



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: November 16, 2012

RE: BriMar Wood Innovations, Inc / 039-32426-00645

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

Notice of Decision – Approval

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 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from 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-AM.dot12/3/07



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Brian Roe
BriMar Wood Innovations, Inc.
2108 Eisenhower Dr. North
Goshen, State, 46526

November 16, 2012

Re: 039-32426-00645
First Administrative Amendment to
R039-22330-00645

Dear Brian Roe:

BriMar Wood Innovations, Inc was issued a Registration No. R039-22330-00645 on February 9, 2006 for a stationary custom finish wood panel manufacturing plant located at 2108 Eisenhower Dr. North, Goshen, IN 46526. On October 17, 2012, the Office of Air Quality (OAQ) received an application from the source requesting to change the coatings being utilized, the addition of a new spray booth (SB3), the replacement of the air make up unit (H1) and the two (2) natural gas fired heaters (H2 and H3) with a new air make up unit (HU-12) and the twelve (12) new natural gas fired heaters HU-1 through HU-11 and HU-13), and moving the woodworking operation (WO1) to the newly acquired adjacent building.

Pursuant to 326 IAC 2-5.5-6(d)(10), this change to the registration is considered administrative amendment because the registration is amended to incorporate a modification that adds an emissions unit of the same type that is already permitted or replaces an existing unit and that will comply with the same applicable requirements and permit terms and conditions as the existing emission unit, and the modification does not result in a potential to emit greater than the thresholds in 326 IAC 2-2 (PSD) or 326 IAC 2-3 (Emission Offset), or does not result in a potential to emit of the source equal to or greater than the thresholds in 326 IAC 2-5.1-3(a) (Permits). The attached Technical Support Document (TSD) provides additional explanation of the changes to the registration.

The source shall continue to operate according to 326 IAC 2-5.5 (Registrations). Please find enclosed the amended registration and Appendix A. A copy of the registration is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Deena Patton, at (800) 451-6027, press 0 and ask for Deena Patton or extension 4-5400, or dial (317) 234-5400.

Sincerely,

Nathan Bell, Section Chief
Permits Branch
Office of Air Quality

NB/DP

Attachment: Revised Registration

cc: File - Elkhart County
Elkhart County Health Department
Compliance and Enforcement Branch
Billing, Licensing and Training Section



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REGISTRATION OFFICE OF AIR QUALITY

**BriMar Wood Innovations
2108 Eisenhower Dr. North,
Goshen, Indiana 46526**

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. R039-22330-00645

Original signed by:
Kathy Moore, Section Chief
Permits Branch
Office of Air Quality

Issuance Date: February 9, 2006

First Registration Revision No. 039-24908-00645, issued on August 2, 2007

First Administrative Amendment No. 039-32426-00645

Issued by:


Nathan Bell, Section Chief
Permits Branch
Office of Air Quality

Issuance Date:

November 16, 2012

SECTION A

SOURCE SUMMARY

This registration is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Registrant to obtain additional permits pursuant to 326 IAC 2.

A.1 General Information

The Registrant owns and operates a stationary custom finish wood panel manufacturing plant..

Source Address:	2108 Eisenhower Dr., North, Goshen, IN 46526
General Source Phone Number:	(574) 535-0024
SIC Code:	2431 and 2521
County Location:	Elkhart County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) One (1) spray booth, identified as SB1, constructed in 2005, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB1.
- (b) One (1) spray booth, identified as SB2, constructed in 2007, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB2.
- (c) One (1) woodworking operation, identified as WO1, constructed in 2005, using portable bag filters (DC1 through DC7) as control with a maximum combined process weight rate of 850 pounds per hour, exhausting indoors, and consisting of the following:
 - (1) One (1) rip saw, and
 - (2) One (1) computerized panel saw
- (d) One (1) enclosed sanding booth, constructed in 2007, using cartridge type filters as controls, and exhausting indoors.
- (e) One (1) curing oven, utilizing halogen lamps, constructed in 2007, using no controls, and exhausting indoors.
- (f) One (1) air compressor, for vacuum pressing operation, constructed in 2007, with a maximum rate of 20 hp, and exhausting indoors.
- (g) Two (2) air compressors, for vacuum pressing operation, constructed in 2007, each with a maximum rate of 10 hp, and exhausting indoors.
- (h) One (1) spray booth, identified as SB3, approved for construction in 2012, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB3.
- (i) Twelve (12) natural gas fired heaters, identified as HU1 through HU11 and HU13, and one (1) natural gas fired air make-up unit, identified as HU12, approved for construction

