWS - 8569	10.74	28.68%	0.0%	28.7%	0.0%	45.02%	1.0	0.33	3.08	3.08	1.02	24.40	4.45	2.77	6.84	75%
EM - 9343	8.37	44.96%	4.9%	40.0%	4.9%	46.94%	1.0	0.33	3.52	3.35	1.11	26.53	4.84	1.66	7.14	75%
AWS - 3313H	11.29	30.68%	0.0%	30.7%	0.0%	51.86%	1.0	0.33	3.46	3.46	1.14	27.43	5.01	2.83	6.68	75%
WR - 9219	8.46	73.32%	59.6%	13.8%	60.6%	23.37%	1.0	0.33	2.95	1.16	0.38	9.21	1.68	0.82	4.98	75%
<b>Paint Booth 4 - Dedicated to Small Rotary Production Lines Primarily Touch Up Prior to Shipment</b>																
WR-9106B	8.64	68.50%	0.0%	68.5%	0.0%	31.50%	1.0	0.25	2.91	5.92	1.48	35.51	6.48	0.75	18.79	75%
WR-7655B	8.41	71.00%	0.0%	71.0%	15.9%	29.00%	1.0	0.25	2.91	5.97	1.49	35.83	6.54	0.67	20.59	75%
F75B50	8.59	32.00%	17.6%	14.4%	15.9%	68.00%	1.0	0.25	2.77	1.24	0.31	7.43	1.36	1.60	1.82	75%
<b>Paint Booth 5 Dedicated to Small Rotary Monorail Production Lines</b>																
WR-9106B	8.64	68.50%	0.0%	68.5%	0.0%	31.50%	1.0	0.50	2.91	5.92	2.96	71.02	12.96	1.49	18.79	75%
WR-7655B	8.41	71.00%	0.0%	71.0%	15.9%	29.00%	1.0	0.50	2.91	5.97	2.99	71.65	13.08	1.34	18.96	75%
F75B50	8.59	32.00%	17.6%	14.4%	15.9%	68.00%	1.0	0.50	2.77	1.24	0.62	14.86	2.71	3.20	4.27	75%

**Potential Emissions**

PTE Summary for spray booths Coating =

\* Only one solvent can be used at a time per booth, therefore the worst case for particulate and VOC was taken

	VOC (lb/day)		Uncontrolled PM (tpy)	Controlled PM (tpy)	
8-2-9 applies	27.43	>15 lbs/day	Paint Booth 1	2.83	0.01
8-2-9 applies	35.51	>15 lbs/day	Paint Booth 4	0.67	0.00
8-2-9 applies	71.02	<15 lbs/day	Paint Booth 5	1.34	0.01

**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  
Controlled (PM w/dry filter at 99.5% eff)

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

**Company Name:** Howden Roots, LLC  
**Address City IN Zip:** 900 West Mount Street, Connerville, Indiana 47331  
**Permit Number:** 041-37407-00010  
**Reviewer:** Kendra Sutherland

### HAP PTE Summary

Material	Density (Lb/Gal)	Gallons of Material (gal/unit)	Maximum (unit/hour)	Weight % Xylene	Weight % Ethylene Glycol	Weight % 2-Butanol	Weight % Cobalt 2-Ethylhexanote	Weight % Diethylethanamine	Xylene Emissions (ton/yr)	Ethylene Glycol Emissions (ton/yr)	2-Butanol (ton/yr)	Cobalt 2-Ethylhexanote (ton/yr)	Diethylethanamine Emissions (ton/yr)
<b>Booth 1</b>													
WR - 9143	8.71	1.000000	0.33	0.00%	10.57%	0.00%	0.00%	2.22%	0.00	<b>1.33</b>	0.00	0.00	0.28
EM - 9304	8.69	1.000000	0.33	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
EM - 9341	7.53	1.000000	0.33	1.14%	0.00%	0.00%	0.00%	0.00%	0.12	0.00	0.00	0.00	0.00
EM - 9330	7.85	1.000000	0.33	1.51%	0.00%	0.00%	0.00%	0.00%	<b>0.17</b>	0.00	0.00	0.00	0.00
AWS - 8569	10.74	1.000000	0.33	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
EM - 9343	8.37	1.000000	0.33	0.47%	0.00%	0.00%	0.00%	0.00%	0.06	0.00	0.00	0.00	0.00
AWS - 3313	11.29	1.000000	0.33	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00
WR - 9219	8.41	1.000000	0.33	0.00%	0.00%	0.00%	0.00%	2.38%	0.00	0.00	0.00	0.00	<b>0.29</b>
<b>Booth 4</b>													
WR-9106B	<b>8.64</b>	1.000000	0.25	0.00%	0.00%	1.00%	0.00%	0.00%	0.00	<b>0.00</b>	0.09	0.00	0.00
WR-7655B	8.41	1.000000	0.25	0.00%	0.00%	1.00%	0.00%	0.00%	0.00	0.00	0.09	0.00	0.00
F75B50	8.59	1.000000	0.25	0.00%	0.00%	4.00%	0.20%	0.00%	0.00	0.00	0.38	0.02	0.00
<b>Booth 5</b>													
WR-9106B	<b>8.64</b>	1.000000	0.50	0.00%	0.00%	1.00%	0.00%	0.00%	0.00	<b>0.00</b>	0.19	0.00	0.00
WR-7655B	8.41	1.000000	0.50	0.00%	0.00%	1.00%	0.00%	0.00%	0.00	0.00	0.18	0.00	0.00
F75B50	8.59	1.000000	0.50	0.00%	0.00%	4.00%	0.20%	0.00%	0.00	0.00	<b>0.75</b>	0.01	0.00
Total State Potential Emissions									<b>0.17</b>	<b>1.33</b>	<b>0.75</b>	<b>0.02</b>	<b>0.29</b>

