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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: September 24, 2013

RE: Iron Baluster, Inc./039-33366-00586

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

Notice of Decision: Approval - Effective Immediately

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 13-15-5-3, this permit 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.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot 6/13/13

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
Michael R. Pence
Governor
Thomas W. Easterly
Commissioner

Minor Source Operating Permit Renewal
OFFICE OF AIR QUALITY

Iron Baluster, Inc.
1722 Eisenhower Drive North
Goshen, Indiana 46526

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M039-33366-00586	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: September 24, 2013 Expiration Date: September 24, 2023

TABLE OF CONTENTS

SECTION A SOURCE SUMMARY

This permit 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 Permittee 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 Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary urethane, decorative molding, and millwork manufacturing operation, a custom hardwood stair production line, and pre-fabricated, hardwood, cabinet door front coating operation.

Source Address:	1722 Eisenhower Drive North, Goshen, Indiana 46526
General Source Phone Number:	(574) 975-0288
SIC Code:	3086 (Plastics Foam Products), 2499 (Wood Products), 2434 (Wood Kitchen Cabinets)
County Location:	Elkhart
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) One (1) stationary urethane, decorative molding, and millwork manufacturing operation, including the following:

(1) Spray Booth # 1, constructed in 2004 and exhausting to stack identified as 001, with a maximum hourly capacity of coating 30 silicone rubber molds per hour; dry filters as control devices for overspray; and one (1) 15 pound per square inch (psi) spray coating gun and using high volume low pressure application;

(2) Spray Booth # 2, constructed in 2004 and exhausting to stack identified as 002, with a maximum hourly capacity of coating 20 silicone rubber molds per hour; dry filters as control devices for overspray; and one (1) 15 pound per square inch (psi) spray coating gun and using high volume low pressure application;

(3) Urethane Sanding and Finishing operations, consisting of a table saw, miter saws, a band saw, table routers, and a sander (# 2), constructed in 2004, with a maximum hourly capacity of processing 50 polyurethane millwork parts per hour, using one (1) Grizzly Model G0637 industrial dust collector, identified as DC2, for particulate matter control, and exhausting to the indoors; and

(4) Equipment Cleaning and Maintenance #020; consisting of SP741 solvent, mineral spirits and acetone; SP741 solvent is used to flush out the urethane line and contains Naphthalene as a HAP, mineral spirits are used to clean silicone-covered parts, and acetone is not defined as a VOC.

(b) One (1) hardwood door front coating operation, constructed in 2009, and including the following:

(1) Spray Booth #5, identified as SB5, constructed in 2009, coating a maximum of forty (40) pre-fabricated hardwood cabinet door fronts per hour, having three (3) fifteen (15) pound per square inch (psi) spray coating guns for high volume low pressure application, using dry filters to control overspray, and exhausting to two (2) external exhausts identified as SVSB5a and SVSB5b;

(c) One (1) custom hardwood stair production line, constructed in 2009, and including the following:

(1) One (1) woodworking line, identified as WW, constructed in 2009, with a maximum material throughput of six hundred (600) pounds of wood per hour, using one (1) external, high efficiency return-air bagfilter system, identified as WWDC1, to control particulate emissions, exhausting to the indoors, and consisting of the following equipment:

(A) Two (2) Drill Presses (DP1 & DP2);
(B) One (1) Stroke Sander (SS1);
(C) One (1) 8" Edge Sander (ES1);
(D) One (1) 24" Belt Sander (BS1);
(E) Four (4) Manual Sanding Tables (ST1 - ST4);
(F) One (1) CNC Router (R1);
(G) One (1) CNC Lathe (L1);
(H) Five (5) Shapers (SH1 - SH5);
(I) Two (2) Molding Machines (MM1 & MM2);
(J) One (1) Basket Jointer (J1);
(K) Two (2) Gang Rip Saws (GRS1 & GRS2);
(L) Two (2) Strate Line Saws (SLS1 & SLS2);
(M) Two (2) Table Saws (S1 & S2); and
(N) Ten (10) Chop Saws (CS1 - CS10);

(2) Two (2) natural gas fired space heaters, identified as H1 and H2, approved for construction in 2009, with a maximum rated heat input capacity of three hundred fifty thousandths (0.350) MMBtu/hr, each, uncontrolled and exhausting inside the building.

(d) One (1) waste wood heating unit, identified as WWH, approved for construction in 2013, with a maximum heat input capacity of 0.25 MMBtu/hour, utilizing no control, and exhausting indoors.

(e) Unpaved roads.

SECTION B GENERAL CONDITIONS

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

Terms in this permit 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 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, M039-33366-00586, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information

(a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(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 permit.

(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, Indiana 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.9 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

(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.

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee 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 Permittee shall implement the PMPs.

(c) 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 Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.

(d) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M039-33366-00586 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 permit.

B.11 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(b) A timely renewal application is one that is:

(1) Submitted at least one hundred twenty (120) days prior to the date of the expiration of this permit; and

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

(c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.15 Inspection and Entry
[326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.

(b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.18 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(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 permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-1 (Applicability) and 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this 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.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator except as provided in 326 IAC 4-2 or in this permit. The Permittee shall not operate a refuse incinerator or refuse burning equipment except as provided in 326 IAC 9-1-2 or in this permit.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee 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).

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project.

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

Testing Requirements [326 IAC 2-6.1-5(a)(2)]

C.8 Performance Testing [326 IAC 3-6]

(a) For performance testing required by this permit, a test protocol, except as provided elsewhere in this permit, shall be submitted to:

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

no later than thirty-five (35) days prior to the intended test date.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.

(c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U. S. EPA.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale

such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.12 Response to Excursions or Exceedances

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

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

(2) recording that operations returned or are returning to normal without operator action (such as through response by a computerized distribution control system); or

(3) any necessary follow-up actions to return operation to normal or usual manner of operation.

(c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:

(1) monitoring results;

(2) review of operation and maintenance procedures and records; and/or

(3) inspection of the control device, associated capture system, and the process.

(d) Failure to take reasonable response steps shall be considered a deviation from the permit.

(e) The Permittee shall record the reasonable response steps taken.

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ, no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ

that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Permittee shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

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

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

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit “calendar year” means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) stationary urethane, decorative molding, and millwork manufacturing operation, including the following:

(1) Spray Booth # 1, constructed in 2004 and exhausting to stack identified as 001, with a maximum hourly capacity of coating 30 silicone rubber molds per hour; dry filters as control devices for overspray; and one (1) 15 pound per square inch (psi) spray coating gun and using high volume low pressure application;

(2) Spray Booth # 2, constructed in 2004 and exhausting to stack identified as 002, with a maximum hourly capacity of coating 20 silicone rubber molds per hour; dry filters as control devices for overspray; and one (1) 15 pound per square inch (psi) spray coating gun and using high volume low pressure application;

(b) One (1) hardwood door front coating operation, constructed in 2009, and including the following:

(1) Spray Booth #5, identified as SB5, constructed in 2009, coating a maximum of forty (40) pre-fabricated hardwood cabinet door fronts per hour, having three (3) fifteen (15) pound per square inch (psi) spray coating guns for high volume low pressure application, using dry filters to control overspray, and exhausting to two (2) external exhausts identified as SVSB5a and SVSB5b;

(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 2-6.1-5(a)(1)]

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating(s) applied in Spray Booth #5, to wood furniture and cabinets, with the exception of applying no more than ten (10) gallons of coating per day used for touch-up and repair operations, shall utilize one of the following application methods:

Airless Spray Application
Air Assisted Airless Spray Application
Electrostatic Spray Application
Electrostatic Bell or Disc Application
Heated Airless Spray Application
Roller Coating
Brush or Wipe Application
Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

D.1.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(d), Spray Booths #1, #2, and #5, shall each be controlled by a dry

particulate filter, waterwash, or an equivalent control device, subject to the following:

(a) The source shall operate the control device in accordance with manufacturer's specifications.