in 2012, with a combined heat input rate of 2.7 million British thermal units (MMBtu) per hour, using no controls, and exhausting to stacks HU1 through HU13, respectively.

SECTION B

GENERAL CONDITIONS

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

Terms in this registration shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-1.1-1) shall prevail.

B.2 Effective Date of Registration [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this registration is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

B.3 Registration Revocation [326 IAC 2-1.1-9]

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

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to Registration No. R039-22330-00645 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

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

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

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

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

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

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

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

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

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

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

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

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

The Registrant shall implement the PMPs.

- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

Testing Requirements [326 IAC 2-5.1-3(e)(2)]

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

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

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

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

- (b) The Registrant 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 Registrant 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 Monitoring Requirements [326 IAC 2-5.1-3(e)(2)]

C.4 Instrument Specifications [326 IAC 2-1.1-11]

- (a) When required by any condition of this registration, 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.

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

Corrective Actions and Response Steps

C.5 Response to Excursions or Exceedances [326 IAC 2-5.1-3(e)(2)]

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

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

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

C.6 General Record Keeping Requirements [326 IAC 2-5.1-3(e)(2)]

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

date of registration issuance or the date of initial start-up, whichever is later, to begin such record keeping.

C.7 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-5.1-3(e)(2)] [IC 13-14-1-13]

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

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

- (b) Unless otherwise specified in this registration, any notice, report, or other submission required by this registration shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) The first report shall cover the period commencing on the date of issuance of this registration or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this registration. For the purpose of this registration, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1

OPERATION CONDITIONS

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

- (a) One (1) spray booth, identified as SB1, constructed in 2005, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB1.
- (b) One (1) spray booth, identified as SB2, constructed in 2007, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB2.
- (h) One (1) spray booth, identified as SB3, approved for construction in 2012, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB3.

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

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

D.1.1 Particulate Matter Limitations [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2(d), particulate from spray booths (SB1, SB2, and SB3), shall be controlled by dry particulate filters, and the Registrant shall operate the control device in accordance with manufacturer's specifications.
- (b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Registrant shall inspect the control device and do either of the following no later than four (4) hours after such observation:
 - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
 - (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (c) If overspray is visibly detected, the Registrant shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

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

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the Permittee shall perform surface coating of wood furniture and cabinets in spray booths S1, S2, and S3, with the exception of no more than ten (10) gallons of coating per day used for touch-up and repair operations, using one (1) or more of the following application systems:

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.

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

D.1.4 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.1(c), the Registrant shall maintain a record of any actions taken if overspray is visibly detected.
- (b) Section C - General Record Keeping Requirements of this permit contains the Registrant's obligations with regard to the records required by this condition.

SECTION D.2

OPERATION CONDITIONS

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

- (c) One (1) woodworking operation, identified as WO1, constructed in 2005, using portable bag filters (DC1 through DC7) as control with a maximum combined process weight rate of 850 pounds per hour, exhausting indoors, and consisting of the following:
 - (1) One (1) rip saw, and
 - (2) One (1) computerized panel saw

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

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

D.2.1 Preventive Maintenance Plan [326 IAC 1-6-3]

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

Compliance Determination Requirements

D.2.2 Particulate Control

In order to that the woodworking operation is exempt from the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the bag filters for particulate control shall be in operation and control emissions from the woodworking facilities at all times that the woodworking facilities are in operation.