#### 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: **Howden Roots, LLC**  
 Address City IN Zip: **900 West Mount Street, Connersville, Indiana 47331**  
 Permit Number: **041-37407-00010**  
 Reviewer: **Kendra Sutherland**

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	
<b>WELDING</b>												
Submerged Arc	2	10		0.036	0.011			0.720	0.220	0.000	0	0.220
Metal Inert Gas (MIG)(carbon steel)	6	2		0.0055	0.0005			0.066	0.006	0.000	0	0.006
Stick (E7018 electrode)	2	1.65		0.0211	0.0009			0.070	0.003	0.000	0	0.003
Tungsten Inert Gas (TIG)(carbon steel)	1	1		0.0055	0.0005			0.006	0.001	0.000	0	0.001
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	3	2	15	0.1622	0.0005	0.0001	0.0003	0.876	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**	2	0.375	150	0.0039				0.070	0.000	0.000	0.000	0.000
<b>EMISSION TOTALS</b>												
Potential Emissions lbs/hr								1.81				0.23
Potential Emissions lbs/day								43.37				5.51
Potential Emissions tons/year								7.92				1.01

\*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: Howden Roots, LLC**  
**Address City IN Zip: 900 West Mount Street, Connersville, Indiana 47331**  
**Permit Number: 041-37407-00010**  
**Reviewer: Kendra Sutherland**

Emission Unit	Maximum Capacity (MMBtu/hr)
Boiler	1.5
Paint Line Curing Oven	1
Total	2.5

Heat Input Capacity	HHV	Potential Throughput
MMBtu/hr	mmBtu	MMCF/yr
2.5	1020	21.5
	mmscf	

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	0.02	0.08	0.08	0.01	1.07	0.06	0.90

\*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

#### Hazardous Air Pollutants (HAPs)

	HAPs - Organics					Total - 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	2.3E-05	1.3E-05	8.1E-04	0.02	3.7E-05	<b>0.02</b>

	HAPs - Metals					Total - 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	5.4E-06	1.2E-05	1.5E-05	4.1E-06	2.3E-05	<b>5.9E-05</b>
						<b>Total HAPs</b>
						<b>0.02</b>
						<b>Worst HAP</b>
						<b>0.02</b>

Methodology is the same as above.

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

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



# Indiana Department of Environmental Management

*We Protect Hoosiers and Our Environment.*

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**Michael R. Pence**  
Governor

**Carol S. Comer**  
Commissioner

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

TO: Rachel Anderson  
Howden Roots LLC  
900 W Mount St  
Connersville, IN 47331

DATE: August 18, 2016

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

SUBJECT: Final Decision  
Registration  
041-37407-00010

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](mailto:jbrush@idem.IN.gov).

Final Applicant Cover letter.dot 2/17/2016

# Mail Code 61-53

IDEM Staff	CDENNY 8/18/2016 Howden Roots LLC 041-37407-00010 (final)		<b>CERTIFICATE OF MAILING ONLY</b>	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		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee
											Remarks
1		Rachel Anderson Howden Roots LLC 900 W Mount St Connersville IN 47331 (Source CAATS)									
2		Connersville City Council and Mayors Office 500 Central Avenue Connersville IN 47331 (Local Official)									
3		Fayette County Health Department 401 N Central Ave Ste 8 Connersville IN 47331-1901 (Health Department)									
4		Fayette County Commissioners 401 Central Ave Connersville IN 47331 (Local Official)									
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Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is \$50,000 per piece subject to a limit of \$50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is \$500. The maximum indemnity payable is \$25,000 for registered mail, sent with optional postal insurance. See <b>Domestic Mail Manual R900, S913, and S921</b> for limitations of coverage on inured and COD mail. See <b>International Mail Manual</b> for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
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