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

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Pan, in accordance with Section B - Preventive Maintenance Plan of this permit, is requried for these facilities and any corresponding control devices.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) stationary urethane, decorative molding, and millwork manufacturing operation, including the following:

(3) Urethane Sanding and Finishing operations, consisting of a table saw, miter saws, a band saw, table routers, and a sander (# 2), constructed in 2004, with a maximum hourly capacity of processing 50 polyurethane millwork parts per hour, using one (1) Grizzly Model G0637 industrial dust collector, identified as DC2, for particulate matter control, and exhausting to the indoors; and

(4) Equipment Cleaning and Maintenance #020; consisting of SP741 solvent, mineral spirits and acetone; SP741 solvent is used to flush out the urethane line and contains Naphthalene as a HAP, mineral spirits are used to clean silicone-covered parts, and acetone is not defined as a VOC.

(c) One (1) custom hardwood stair production line, constructed in 2009, and including the following:

(1) One (1) woodworking line, identified as WW, constructed in 2009, with a maximum material throughput of six hundred (600) pounds of wood per hour, using one (1) external, high efficiency return-air bagfilter system, identified as WWDC1, to control particulate emissions, exhausting to the indoors, and consisting of the following equipment:

Note: Previously, the throughput of this woodworking line corresponded to the throughput of Spray Booth #4. However, Spray Booth #4 is being removed with this renewal. The source has indicated that the maximum throughput of the woodworking line will remain 600 pounds of wood per hour.

(A) Two (2) Drill Presses (DP1 & DP2);
(B) One (1) Stroke Sander (SS1);
(C) One (1) 8" Edge Sander (ES1);
(D) One (1) 24" Belt Sander (BS1);
(E) Four (4) Manual Sanding Tables (ST1 - ST4);
(F) One (1) CNC Router (R1);
(G) One (1) CNC Lathe (L1);
(H) Five (5) Shapers (SH1 - SH5);
(I) Two (2) Molding Machines (MM1 & MM2);
(J) One (1) Basket Jointer (J1);
(K) Two (2) Gang Rip Saws (GRS1 & GRS2);
(L) Two (2) Strate Line Saws (SLS1 & SLS2);
(M) Two (2) Table Saws (S1 & S2); and
(N) Ten (10) Chop Saws (CS1 - CS10);

(2) Two (2) natural gas fired space heaters, identified as H1 and H2, approved for construction in 2009, with a maximum rated heat input capacity of three hundred fifty thousandths (0.350) MMBtu/hr, each, uncontrolled and exhausting inside the building.

(d) One (1) waste wood heating unit, identified as WWH, approved for construction in 2013, with a maximum heat input capacity of 0.25 MMBtu/hour, utilizing no control, and exhausting indoors.

(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 2-6.1-5(a)(1)]

D.2.1 Prevention of Significant Deterioration (PSD) Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the PM, PM10, and PM2.5 emissions from the following emission unit(s) shall not exceed the pound per hour limitations listed below:

(a) The PM emissions after control from the woodworking line, identified as WW, shall not exceed 0.55 pounds per hour.

(b) The PM10 emissions after control from the woodworking line, identified as WW, shall not exceed 0.55 pounds per hour.

(c) The PM2.5 emissions after control from the woodworking line, identified as WW, shall not exceed 0.55 pounds per hour.

Compliance with these limits, combined with the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source wide total potential to emit of PM, PM10, and PM2.5 to less than 250 tons per 12 consecutive month period each and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

D.2.2 Particulate [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the urethane sanding and finishing operations shall not exceed 1.342 pounds per hour when operating at a process weight rate of 378 pounds per hour.

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the woodworking line (WW) shall not exceed 1.83 pounds per hour when operating at a process weight rate of 600 pounds per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

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

D.2.3 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the 0.25 MMBtu/hr waste wood heating unit (WWH) shall be limited to 0.6 pounds per MMBtu heat input.

D.2.4 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Pan, in accordance with Section B - Preventive Maintenance Plan of this permit, is requried for these facilities and any corresponding control devices.

Compliance Determination Requirements

D.2.5 Particulate Control

(a) In order to comply with Conditions D.2.1 and D.2.2(b), the external, high efficiency return-air bagfilter system (WWDC1) for particulate control shall be in operation and control emissions from the woodworking line at all times that the woodworking line is in operation.

(b) In order to comply with Condition D.2.2(a), the industrial dust collector (DC2) for particulate control shall be in operation and control emissions from the urethane sanding and finishing operations at all times that the urethane sanding and finishing operations are in operation.

(c) In the event that bag failure is observed in a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.

Compliance Monitoring Requirements [**326 IAC 2-6.1-5(a)(2)]**

D.2.6 Broken or Failed Bag Detection

(a) For a single compartment baghouses controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C- Response to Excursions or Exceedances).

(b) For a single compartment baghouse controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the emissions unit. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section C- Response to Excursions or Exceedances).

Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

D.2.7 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the woodworking line (WW). Inspections required by this condition shall not be performed in consecutive months. All defective bags shall be replaced.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.2.8 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.7, the Permittee shall maintain records of the baghouse inspections.

(b) Section C - General Record Keeping Requirements contains the Permittee's obligation with regard to the recordkeeping requirements of this requirement.

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

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Iron Baluster, Inc.
Address:	1722 Eisenhower Drive North
City:	Goshen, Indiana 46526
Phone #:	(574) 975-0288
MSOP #:	M039-33366-00586

I hereby certify that Iron Baluster, Inc. is:

□ still in operation.
□ no longer in operation.

I hereby certify that Iron Baluster, Inc. is:

□ in compliance with the requirements of MSOP M039-33366-00586.
□ not in compliance with the requirements of MSOP M039-33366-00586.

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

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

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP:_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____
_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____
_____

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Source Operating Permit Renewal

Source Background and Description

Source Name:	**Iron Baluster, Inc.**
Source Location:	**1722 Eisenhower Drive North, Goshen, Indiana 46526**
County:	**Elkhart**
SIC Code:	**3086 (Plastics Foam Products), 2499 (Wood Products), 2434 (Wood Kitchen Cabinets)**
Permit Renewal No.:	**M039-33366-00586**
Permit Reviewer:	**Sarah Street**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Iron Baluster, Inc. relating to the operation of a stationary urethane, decorative molding, and millwork manufacturing operation, a custom hardwood stair production line, and pre-fabricated, hardwood, cabinet door front coating operation. On June 28, 2013, from Iron Baluster, Inc. submitted an application to the OAQ requesting to renew its operating permit. Iron Baluster, Inc. was issued its MSOP M039-26567-00586 on October 23, 2008.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) stationary urethane, decorative molding, and millwork manufacturing operation, including the following:

(1) Spray Booth # 1, constructed in 2004 and exhausting to stack identified as 001, with a maximum hourly capacity of coating 30 silicone rubber molds per hour; dry filters as control devices for overspray; and one (1) 15 pound per square inch (psi) spray coating gun and using high volume low pressure application;

(2) Spray Booth # 2, constructed in 2004 and exhausting to stack identified as 002, with a maximum hourly capacity of coating 20 silicone rubber molds per hour; dry filters as control devices for overspray; and one (1) 15 pound per square inch (psi) spray coating gun and using high volume low pressure application;

(3) Urethane Sanding and Finishing operations, consisting of a table saw, miter saws, a band saw, table routers, and a sander (# 2), constructed in 2004, with a maximum hourly capacity of processing 50 polyurethane millwork parts per hour, using one (1) Grizzly Model G0637 industrial dust collector, identified as DC2, for particulate matter control, and exhausting to the indoors; and

(4) Equipment Cleaning and Maintenance #020; consisting of SP741 solvent, mineral spirits and acetone; SP741 solvent is used to flush out the urethane line and contains Naphthalene as a HAP, mineral spirits are used to clean silicone-covered parts, and acetone is not defined as a VOC.