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

**REGISTRATION
ANNUAL NOTIFICATION**

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

Company Name:	BriMar Wood Innovations, Inc.
Address:	2108 Eisenhower Dr. North
City:	Goshen, Indiana 46526
Phone Number:	(574) 535-0024
Registration No.:	R039-22330-00645

I hereby certify that BriMar Wood Innovations is :

still in operation.

I hereby certify that BriMar Wood Innovations is :

no longer in operation.

in compliance with the requirements of Registration No. R039-22330-00645.

not in compliance with the requirements of Registration No. R039-22330-00645.

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

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

Noncompliance:

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for an Administrative Amendment

Source Description and Location

Source Name:	BriMar Wood Innovations, Inc.
Source Location:	2108 Eisenhower Dr. North, Goshen, IN 46526
County:	Elkhart
SIC Code:	2431 (Millwork) and 2521 (Wood Office Furniture)
Registration No.:	R039-22330-00645
Registration Issuance Date:	February 9, 2006
Administrative Amendment No.:	039-32426-00645
Permit Reviewer:	Deena Patton

On October 17, 2012, the Office of Air Quality (OAQ) received an application from BriMar Wood Innovations, Inc. related to a modification to an existing stationary custom finish wood panel manufacturing plant.

Existing Approvals

The source was issued Registration No. R039-22330-00645 on February 9, 2006. The source has since received Registration Revision No. 039-24908-00645, issued on August 2, 2007.

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.
O ₃	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 PM _{2.5} .	

- (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 SO₂ 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 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

The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

Status of the Existing Source

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

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Spray Booths (SB1 & SB2)	5.88	5.88	NA	0.00	0.00	23.80	0.00	ND	0.04	0.04 (Formaldehyde)
Woodworking Operation (WO1)	8.28	8.28	NA	0.00	0.00	0.00	0.00	ND	0.00	0.00
Air Makeup unit and Office Heaters H1 through H3)	0.04	0.15	NA	0.01	1.93	0.11	1.62	ND	0.04	1.40E-03 (Formaldehyde)
Total PTE of Entire Source	14.20	14.31	NA	0.01	1.93	23.91	1.62	ND	0.08	0.04 (Formaldehyde)
Exemptions Levels**	5	5	5	10	10	10	25	100,000	25	10
Registration Levels**	25	25	25	25	25	25	100	100,000	25	10
These emissions are based upon Registration Revision 039-24908-00645 **The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD. ND = not determined										

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by BriMar Wood Innovations, Inc on October 17, 2012, relating to the change in coatings being utilized, the addition of a new spray booth (SB3), the replacement of the air make up unit (H1) and the two (2) natural gas fired heaters (H2 and H3) with a new air make up unit (HU-12) and the twelve (12) new natural gas fired heaters HU-1 through HU-11 and HU-13), and moving the woodworking operation (WO1) to the newly acquired adjacent building.

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

- (a) One (1) spray booth, identified as SB3, approved for construction in 2012, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB3.
- (b) Twelve (12) natural gas fired heaters, identified as HU1 through HU11 and HU13, and one (1) natural gas fired air make-up unit, identified as HU12, approved for construction in 2012, with a combined heat input rate of 2.7 million British thermal units (MMBtu) per hour, using no controls, and exhausting to stacks HU1 through HU13, respectively.

Emission Units Removed From the Source

The source has removed the following emission units:

- (a) Two (2) natural gas-fired heaters, identified as H2 and H3, approved for construction in 2007, maximum capacity of 0.5 MMBtu/hr each;
- (b) One (1) natural gas-fired air make-up unit, identified as H1, approved for construction in 2007, maximum capacity of 3.4 MMBtu/hr;

"Integral Part of the Process" Determination

In October of 1993 a Final Order Granting Summary Judgment was signed by an 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 from woodworking operations were calculated after consideration of the controls for purposes of determining permit level and 326 IAC 6-3-2 (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 controls.

Enforcement Issues

There are no pending enforcement actions related to this administrative amendment.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Administrative Amendment

This Registration is being revised through a Administrative Amendment pursuant to 326 IAC 2-5.5-6(d)(10), because the revision involves a modification that adds emission units of the same type that are already permitted or replaces an existing unit and will comply with the same applicable requirements and permit terms and conditions as the existing emission unit.

PTE of the Entire Source After Issuance of the Administrative Amendment

The table below summarizes the potential to emit of the entire source after issuance of this administrative amendment, reflecting all limits, of the emission units.

Process/ Emission Unit	Potential To Emit of the Entire Source with the Amendment (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Spray Booths	5.88 2.47	5.88 2.47	2.47	0.00	0.00	23.80 21.51	0.00	0.00	0.04 2.00	0.04 0.78 (Formaldehyde) (Toluene)
Woodworking Operation (WO1)	8.28 0.42	8.28 0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion	0.04 0.02	0.15 0.09	0.09	0.01 0.01	1.93 1.16	0.11 0.06	1.62 0.97	1399.76	0.04 0.02	1.4E-03 3.94E-05 (Formaldehyde) (Toluene)
Total PTE of Entire Source	14.20 2.91	14.34 2.98	2.98	0.01 0.01	1.93 1.16	23.94 21.58	1.62 0.97	1399.76	0.08 2.02	0.04 0.78 (Formaldehyde) (Toluene)
Exemptions Levels	5	5	5	10	10	10	25	100,000	25	10
Registration Levels	25	25	25	25	25	25	100	100,000	25	10

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 **The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

The table below summarizes the potential to emit of the entire source after issuance of this administrative amendment, reflecting all limits, of the emission units. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source with the Amendment (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Spray Booth (SB1, SB2, SB3)	2.47	2.47	2.47	0.00	0.00	21.51	0.00	0.00	2.00	0.78 (Toluene)
Woodworking Operation (WO1)	0.42	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas Combustion (HU1 through HU13)	0.02	0.09	0.09	0.01	1.16	0.06	0.97	1399.76	0.02	3.94E-05 (Toluene)
Total PTE of Entire Source	2.91	2.98	2.98	0.01	1.16	21.58	0.97	1399.76	2.02	0.78 (Toluene)
Exemptions Levels	5	5	5	10	10	10	25	100,000	25	10
Registration Levels	25	25	25	25	25	25	100	100,000	25	10

*Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 **The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

- (a) This revision will not change the registration status of the source, because the uncontrolled/unlimited potential to emit of all criteria pollutants from the entire source will still be within the ranges listed in 326 IAC 2-5.5-1(b)(1) and the PTE of all other regulated criteria pollutants will still be less than the ranges listed in 326 IAC 2-5.5-1(b)(1). Therefore, the source will still be subject to the provisions of 326 IAC 2-5.5 (Registrations).
- (b) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.
- (c) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit greenhouse gases (GHGs) will still be less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

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

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Surface Coating of Metal Furniture, 40 CFR 60, Subpart EE (326 IAC 12), are not included in this proposed revision, since this source does not coat metal furniture.
- (b) The requirements of the New Source Performance Standard for Automobile and Light Duty Truck Surface Coating Operations, 40 CFR 60, Subpart MM (326 IAC 12), are not included in this proposed revision, since this source does not coat automobiles or light duty trucks.
- (c) The requirements of the New Source Performance Standard for Pressure Sensitive Tape and Label Surface Coating Operations, 40 CFR 60, Subpart RR (326 IAC 12), are not included in this proposed revision, since this source does not coat pressure sensitive tape or labels.
- (d) The requirements of the New Source Performance Standard for Industrial Surface Coating: Large Appliances, 40 CFR 60, Subpart SS (326 IAC 12), are not included in this proposed revision, since this source does not coat large appliances.
- (e) The requirements of the New Source Performance Standard for Metal Coil Surface Coating, 40 CFR 60, Subpart TT (326 IAC 12), are not included in this proposed revision, since this source does not coat metal coils.
- (f) The requirements of the New Source Performance Standard for the Beverage Can Surface Coating Industry, 40 CFR 60, Subpart WW (326 IAC 12), are not included in this proposed revision, since this source does not coat beverage cans.
- (g) The requirements of the New Source Performance Standard for Magnetic Tape Coating Facilities, 40 CFR 60, Subpart SSS (326 IAC 12), are not included in this proposed revision, since this source does not coat magnetic tape.
- (h) The requirements of the New Source Performance Standard for Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines, 40 CFR 60, Subpart TTT (326 IAC 12), are not included in this proposed revision, since this source does not coat plastic parts for business machines.