(b) One (1) hardwood door front coating operation, constructed in 2009, and including the following:

(1) Spray Booth #5, identified as SB5, constructed in 2009, coating a maximum of forty (40) pre-fabricated hardwood cabinet door fronts per hour, having three (3) fifteen (15) pound per square inch (psi) spray coating guns for high volume low pressure application, using dry filters to control overspray, and exhausting to two (2) external exhausts identified as SVSB5a and SVSB5b;

(c) One (1) custom hardwood stair production line, constructed in 2009, and including the following:

(1) One (1) woodworking line, identified as WW, constructed in 2009, with a maximum material throughput of six hundred (600) pounds of wood per hour, using one (1) external, high efficiency return-air bagfilter system, identified as WWDC1, to control particulate emissions, exhausting to the indoors, and consisting of the following equipment:

Note: Previously, the throughput of this woodworking line corresponded to the throughput of Spray Booth #4. However, Spray Booth #4 is being removed with this renewal. The source has indicated that the maximum throughput of the woodworking line will remain 600 pounds of wood per hour.

(A) Two (2) Drill Presses (DP1 & DP2);
(B) One (1) Stroke Sander (SS1);
(C) One (1) 8" Edge Sander (ES1);
(D) One (1) 24" Belt Sander (BS1);
(E) Four (4) Manual Sanding Tables (ST1 - ST4);
(F) One (1) CNC Router (R1);
(G) One (1) CNC Lathe (L1);
(H) Five (5) Shapers (SH1 - SH5);
(I) Two (2) Molding Machines (MM1 & MM2);
(J) One (1) Basket Jointer (J1);
(K) Two (2) Gang Rip Saws (GRS1 & GRS2);
(L) Two (2) Strate Line Saws (SLS1 & SLS2);
(M) Two (2) Table Saws (S1 & S2); and
(N) Ten (10) Chop Saws (CS1 - CS10);

(2) Two (2) natural gas fired space heaters, identified as H1 and H2, approved for construction in 2009, with a maximum rated heat input capacity of three hundred fifty thousandths (0.350) MMBtu/hr, each, uncontrolled and exhausting inside the building.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

(a) Spray Booth # 3, constructed in 2004 and exhausting to stack identified as 003, with a maximum hourly capacity of coating 50 polyurethane millwork parts per hour; dry filters as control devices for overspray; and one (1) 15 pound per square inch (psi) spray coating gun and using high volume low pressure application;

(b) Aerosol Spray Can Painting #019, constructed in 2004, with a maximum gallon per hour (gph) application rate of 0.09; the twelve (12) ounce aerosol spray cans are used for surface coating touch up;

(c) Urethane Machine # 1, constructed in 2004 and exhausting to stack identified as stack 002, with a maximum hourly capacity of filling urethane at 20 silicone rubber molds per hour; makes

polyurethane millwork parts by applying two-part mixture of urethane and isocynate to a rubber mold;

(d) Urethane Machine #2, constructed in 2004 and exhausting to stack identified as stack 005, with a maximum hourly capacity of filling urethane at 20 silicone rubber molds per hour; makes polyurethane millwork parts by applying two-part mixture of urethane and isocynate to a rubber mold;

Note: Spray Booth #3, Aerosol Spray Can Painting #019, Urethane Machine #1, and Urethane Machine #2 were associated with the one (1) stationary urethane, decorative molding, and millwork manufacturing operation.

(e) Spray Booth # 4, identified as SB4, constructed in 2004 and reconstructed in 2009, coating a maximum of one (1) custom hardwood stair unit per hour, having one (1) fifteen (15) pound per square inch (psi) spray coating gun for high volume low pressure application, using dry filters to control overspray, and exhausting to one (1) stack identified as SB4;

Note: Spray Booth #4 was associated with the one (1) custom hardwood stair production line.

New Emission Units and Pollution Control Equipment

The following is a new emission unit:

(a) One (1) waste wood heating unit, identified as WWH, approved for construction in 2013, with a maximum heat input capacity of 0.25 MMBtu/hour, utilizing no control, and exhausting indoors.

Note: The addition of this wood heating unit would only require an Administrative Amendment, pursuant to the provisions of 326 IAC 2-6.1-6. Therefore, this MSOP Renewal is not being evaluated as New Source Review.

The following will be added to the permit with this renewal:

(b) Unpaved roads.

Note: The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability. The potential to emit (PTE) calculations of fugitive emissions are being included in this permit renewal (see Appendix A).

Integral Determination

Potential emissions for particulate matter (PTE) for the woodworking operations were calculated after consideration of the controls. In October 1993 a Final Order Granting Summary Judgment was signed by Administrative Law Judge ("ALJ") Garrettson resolving an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls. Based on this ruling, potential emissions for particulate matter were calculated after consideration of the dust collector and baghouse controls for determining operating permit level purposes and 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) applicability. However, for purposes of determining the applicability of Prevention of Significant Deterioration (PSD), potential particulate matter emissions from the woodworking operations were calculated before consideration of the dust collector and baghouse controls.

Existing Approvals

Since the issuance of the M039-26567-00586 on October 23, 2008, the source has constructed or has been operating under the following additional approvals:

(a) Significant Permit Revision No. 039-28310-00586 issued on January 11, 2010; and

(a) Administrative Amendment No. 039-33246-00586 issued on June 5, 2013.

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O3	Attainment effective July 19, 2007, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Attainment effective October 18, 2000, for the 1-hour ozone standard for the South Bend-Elkhart area, including Elkhart County, and is a maintenance area for the 1-hour National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour standard was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for PM2.5.

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. Elkhart County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Elkhart County has been classified as attainment for $PM_{2.5}$. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Elkhart 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.

Fugitive Emissions

(a) The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.

(b) Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	59.19
PM_{10}	57.26
$PM_{2.5}$	56.61
SO_2	0.03
NO_x	0.84
VOC	41.90
CO	0.91
GHGs as CO_2e	595.37
Single HAP (Xylene)	5.80
Total HAP	12.23

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all regulated pollutants, excluding GHGs, is less than 100 tons per year. However, PM, PM10, PM2.5 and VOC emissions are each equal to or greater than twenty-five (25) tons per year. The source is not subject to the provisions of 326 IAC 2-7. Therefore, the source will be issued an MSOP Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of GHGs is less than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year.

This source has the potential to emit 226.44 tons of biogenic CO2 per year. On July 20, 2011 U.S. EPA issued a deferral of Biogenic CO2 emissions from PSD and Title V. On July 12, 2013, the United States Court of Appeals for the District of Columbia Circuit vacated the U.S. EPA Deferral Rule. Therefore, these CO2 emissions were included in the total GHG emissions.