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

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (j) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Surface Coating of Automobiles and Light Duty Trucks, 40 CFR 63.3080, Subpart IIII (326 IAC 20-85), are not included in this proposed revision, since this source is not considered a major source of HAPs and does not include surface coating of automobiles and light duty trucks.
- (k) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Surface Coating of Metal Cans, 40 CFR 63.3480, Subpart KKKK (326 IAC 20-86), are not included in this proposed revision, since this source is not considered a major source of HAPs and does not include surface coating of metal cans.
- (l) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63.3880, Subpart MMMM (326 IAC 20-80), are not included in this proposed revision, since this source is not considered a major source of HAPs and does not include surface coating of miscellaneous metal parts and products.
- (m) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Surface Coating of Large Appliances, 40 CFR 63.4080, Subpart NNNN (326 IAC 20-63), are not included in this proposed revision, since this source is not considered a major source of HAPs and does not include surface coating of large appliances.
- (n) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Plastic Parts and Products, 40 CFR 63.4480, Subpart PPPP (326 IAC 20-81), are not included in this proposed revision, since this source is not considered a major source of HAPs and does not include surface coating of plastic parts and products.
- (o) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Surface Coating of Wood Building Products, 40 CFR 63.4680, Subpart QQQQ (326 IAC 20-79), are not included in this proposed revision, since this source is not considered a major source of HAPs.
- (p) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Surface Coating of Metal Furniture, 40 CFR 63.4880, Subpart RRRR (326 IAC 20-78), are not included in this proposed revision, since this source is not considered a major source of HAPs and does not include surface coating of metal furniture.
- (q) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Surface Coating of Metal Coil, 40 CFR 63.5080, Subpart SSSS (326 IAC 20-64), are not included in this proposed revision, since this source is not considered a major source of HAPs and does not include surface coating of metal coil.
- (r) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs): Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, 40 CFR 63.11169, Subpart HHHHHH (6H), are not included in this proposed revision, since this source does not coat metal or plastic parts. Although, the source does use a stain that contains chromium compounds, they do not coat the stain on metal or plastic parts as described in §63.11169(c).
- (s) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Wood Preserving Area Sources, 40 CFR 63.11428, Subpart QQQQQQ, are not included in this proposed revision, since this source does not own or operate a wood preserving operation.

- (t) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this proposed revision.

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability Determination

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

The following state rules are applicable to the proposed amendment:

- (a) 326 IAC 2-5.5 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the new and units are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (d) 326 IAC 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.
- (e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4.
- (f) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
Due to this revision, the source is not subject to the requirements of 326 IAC 6-5, because the potential fugitive particulate emissions are less than 25 tons per year.
- (g) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

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

Spray Booths (SB1, SB2, and SB3)

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

Pursuant to 326 IAC 6-3-2, the three (3) spray booths (SB1, SB2, and SB3) are subject to the requirements of 326 IAC 6-3-2(d), since each have the potential to use equal to or greater than five (5) gallons per day of surface coatings. Pursuant to 326 IAC 6-3-2(d), particulate from spray booths (SB1, SB2, and SB3), shall be controlled by dry particulate filters, and the Registrant shall operate the control device in accordance with manufacturer's specifications.

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

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

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

326 IAC 8-1-6 (New Facilities: General Reduction Requirements)

Pursuant to 326 IAC 8-1-6, each of the spray booths (SB1, SB2, and SB3) are not subject to the requirements of 326 IAC 8-1-6, because each booth is regulated by another provision under article 8. The spray booths (SB1, SB2, and SB3) are subject to the requirements of 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating).

326 IAC 8-2-10 (Flat Wood Panels; Manufacturing Operations)

The three (3) spray booths, SB1, SB2, and SB3, are not subject to the requirements of 326 IAC 8-2-10, since each of the spray booths do not surface coat flat wood panels as described in 326 IAC 8-2-10(a). The source manufactures thick 3/4" hardwood panel whose grain is not enhanced by fillers and toners.

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

The requirements of 326 IAC 8-2-12 apply to surface coated wood furnishings which include cabinets (kitchen, bath, and vanity), tables, beds, chairs, sofas (non upholstered), art objects and any other coated furnishings made of solid wood, wood composition, or simulated wood material. The three (3) spray booths, SB1, SB2, and SB3 are each subject to 326 IAC 8-2-12, since they each are a facility of the type described in 326 IAC 8-2-12, were each constructed after July 1, 1990, and each have the potential VOC emissions of greater than fifteen (15) pounds of VOC per day before add-on controls. Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the Permittee shall perform surface coating of wood furniture and cabinets, with the exception of no more than ten (10) gallons of coating per day used for touch-up and repair operations, using one (1) or more of the following application systems:

- 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.

Since each of the three (3) spray booths, SB1, SB2, and SB3 use high volume low pressure (HVLP) spray application, each is in compliance with 326 IAC 8-2-12.

326 IAC 8-6 (Organic Solvent Emission Limitations)

Pursuant to 326 IAC 8-6, the spray booths (SB1, SB2, and SB3) are not subject to the requirements of this rule, because the source was constructed after January 1, 1980 and does not have potential emissions of more than one hundred (100) tons or greater per year.

Natural Gas Combustion

326 IAC 6-2-4 (Particulate Matter Limitations for Indirect Heating Units)

The requirements of 326 IAC 6-2-4 are not included in this permit, since the twelve (12) natural gas fired heaters and the one (1) natural gas fired air make up unit are not sources of indirect heating.

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

The requirements of 326 IAC 6-3-2, are not included in this permit, since the twelve (12) natural gas fired heaters and the one (1) natural gas fired air make up unit are not considered manufacturing processes.

326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)

Pursuant to 326 IAC 7-1.1-1, each of the twelve (12) natural gas fired heaters and the one (1) natural gas fired air make up unit, are not subject to the requirements of 326 IAC 7-1.1-1, since each has unlimited sulfur dioxide (SO₂) emissions less than twenty-five (25) tons per year and ten (10) pounds per hour, respectively.

326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

The twelve (12) space heaters and the one (1) air make up unit are each not subject to this rule, because the potential to emit VOC from each emission unit is less than twenty five (25) tone per year.

Woodworking Operations

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

Pursuant to 326 IAC 6-3-1(b)(14), the woodworking operation is not subject to the requirements of 326 IAC 6-3, because the potential to emit particulate matter from the woodworking operation after integral woodworking controls is less than five hundred fifty-one thousandths (0.551) pound per hour.

In order to ensure that the woodworking operation is exempt from the requirements of 326 IAC 6-3-2, the bag filters for particulate control shall be in operation and control emissions from the woodworking facilities at all times that the woodworking facilities are in operation.

Proposed Changes

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

1. The registration has been revised to include a new spray booth (SB3), to replace the air make up unit (H1) and the two (2) natural gas fired heaters (H2 and H3) with a new air make up unit (HU-12) and the twelve (12) new natural gas fired heaters HU-1 through HU-11 and HU-13), and to update and reorganize the emission unit descriptions for the other emission units at the source.

Upon further review, IDEM, OAQ has decided to make additional amendments to the registration as described below. The registration has been amended as follows with deleted language as ~~strikeouts~~ and new language **bolded**:

2. The registration has been updated from the letter style format to the permit style format, as is now standard IDEM procedure.
3. Several of IDEM's branches and sections have been renamed. Therefore, IDEM has updated the addresses listed in the registration. References to "Compliance Data Section" have been changed to "Compliance and Enforcement Branch".