(c) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source will be issued an MSOP Renewal.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this MSOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)									
	PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP
Spray Booth #1	4.57	4.57	4.57	0.00	0.00	2.44	0.00	0.00	0.00	0.00
Spray Booth #2	3.05	3.05	3.05	0.00	0.00	1.63	0.00	0.00	0.00	0.00
Spray Booth #5	7.09	7.09	7.09	0.00	0.00	36.13	0.00	0.00	12.14	5.80 (Xylene)
Urethane Sanding and Finishing	39.06	39.06	39.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Equipment Cleaning and Maintenance	0.00	0.00	0.00	0.00	0.00	1.67	0.00	0.00	0.05	0.05 (Naphthalene)
Woodworking Line***	2.39	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion	0.01	0.02	0.02	0.00	0.30	0.02	0.25	362.90	0.01	0.01 (Hexane)
Waste Wood Heating****	0.44	0.41	0.36	0.03	0.54	0.01	0.66	232.47	0.04	0.02 (Hydrogen Chloride)
Fugitives: Unpaved Roads	2.58	0.66	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Entire Source	**59.19**	**57.26**	**56.61**	**0.03**	**0.84**	**41.90**	**0.91**	**595.37**	**12.23**	**5.80 (Xylene)**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	100,000 CO_2e	NA	NA

* 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".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
*** PTE is after control because the control is considered integral.
**** This unit has the potential to emit 226.44 tons of biogenic CO2 per year. On July 20, 2011 U.S. EPA issued a deferral of Biogenic CO2 emissions from PSD and Title V. On July 12, 2013, the United States Court of Appeals for the District of Columbia Circuit vacated the U.S. EPA Deferral Rule. Therefore, these CO2 emissions were included in the total GHG emissions for the waste wood heating unit.

PSD Minor Source Status (326 IAC 2-2)

The unlimited potential to emit (before consideration of the integral woodworking controls) of PM, PM10, and PM2.5 from the entire source is greater than 250 tons per year (See Appendix A).

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the PM, PM10, and PM2.5 emissions from the following emission unit(s) shall not exceed the pound per hour limitations listed below:

(a) The PM emissions after control from the woodworking line, identified as WW, shall not exceed 0.55 pounds per hour.

(b) The PM10 emissions after control from the woodworking line, identified as WW, shall not exceed 0.55 pounds per hour.

(c) The PM2.5 emissions after control from the woodworking line, identified as WW, shall not exceed 0.55 pounds per hour.

Compliance with these limits, combined with the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source wide total potential to emit of PM, PM10, and PM2.5 to less than 250 tons per 12 consecutive month period each and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Note: These emission limitations are new with this renewal.

Federal Rule Applicability

New Source Performance Standards (NSPS)

(a) The requirements of Standards of Performance for Small Industrial-Commercial Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in the permit, because the wood-fired heating unit has a maximum heat capacity of less than 10 MMBtu/hr.

(b) The requirements of the New Source Performance Standard for Surface Coating of Metal Furniture, 40 CFR 60, Subpart EE (40 CFR 60.310 through 60.316) (326 IAC 12), are not included in the permit, since the source does not coat metal furniture. This source coats wood cabinets and silicone rubber molds.

(c) There are no New Source Performance Standards (NSPS) (40 CFR Part 60) included in this permit renewal.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Wood Furniture Manufacturing Operations, 40 CFR 63, Subpart JJ (63. 800 through 63.808) (326 IAC 20-14), are not included in this permit since this source is not a major source of HAPs as defined in 40 CFR 63.2.

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Plywood and Composite Wood Products, Subpart DDDD are not included in the permit for the woodworking operation, because this facility does not manufacture plywood or composite wood and not a major source of HAPs.

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Wood Building Products, 40 CFR 63, Subpart QQQQ (63.4670 though 63.4781) (326 IAC 20-79), are not included in this permit since this source does not coat wood building products, this source coats wood cabinets and silicone rubber molds.

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Metal Parts and Products, 40 CFR 63, Subpart MMMM (63.3880 through 63.3981) (326 IAC 20-80), are not included in this permit, since the source does not coat metal parts or products; this source coats wood cabinets and silicone rubber molds.

(h) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs)\ for Surface Coating of Plastic Parts and Products, 40 CFR 63, Subpart PPPP (63.4480 through 63.4581) (326 IAC 20-81), are not included in this permit since this source does not coat plastic parts and products, this source coats wood cabinets and silicone rubber molds and is not a major source of HAPs.

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

(j) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD (326 IAC 20-95), are not included in this permit because the facility is not a major source of HAPs.

(k) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Miscellaneous Coating Manufacturing, 40 CFR 63, Subpart HHHHH (63.7980 through 63.8105) (326 IAC 20-88), are not included in this permit since the source is not a major source of HAPs.

(l) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Paint Stripping and Miscellaneous Surface Coating Operations, 40 CFR 63, Subpart HHHHHH (63.11169 through 63.11180) (326 IAC 20), are not included in this permit, since this source does not perform paint stripping using chemical strippers that contain methylene chloride in the removal of dried paint, does not perform spray application of coatings to motor vehicles or mobile equipments, and does not perform spray application of coating that contains chromium, lead, manganese, nickel, or cadmium to a plastic and/or metal substrate.

(m) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Wood Preserving Area Sources, Subpart QQQQQQ are not included in the permit for the woodworking operation, because this facility does not perform wood preserving as defined in 40 CFR 63.11433.

(n) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit renewal.

Compliance Assurance Monitoring (CAM)

(o) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability - Entire Source

(a) 326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
MSOP applicability is discussed under the Unrestricted Potential Emissions section above.

(b) 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
PSD applicability is discussed under the Potential to Emit After Issuance section above.

This existing source is not a major stationary source, under PSD (326 IAC 2-2), because the potential to emit PM, PM10, and PM2.5 is limited to less than 250 tons per year, the potential to emit all other attainment regulated criteria pollutants are less than 250 tons per year, the potential to emit greenhouse gases (GHGs) is less than the PSD subject to regulation threshold of one hundred thousand (100,000) tons of CO2 equivalent emissions (CO2e) per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

(c) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.

(d) 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.

(e) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Individual Facilities

Spray Booths (#1, #2, #5)

(a) 326 IAC 6-3-2 (Particulate Emissions Limitations for Manufacturing Sources)
Pursuant to 326 IAC 6-3-2(d), Spray Booths 1, 2, and 5, shall each be controlled by a dry particulate filter, waterwash, or an equivalent control device, subject to the following:

(1) The source shall operate the control device in accordance with manufacturer's specifications.

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

(A) Repair control device so that no overspray is visibly detectable at the exhaustor accumulates on the ground.

(B) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

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

(b) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
(1) Pursuant to 326 IAC 8-1-6(1), Spray Booth #1 and Spray Booth #2 (which coat silicone rubber molds) are not subject to the requirements of this rule because each booth has potential VOC emissions of less than 25 tons per year.

(2) Pursuant to 326 IAC 8-1-6(3)(A), since Spray Booth #5 (which coats prefabricated hardwood cabinet door fronts) is regulated by 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), this booth is not subject to the requirements of this rule, even though the potential VOC emissions from this booth are greater than 25 tons per year.

(c) 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating)

(1) Spray booths #1 and #2 are not subject to the requirements of this rule because these emission units do not surface coat wood furnishings. These booths coat silicone rubber molds.

(2) Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the surface coating(s) applied in Spray Booth #5, to wood furniture and cabinets, with the exception of applying no more than ten (10) gallons of coating per day used for touch-up and repair operations, shall utilize one of the following application methods:

Airless Spray Application
Air Assisted Airless Spray Application
Electrostatic Spray Application
Electrostatic Bell or Disc Application
Heated Airless Spray Application
Roller Coating
Brush or Wipe Application
Dip-and-Drain Application

High Volume Low Pressure (HVLP) Spray Application is an accepted alternative method of application for Air Assisted Airless Spray Application. HVLP spray is the technology used to apply coating to substrate by means of coating application equipment which operates between one-tenth (0.1) and ten (10) pounds per square inch gauge (psig) air pressure measured dynamically at the center of the air cap and at the air horns of the spray system.

(d) 326 IAC 8-11 (Wood Furniture Coatings)
Pursuant to 326 IAC 8-11-1, this source is not subject to the requirements of 326 IAC 8-11 because the source is not located in one of the following counties: Lake Porter, Clark, or Floyd County.

(e) 326 IAC 8 (VOC Rules)
There are no VOC Rules that apply to Spray Booth #1 or Spray Booth #2.