(a) **One (1) spray booth, identified as SB1, constructed in 2005, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB1.**

(ab) One (1) spray booth, identified as SB2 ~~approved for construction~~**ed** in 2007, with a maximum capacity of ~~4~~ **5.704** gallons of ~~coatings and solvent~~ **per hour day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, using a low pressure air atomization spray gun, for applying stain, sealer and topcoat, with particulate emissions controlled by dry filters, and exhausting to stack SB2;**

(b) ~~Two (2) natural gas fired heaters, identified as H2 and H3, approved for construction in 2007, maximum capacity of .5 MMBtu/hr each;~~

(c) ~~One (1) natural gas fired air make-up unit, identified as H1, approved for construction in 2007, maximum capacity of 3.4 MMBtu/hr;~~

(d) ~~One (1) enclosed sanding booth including cartridge type filters, approved for construction in 2007, for sanding coated and cured panels, with no discharge to atmosphere.~~

(ec) ~~Woodworking equipment, identified as WO1, consisting of a rip saw, and a computerized panel saw, approved for construction in 2007, using two (2) additional portable bag filters to control particulate emissions, and exhausting inside the building;~~

One (1) woodworking operation, identified as WO1, constructed in 2005, using portable bag filters (DC1 through DC7) as control with a maximum combined process weight rate of 850 pounds per hour, exhausting indoors, and consisting of the following:

(1) **One (1) rip saw, and**

(2) **One (1) computerized panel saw**

(d) **One (1) enclosed sanding booth, constructed in 2007, using cartridge type filters as controls, and exhausting indoors.**

- (fe) One (1) curing oven, utilizing halogen lamps, ~~approved for construction~~ in 2007, for curing the coatings applied to the wood panels; **using no controls, and exhausting indoors.**
- (gf) One (1) Air compressor, for vacuum pressing operation, ~~approved for construction~~ in 2007, ~~rated at 20 hp~~; **with a maximum rate of 20 hp, and exhausting indoors.**
- (hg) Two (2) Air compressors, for vacuum pressing operation, ~~approved for construction~~ in 2007, ~~rated at 10 hp each~~; **each with a maximum rate of 10 hp, and exhausting indoors.**
- (i) ~~One (1) spray booth, identified as SB1, constructed in 2005, with a maximum capacity of 1 gallon of coatings and solvent per hour, using a low pressure air atomization spray gun, for applying stain, sealer and topcoat, with particulate emissions controlled by dry filters, and exhausting to stack SB1;~~
- (j) ~~Woodworking equipment, identified as WO1, constructed in 2005, to be relocated in the new expansion area within the building, with a total maximum capacity of 850 pounds of wood per hour, using five (5) portable bag filters to control particulate emissions.~~
- (h) **One (1) spray booth, identified as SB3, approved for construction in 2012, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLV) spray application, using dry filters as control, and exhausting to stack SB3.**
- (i) **Twelve (12) natural gas fired heaters, identified as HU1 through HU11 and HU13, and one (1) natural gas fired air make-up unit, identified as HU12, approved for construction in 2012, with a combined heat input rate of 2.7 million British thermal units (MMBtu) per hour, using no controls, and exhausting to stacks HU1 through HU13, respectively.**

3. ~~Pursuant to 326 IAC 8-2-10 (Surface Coating Emission Limitations: Flat Wood Panels), the Permittee of a flatwood manufacturing facility subject to this section shall not emit volatile organic compounds from a coating line in excess of:~~

- (1) ~~2.9 kg per 100 square meters of coated finished product (6.0 lb/1,000 sq ft) from printed interior panels, regardless of the number of coats applied;~~
- (2) ~~5.8 kg per 100 square meters of coated finished product (12.0 lb/1,000 sq ft) from natural finish hardwood plywood panels, regardless of the number of coats applied; and~~
- (3) ~~4.8 kg per 100 square meters of coated finished product (10.0 lb/1,000 sq ft) from Class II finishes on hardboard panels, regardless of the number of coats applied.~~

4. ~~Pursuant to 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the woodworking operations (WO1), shall not exceed the following:~~