Urethane Sanding and Finishing

(f) 326 IAC 6-3-2 (Particulate Emissions Limitations for Manufacturing Sources)
Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the urethane sanding and finishing operations shall not exceed 1.342 pounds per hour when operating at a process weight rate of 378 pounds per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

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

Based on Appendix A, the uncontrolled potential to emit PM from the urethane sanding and finishing operations is 8.92 lbs/hr. Therefore, the source will be required to operate the control device (DC2) in order to comply with this emission limitation. The controlled potential to emit PM is 0.089 pounds per hour, which is less than the 1.342 pounds per hour limitation.

Woodworking Line

(g) 326 IAC 6-3-2 (Particulate Emissions Limitations for Manufacturing Sources)
Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the woodworking line (WW) shall not exceed 1.83 pounds per hour when operating at a process weight rate of 600 pounds per hour.

The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

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

Based on Appendix A, the uncontrolled potential to emit PM from the woodworking line is 546.48 lbs/hr. Therefore, the source will be required to operate the control device (WWDC1) in order to comply with this emission limitation. The controlled potential to emit PM is 0.546 pounds per hour, which is less than the 1.83 pounds per hour limitation.

Equipment Cleaning and Maintenance

(h) 326 IAC 8 (VOC Rules)
There are no VOC rules that apply to the equipment cleaning and maintenance operations.

Combustion Units (Space Heaters & Wood Heating Unit)

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

(1) The natural gas-fired space heaters are not subject to 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating), because, pursuant to 326 IAC 1-2-19, these emission units do not meet the definition of an indirect heating unit.

(2) Pursuant to 326 IAC 6-2-1(d), the wood-fired heating unit (WWH) is subject to 326 IAC 6-2-4 since this heating unit is a source of indirect heat, and is constructed after September 21, 1983. Pursuant to 326 IAC 6-2-4(a), since Q for the wood-fired heating unit is less than 10 mmBtu/hr, particulate emissions from the wood-fired heating unit shall not exceed 0.6 pounds per million Btu (lb/MMBtu).

Based on the AP-42 uncontrolled wood combustion particulate emission factor of 0.4 lb/MMBtu, the wood-fired heating unit is able to comply with the particulate emission limitation under 326 IAC 6-2-4 without the use of a control device.

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

(1) The natural gas-fired space heaters are exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight.

(2) The wood-fired heating unit (WWH) is not subject to the requirements of 326 IAC 6-3, since this unit is not a "manufacturing process" as defined by 326 IAC 6-3-1.5.

Compliance Determination and Monitoring Requirements

(a) The one (1) external, high efficiency return-air bagfilter system, identified as WWDC1, controlling particulate emissions from the one (1) woodworking line, identified as WW, is exhausting indoors. Therefore, quarterly baghouse inspections will be required. This requirement is new with this renewal.

There are no other compliance determination and monitoring requirements applicable to this source, other than what is specifically addressed in state rule requirements discussed above.

(b) There are no testing requirements applicable to this source.

Recommendation

The staff recommends to the Commissioner that the MSOP Renewal be approved. 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 application for the purposes of this review was received on June 28, 2013.

Conclusion

The operation of this stationary urethane, decorative molding, and millwork manufacturing operation, a custom hardwood stair production line, and pre-fabricated, hardwood, cabinet door front coating operation shall be subject to the conditions of the attached MSOP Renewal No. M039-33366-00586.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Sarah Street 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) 232-8427 or toll free at 1-800-451-6027 extension 2-8427.

(b) A copy of the findings is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/

(c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emissions Calculations
Summary

Company Name: Iron Baluster, Inc.
Address City IN Zip: 1722 Eisenhower Drive North, Goshen, Indiana
Permit No.: M039-33366-00586
Reviewer: Sarah Street

Potential to Emit Before Integral Woodworking Controls* (tons/year)											
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**GHGs as**	**Total HAPs**	**Worst Single HAP**	
Spray Booth #1	4.57	4.57	4.57	0.00	0.00	2.44	0.00	0.00	0.00	0.00	
Spray Booth #2	3.05	3.05	3.05	0.00	0.00	1.63	0.00	0.00	0.00	0.00	
Spray Booth #5	7.09	7.09	7.09	0.00	0.00	36.13	0.00	0.00	12.14	5.80	Xylene
Urethane Sanding and Finishing	39.06	39.06	39.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Equipment Cleaning and Maintenance	0.00	0.00	0.00	0.00	0.00	1.67	0.00	0.00	0.05	0.05	Naphthalene
Woodworking Line*	2,393.58	2,393.58	2,393.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Natural Gas	0.01	0.02	0.02	0.00	0.30	0.02	0.25	362.90	0.01	0.01	Hexane
Waste Wood Heating**	0.44	0.41	0.36	0.03	0.54	0.01	0.66	232.47	0.04	0.02	Hydrogen Chloride
Fugitives: Unpaved Roads	2.58	0.66	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Uncontrolled	**2,450.38**	**2,448.45**	**2,447.80**	**0.03**	**0.84**	**41.90**	**0.91**	**595.37**	**12.23**	**5.80**	**Xylene**

Potential to Emit After Integral Woodworking Controls* (tons/year)											
Emission Unit	**PM**	**PM10**	**PM2.5**	**SO2**	**NOx**	**VOC**	**CO**	**GHGs as CO2e**	**Total HAPs**	**Worst Single HAP**	
Spray Booth #1	4.57	4.57	4.57	0.00	0.00	2.44	0.00	0.00	0.00	0.00	
Spray Booth #2	3.05	3.05	3.05	0.00	0.00	1.63	0.00	0.00	0.00	0.00	
Spray Booth #5	7.09	7.09	7.09	0.00	0.00	36.13	0.00	0.00	12.14	5.80	Xylene
Urethane Sanding and Finishing	39.06	39.06	39.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Equipment Cleaning and Maintenance	0.00	0.00	0.00	0.00	0.00	1.67	0.00	0.00	0.05	0.05	Naphthalene
Woodworking Line*	2.39	2.39	2.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Natural Gas Combustion	0.01	0.02	0.02	0.00	0.30	0.02	0.25	362.90	0.01	0.01	Hexane
Waste Wood Heating**	0.44	0.41	0.36	0.03	0.54	0.01	0.66	232.47	0.04	0.02	Hydrogen Chloride
Fugitives: Unpaved Roads	2.58	0.66	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total Uncontrolled Emissions	**59.19**	**57.26**	**56.61**	**0.03**	**0.84**	**41.90**	**0.91**	**595.37**	**12.23**	**5.80**	**Xylene**

* Potential emissions for particulate matter (PTE) for the woodworking operations were calculated after consideration of the controls. In October 1993 a Final Order Granting Summary Judgment was signed by Administrative Law Judge ("ALJ") Garrettson resolving an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls. Based on this ruling, potential emissions for particulate matter were calculated after consideration of the dust collector and baghouse controls for determining operating permit level purposes and 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) applicability. However, for purposes of determining the applicability of Prevention of Significant Deterioration (PSD), potential particulate matter emissions from the woodworking operations were calculated before consideration of the dust collector and baghouse controls.

** This source has the potential to emit 226.44 tons of biogenic CO2 per year. On July 20, 2011 U.S. EPA issued a deferral of Biogenic CO2 emissions from PSD and Title V. On July 12, 2013, the United States Court of Appeals for the District of Columbia Circuit vacated the U.S. EPA Deferral Rule. Therefore, these CO2 emissions were included in the total GHG emissions for the waste wood heating unit.

Appendix A: Emissions Calculations
VOC and Particulate
Surface Coating Operations

Company Name: Iron Baluster, Inc.
Address City IN Zip: 1722 Eisenhower Drive North, Goshen, Indiana
Permit No.: M039-33366-00586
Reviewer: Sarah Street

Material	Density (Lb/Gal)	Weight % Volatiles (H20 & Organics)	Weight % Water & Exempt	Weight % Organics	Volume % Water	Weight % Non-Volatiles (solids)	Material Usage Rate (gal/unit)*	Maximum Throughput (unit/hour)	Pounds VOC per gallon of coating	Pounds VOC per gallon of coating less water	Potential Hourly VOC Emissions (lbs/hr)	Potential Daily VOC Emissions (lb/day)	Potential Annual VOC Emissions (ton/yr)	Potential Annual Particulate Emissions (ton/yr)	lb VOC/gal solids	Transfer Efficiency
Booth 1 - Urethane, decorative molding, and millwork manufacturing operation																
Berkley Barrier Coat	10.7	69.40%	63.2%	6.20%	0%	46.4%	0.0280	30.000	0.66	0.66	**0.56**	**13.37**	**2.44**	**4.6**	1.4	75%
Booth 2 - Urethane, decorative molding, and millwork manufacturing operation																
Berkley Barrier Coat	10.7	69.40%	63.2%	6.20%	0%	46.4%	0.0187	30.000	0.66	0.66	**0.37**	**8.93**	**1.63**	**3.0**	1.4	75%
Booth 5 - Hardwood Cabinet Door Front Coating Operation																
3090 Stain Base	6.42	100.00%	25.0%	75.00%	0%	0%	0.2490	1.000	4.82	4.82	1.20	28.77	5.25	0.0	0.0	75%
HC Precatalyzed Lacquer	7.58	76.97%	0%	76.97%	0%	23.03%	0.7499	1.000	5.83	5.83	4.38	105.00	19.16	1.43	25.33	75%
HC Aristocoat Sealer	9.99	31.00%	0%	31.00%	0%	68.99%	0.7499	1.000	3.10	3.10	2.32	55.74	10.17	5.66	4.49	75%
4-PLT Thinner-Cleaner	7.07	100.00%	0%	100.00%	0%	0%	0.0499	1.000	7.07	7.07	0.35	8.47	1.55	0.0	0.0	100%
											8.25	**197.98**	**36.13**	**7.09**		

State Potential Emissions	**Add worst case coating to all solvents**	**9.18**	**220.29**	**40.20**	**14.71**

METHODOLOGY
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Potential Hourly VOC Emissions (lbs/hr) = Material Usage Rate (gal/unit) * Maximum Throughput (units/hr) * Pounds of VOC per Gallon coating (lb/gal)
Potential Daily VOC Emissions (lbs/day) = Material Usage Rate (gal/unit) * Maximum Throughput (units/hr) * Pounds of VOC per Gallon coating (lb/gal) * (24 hr/day)
Actual Daily VOC Emissions (lbs/day) = Material Usage Rate (gal/unit) * Maximum Throughput (units/hr) * Pounds of VOC per Gallon coating (lb/gal) * Anticipated Actual Hours of Operation (hr/day)
Potential Annual VOC Emissions (tons/yr) = Material Usage Rate (gal/unit) * Maximum Throughput (units/hr) * Pounds of VOC per Gallon coating (lb/gal) * (8760 hr/yr) * (1 ton/2000 lbs)
Actual Annual VOC Emissions (tons/yr) = Material Usage Rate (gal/unit) * Maximum Throughput (units/hr) * Pounds of VOC per Gallon coating (lb/gal) * Anticipated Actual Hours of Operation (hr/yr) * (1 ton/2000 lbs)
Potential Annual Particulate Emissions (tons/yr) = (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)
State Potential Emissions (tons/yr) = Worst Case Coating + Sum of all solvents, adhesives, and fillers

Aerosol cans:

Iron Baluster, Inc. uses aerosol cans [PrepRite Problock] for touch-up.
The characteristics of the paint are:

Volatility:	46	wt % less water and exempt solvents
Density	7.46	lb/gal
2007 usage	60	cans
Wt of can	12	oz
Components:		
Acetone	13	wt %
Propane	14	wt %
Butane	13	wt %
Volatility	82	volume % (total)
VOCs	46.2	wt % (total volatility less water and exempt solvents) - from MSDS

To determine PTE, assume that the cans are used in proportion to the Barrier Coat and Final Finish paints:

Cans used in 2007	lb aerosols, 2007	Paint, 2007 gallons	Ratio, lb aerosols / gal paint	Max. paint, gph	Max. aerosols, lb/hr	VOC, wt %	PTE of VOCs, lb/hr	**PTE of VOCs, tpy**
60	45	1,370	0.033	2.74	0.090	46.2	0.04	**0.18**

Aerosol painting

For aerosol painting, solids = 18 wt% talc + 11% titanium dioxide = 29%
Max PTE = 0.090 lb/hr * 29% PM * 8760 hours/yr / 2000 lb/ton = **0.114 tpy**

Appendix A: Emission Calculations
HAP Emission Calculations
Surface Coating Operations

Company Name: Iron Baluster, Inc.
Address City IN Zip: 1722 Eisenhower Drive North, Goshen, Indiana
Permit No.: M039-33366-00586
Reviewer: Sarah Street

Material	Density (Lb/Gal)	Material Usage Rate (gal/unit)	Maximum Throughput (unit/hour)	Weight % Ethyl Benzene	E-Benzene Emissions (ton/yr)	Weight % Formaldehyde	Formaldehyde Emissions (ton/yr)	Weight % Methanol	Methanol Emissions (ton/yr)	Weight % Toluene	Toluene Emissions (ton/yr)	Weight % Xylene	Xylene Emissions (ton/yr)
Booth 1 - Urethane, decorative molding, and millwork manufacturing operation													
Berkley Barrier Coat	10.70	0.0280	30.000	0%	0	0%	0	0%	0	0%	0	0%	0
Booth 2 - Urethane, decorative molding, and millwork manufacturing operation													
Berkley Barrier Coat	10.70	0.0187	30.000	0%	0	0%	0	0%	0	0%	0	0%	0
Booth 5 - Hardwood Cabinet Door Front Coating Operation													
3090 Stain Base	6.42	0.2490	1.000	0%	0	0%	0	0%	0	0%	0	0%	0
HC Precatalyzed Lacquer	7.58	0.7499	1.000	9.90%	2.46	0.09%	0.02	0%	0	9.90%	2.46	20.70%	5.15
HC Aristocoat Sealer	9.99	0.7499	1.000	0.55%	0.18	0.09%	0.03	0%	0	0%	0	1.72%	0.56
4-PLT Thinner-Cleaner	7.07	0.0499	1.000	0%	0	0%	0	9.38%	0.14	66.28%	1.02	5.59%	0.09
					2.65		**0.05**		**0.14**		**3.49**		**5.80**

State Potential Emissions	**Total Single HAPs**	**2.65**	**0.05**	**0.14**	**3.49**	**5.80**
	Total Combined HAPs	**12.14**				

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
State Potential Emissions (Total Single HAPs (tons/yr)) = Worst Case Coating + Sum of all solvents, adhesives, and fillers used
State Potential Emissions (Total Combined HAPs (tons/yr)) = Sum of all Single HAPs totals

Appendix A: Emission Calculations
Baghouse for the Urethane Sanding & Finishing Operations

Company Name: Iron Baluster, Inc.
Address City IN Zip: 1722 Eisenhower Drive North, Goshen, Indiana
Permit No.: M039-33366-00586
Reviewer: Sarah Street

Particulate Emissions

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Uncontrolled Particulate (PM) Emissions (lb/hr)	Controlled Particulate (PM) Emissions (lb/hr)	Uncontrolled Particulate (PM) Emissions (tons/yr)	Controlled Particulate (PM) Emissions (tons/yr)
DC2	99.0%	0.0030	3,468.0	8.92	0.089	39.06	0.391
			Total	8.92	0.09	**39.06**	0.39

METHODOLOGY
Potential Particulate After Controls (lb/hr) = Grain Loading (gr/acf) x Air Flow Rate (acfm) x 60 (minutes/hour) x (1 lb/7000 grains)
Potential Particulate Before Controls (lb/hr) = Potential Particulate After Controls (lb/hr) / (1 - control efficiency)
Potential Particulate After Controls (tons/year) = Potential Particulate After Controls (lb/hr) x 8760 (hr/year) x (1 ton/2000 lbs)
Potential Particulate Before Controls (tons/year) = Potential Particulate After Controls (tons/yr) / (1 - control efficiency)

NOTES
* PM, PM10, and PM 2.5 emissions are assumed equal.

326 IAC 6-3-2(e) Allowable Rate of Emissions

Unit ID	Process Rate ** (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)
DC2	8.45	0.004226	**0.11**

METHODOLOGY
**Process weight; weight rate: Total weight of all materials introduced into any source operation (326 IAC 1-2-59(a)).
Allowable Emissions (lb/hr) = 4.10(Process Weight Rate (lb/hr)^0.67
Allowable Emissions (tons/yr) = (Allowable Emissions (lb/hr)*8760)/2000

Appendix A: Emissions Calculations
Potential Emissions from Solvent Cleaning

Company Name: Iron Baluster, Inc.
Address City IN Zip: 1722 Eisenhower Drive North, Goshen, Indiana
Permit No.: M039-33366-00586
Reviewer: Sarah Street

MDI emissions from urethane operations.:

According to the document "MDI/Polymeric MDI Emissions Reporting Guidelines for the Polyurethane Industry," by the Alliance for the Polyurethanes Industry, MDI emissions from these type of operations are extremely low due to the low vapor pressure of MDI.

Solvent emissions:

SP741 solvent is used to flush out the urethane line.

Solvent density:	10.1	lb/gal		
Amt solvent used in 2002:	6,070	gal	61,307	lb/yr solvent
Amt shipped for recycling:	5,995	gal	60,550	lb/yr solvent

Emissions (assume that what was not recovered for recycling was emitted)

75	gal	758	lb/yr solvent

The solvent includes the following HAPs:

Naphthalene: 0 - 3% Use 3% for the max.: 23 lb/yr naphthalene

Assume these emissions occurred during 8 hours/day, 5 days/wk, 50 weeks per year (2000 hours)

Hourly emissions = 0.0375 gal/hr 0.379 lb/hr solvent

Therefore, PTE = hourly emissions * 8,760 hours/year = 3,318 lb/yr solvent **1.66 tpy VOCs**
0.05 tpy HAPs

Acetone

Acetone is not a regulated pollutant under Federal or IDEM regulations because it is not defined as a Volatile Organic Compound (VOC). Therefore, it is not subject to air pollution regulations or permitting.

Use of mineral spirits

Mineral spirits are used to clean silicone-covered parts.
A total of 1080 gallons were used in 2007 (at 6.58 lb/gal, this equals 164 gallons).
Indiana rule 326 IAC 2-1.1-3(e)(10)(D) contains an exemption for cleaners and solvents with a vapor pressure <15 mmHg at 100 F; or a vapor pressure <5 mm Hg at 68 F; if the use for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
The definition of "insignficant activity" for Title V purposes includes this same definition.

Mineral spirits have a vapor pressure of 0.38 mm Hg @ 20 C, which meets the IDEM exemption.
Approximately 164 gallons were used in 2007.

Assume that 10% of the mineral spirits evaporate (low vapor pressure).
Density = 6.58 lb/gal
Assume that the 164 gallons of use represents 2000 hours.

PTE, VOCs = 164 gal * 6.58 lb/gal * 10% / 2000 hours * (8,760 hours) =

473 lb/yr
1.3 lb/day
0.05 lb/hr
0.01 tons/year

Appendix A: Emission Calculations
Woodworking Operations

Company Name: Iron Baluster, Inc.
Address City IN Zip: 1722 Eisenhower Drive North, Goshen, Indiana
Permit No.: M039-33366-00586
Reviewer: Sarah Street

Particulate Emissions

Unit ID	Control Efficiency (%)	Grain Loading per Actual Cubic foot of Outlet Air (grains/cub. ft.)	Gas or Air Flow Rate (acfm.)	Controlled Particulate (PM) Emissions (lb/hr)	Controlled Particulate (PM) Emissions (tons/yr)	Potential Emissions Before Integral Control (tons/yr)
WWDC1	99.9%	0.0030	21,252.0	0.55	2.39	2,393.58
			Total	0.55	**2.39**	**2,393.58**

METHODOLOGY

Emission Rate in lbs/hr (after controls) = (grains/cub. ft.) (cub. ft./min.) (60 min/hr) (lb/7000 grains)
Emission Rate in tons/yr = (lbs/hr) (8760 hr/yr) (ton/2000 lb)
Emission Rate in tons/yr (before controls) = Emission Rate (after controls): (lbs/hr)/(1-control efficiency)

NOTES

PM, PM10, and PM 2.5 emissions are assumed equal.

Potential emissions for particulate matter (PTE) for the woodworking operations were calculated after consideration of the controls. In October 1993 a Final Order Granting Summary Judgment was signed by Administrative Law Judge ("ALJ") Garrettson resolving an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls.

326 IAC 6-3-2(e) Allowable Rate of Emissions

Unit ID	Process Rate ** (lbs/hr)	Process Weight Rate (tons/hr)	Allowable Emissions (lbs/hr)
WWDC1	600	0.30	**1.83**

METHODOLOGY

**Process weight; weight rate: Total weight of all materials introduced into any source operation (326 IAC 1-2-59(a)).
The process rate for the woodworking operation is inherently limited by the maximum throughput of the corresponding surface coating booth, and is based on a throughput rate of one hundred fifty (150) board ft/hr of red oak at four (4.0) lbs/board ft.

Allowable Emissions (lb/hr) = 4.10(Process Weight Rate (lb/hr)^0.67
Allowable Emissions (tons/yr) = (Allowable Emissions (lb/hr)*8760)/2000

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100

Company Name: Iron Baluster, Inc.
Address City IN Zip: 1722 Eisenhower Drive North, Goshen, Indiana
Permit No.: M039-33366-00586
Reviewer: Sarah Street

Heat Input Capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
0.70	1020	6.0

= 2 @ 0.35 MMBtu/hr each

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.01	0.02	0.02	0.00	0.30	0.02	0.25

*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

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
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	6.312E-06	3.607E-06	2.254E-04	5.411E-03	1.022E-05	**5.656E-03**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
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	1.503E-06	3.306E-06	4.208E-06	1.142E-06	6.312E-06	**1.647E-05**
					Total HAPs	**5.673E-03**
					Worst HAP	**5.411E-03**

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.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	361	0.0	0.0
Summed Potential Emissions in tons/yr	361		
CO2e Total in tons/yr	363		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
External Combustion Boiler
Wood Waste Combustion
Dry Wood

Company Name: Iron Baluster, Inc.
Address City IN Zip: 1722 Eisenhower Drive North, Goshen, Indiana
Permit No.: M039-33366-00586
Reviewer: Sarah Street

	Capacity (MMBtu/hr)
Waste wood heating unit (WWH)	0.25

	Pollutant						
	PM*	**PM10***	**PM2.5***	**SO2**	**NOx**	**VOC**	**CO****
Emission Factor in lb/MMBtu	0.4	0.377	0.327	0.025	0.49	0.013	0.6
Potential Emissions in tons/yr	0.44	0.41	0.36	0.03	0.54	0.01	0.66

Wet wood is considered to be greater than or equal to 20% moisture content. Dry wood is considered to be less than 20% moisture content.

*The PM10 and PM2.5 emission factors include the condensible PM emission factor of 0.017 lb/MMBtu, measured by EPA Method 202 (or equivalent) and the appropriate filterable PM emission factor, measured by EPA Method 5 (or equivalent). The PM emission factor is filterable PM measured by EPA Method 5 (or equivalent).

**The CO emission factor is for stokers and dutch ovens/fuel cells. Change the emission factor to 0.17 lb/MMBtu if the calculations are for a fluidized bed combustor.

Methodology

To convert from tons/hr capacity to MMBtu/hr capacity:

Heat Input Capacity (MMBtu/hr) = Capacity (tons/hr) x Higher Heating Value of wood fuel (Btu/lb) x (1 MMBtu/10^6 Btu/) x 2000 lbs/1 ton

Emission Factors are from AP-42 Chapter 1.6 (revised 3/02), SCCs #1-0X-009-YY where X = 1 for utilities, 2 for industrial, and 3 for commercial/institutional; Y = 01 for bark-fired boilers, 02 for bark and wet wood-fired boilers, 03 for wet wood-fired boilers, and 08 for dry wood-fired boilers

Emissions (tons/yr) = Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760hrs/yr x 1ton/2000lbs

	Selected Hazardous Air Pollutants				
	Acrolein	**Benzene**	**Formaldehyde**	**Hydrogen Chloride**	**Styrene**
Emission Factor in lb/MMBtu	4.0E-03	4.2E-03	4.4E-03	1.9E-02	1.9E-03
Potential Emissions in tons/yr	4.4E-03	4.6E-03	4.8E-03	0.021	2.1E-03
				Total HAP	0.037

Methodology

To convert from tons/hr capacity to MMBtu/hr capacity:

Heat Input Capacity (MMBtu/hr) = Capacity (tons/hr) x Higher Heating Value of wood fuel (Btu/lb) x (1 MMBtu/10^6 Btu/) x 2000 lbs/1 ton

Emission Factors are from AP-42 Chapter 1.6 (revised 3/02), SCCs #1-0X-009-YY where X = 1 for utilities, 2 for industrial, and 3 for commercial/institutional; Y = 01 for bark-fired boilers, 02 for bark and wet wood-fired boilers, 03 for wet wood-fired boilers, and 08 for dry wood-fired boilers

Emissions (tons/yr) = Capacity (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8760hrs/yr x 1ton/2000lbs
These factors include the five HAPs with the highest AP-42 emission factors.

	Greenhouse Gases				
	CO2	CH4	N2O		
Emission Factor in kg/mmBtu from 40 CFR 98	** 93.8	0.032			
Emission Factor in lb/mmBtu from AP-42			0.013		
Potential Emission in tons/yr	** 226.44	0.08	0.01	Biogenic CO2 emissions	
Summed Potential Emissions in tons/yr		0.09	**	226.44	tons/yr
CO2e Total in tons/yr		6.04	**	232.47	tons/yr total GHGs

Methodology

To convert from tons/hr capacity to MMBtu/hr capacity:

Heat Input Capacity (MMBtu/hr) = Capacity (tons/hr) x Higher Heating Value of wood fuel (Btu/lb) x (1 MMBtu/10^6 Btu/) x 2000 lbs/1 ton

CO2 and CH4 Emission Factors from Tables C-1 and 2 of 40 CFR Part 98 Subpart C. N2O emission factor from AP-43 Chapter 1.6 (revised 3/02).

Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Potential Emission (tons/yr) = Heat Input Capacity mmBtu/hr x Emission Factor (kg/mmBtu) x 2.20462 lb/kg x 8760 hrs/yr /2,000 lb/ton

Potential Emission (tons/yr) = Heat Input Capacity mmBtu/hr x Emission Factor (lb/mmBtu) x 8760 hrs/yr /2,000 lb/ton

CO2e (tons/yr) = CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).**

** This source has the potential to emit 226.44 tons of biogenic CO2 per year. On July 20, 2011 U.S. EPA issued a deferral of Biogenic CO2 emissions from PSD and Title V. On July 12, 2013, the United States Court of Appeals for the District of Columbia Circuit vacated the U.S. EPA Deferral Rule. Therefore, these CO2 emissions were included in the total GHG emissions for the waste wood heating unit.

Appendix A: Emission Calculations
Fugitive Dust Emissions - Unpaved Roads

Company Name: Iron Baluster, Inc.
Address City IN Zip: 1722 Eisenhower Drive North, Goshen, Indiana
Permit No.: M039-33366-00586
Reviewer: Sarah Street

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

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	15.0	2.0	30.0	1.0	30.0	792	0.150	4.5	1642.5
Vehicle (leaving plant) (one-way trip)	15.0	2.0	30.0	1.0	30.0	792	0.150	4.5	1642.5
		Totals	**60.0**		**60.0**			**9.0**	**3285.0**

Average Vehicle Weight Per Trip = 1.0 tons/trip
Average Miles Per Trip = 0.15 miles/trip

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

	PM	PM10	PM2.5	
where k =	4.9	1.5	0.15	lb/mi = particle size multiplier (AP-42 Table 13.2.2-2 for Industrial Roads)
s =	4.8	4.8	4.8	% = mean % silt content of unpaved roads (AP-42 Table 13.2.2-1 Sand/Gravel Processing Plant)
a =	0.7	0.9	0.9	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)
W =	1.0	1.0	1.0	tons = average vehicle weight (provided by source)
b =	0.45	0.45	0.45	= constant (AP-42 Table 13.2.2-2 for Industrial Roads)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [(365 - P)/365] (Equation 2 from AP-42 13.2.2)
Mitigated Emission Factor, Eext = E * [(365 - P)/365]
where P = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.2-1)

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	1.57	0.40	0.04	lb/mile
Mitigated Emission Factor, Eext =	1.03	0.26	0.03	lb/mile
Dust Control Efficiency =	50%	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	1.29	0.33	0.03	0.85	0.22	0.02	0.42	0.11	0.01
Vehicle (leaving plant) (one-way trip)	1.29	0.33	0.03	0.85	0.22	0.02	0.42	0.11	0.01
Totals	**2.58**	**0.66**	**0.07**	**1.70**	**0.43**	**0.04**	**0.85**	**0.22**	**0.02**

Methodology

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

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

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Len Morris
Iron Baluster, Inc.
1722 Eisenhower Drive N
Goshen, IN 46526-5383

DATE: September 24, 2013

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

SUBJECT: Final Decision
Minor Source Operating Permit Renewal
039-33366-00586

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:
Nate Black, D & B Environmental Services, Inc.
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.

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

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

September 24, 2013

TO: Goshen Public Library

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

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Iron Baluster, Inc.
Permit Number: 039-33366-00586

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	PWAY 9/24/2013 Iron Baluster, Inc 039-33366-00586 (final)		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	Type of Mail: **CERTIFICATE OF MAILING ONLY**

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		Len Morris Iron Baluster, Inc 1722 Eisenhower Dr N Goshen IN 46526 (Source CAATS)									
2		Elkhart County Health Department Elkhart County Health Department 608 Oakland Avenue Elkhart IN 46516 *(Health Department)*									
3		Goshen City Council and Mayors Office 202 South 5th Street Suite 1 Goshen IN 46528 *(Local Official)*									
4		Goshen Public Library 601 S 5th St Goshen IN 46526-3994 *(Library)*									
5		Elkhart County Board of Commissioners 117 North Second St. Goshen IN 46526 *(Local Official)*									
6		Nate Black D & B Environmental Services, Inc. 401 Lincoln Way West Osceola IN 46561 *(Consultant)*									
7											
8											
9											
10											
11											
12											
13											
14											
15											

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 ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.

FACSIMILIE OF PS Form 3877