Baghouse ID Dust Collectors	Process Weight Rate (lbs/hr)	Allowable PM Emission Rate (lbs/hour)
DC1 (Delta Model)	52	0.551
DC2 (Delta Model)	133	0.67
DC3 (Delta Model)	133	0.67
DC4 (Delta Model)	133	0.67
DC5 (Delta Model)	133	0.67

Baghouse ID Dust Collectors	Process Weight Rate (lbs/hr)	Allowable PM Emission Rate (lbs/hour)
DC6 (Dantherm Filtration)	133	0.67
DC7 (Dantherm Filtration)	133	0.67

In order to comply with the allowable rate of emission, the baghouses for particulate control shall be in operation and control emissions from the woodworking operations at all times that the woodworking operations are in operation. The allowable rate of emission was calculated as follows:

Interpolation of the data in the table in 326 IAC 6-3-2(c) for the process weight rates up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

When the process weight rate is less than one hundred (100) pounds per hour, the allowable rate of emission is five hundred fifty-one thousandths (0.551) pound per hour.

SECTION D.1 OPERATION CONDITIONS

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

- (a) One (1) spray booth, identified as SB1, constructed in 2005, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB1.
- (b) One (1) spray booth, identified as SB2, constructed in 2007, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB2.
- (h) One (1) spray booth, identified as SB3, approved for construction in 2012, with a maximum capacity of 5.704 gallons per day of coatings, utilizing high volume low pressure (HVLP) spray application, using dry filters as control, and exhausting to stack SB3.

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

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

D.1.1 Particulate Matter Limitations [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2(d), particulate from spray booths (SB1, SB2, and SB3), shall be controlled by dry particulate filters, and the Registrant shall operate the control device in accordance with manufacturer's specifications.
- (b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Registrant shall inspect the control device and do either of the following no later than four (4) hours after such observation:
 - (1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

- (2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.
- (c) If overspray is visibly detected, the Registrant shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

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

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-2-12]

Pursuant to 326 IAC 8-2-12 (Wood Furniture and Cabinet Coating), the Permittee shall perform surface coating of wood furniture and cabinets in spray booths S1, S2, and S3, with the exception of no more than ten (10) gallons of coating per day used for touch-up and repair operations, using one (1) or more of the following application systems:

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.

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

D.1.4 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.1(c), the Registrant shall maintain a record of any actions taken if overspray is visibly detected.
- (b) Section C - General Record Keeping Requirements of this permit contains the Registrant's obligations with regard to the records required by this condition.

SECTION D.2 OPERATION CONDITIONS

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

- (c) One (1) woodworking operation, identified as WO1, constructed in 2005, using portable bag filters (DC1 through DC7) as control with a maximum combined process weight rate of 850 pounds per hour, exhausting indoors, and consisting of the following:
 - (1) One (1) ripsaw, and

(2) One (1) computerized panel saw

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

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

D.2.1 Preventive Maintenance Plan [326 IAC 1-6-3]

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

Compliance Determination Requirements

D.2.2 Particulate Control

In order to that the source is exempt from the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the bag filters for particulate control shall be in operation and control emissions from the woodworking facilities at all times that the woodworking facilities are in operation.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on October 17, 2012.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed Administrative Amendment No. 039-32426-00645. The staff recommends to the Commissioner that this Administrative Amendment be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Deena Patton at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5400 or toll free at 1-800-451-6027 extension 4-5400.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

**Appendix A: Emissions Calculations
Emission Summary**

**Company Name: BriMAR Wood Innovations, Inc.
Source Address: 2108 Eisenhower Drive North, Goshen, Indiana 46526
Administrative Amendment No.: 039-32426-00645
Reviewer: Deena Patton**

Uncontrolled Potential to Emit for Revision (039-24908-00645)											
Emission Units/ID	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	GHGs	HAP	Worst Single HAP	
Spray Booths (SB1 & SB2)	5.88	5.88	N/A	0.00	0.00	23.80	0.00	N/A	0.04	0.04	Formaldehyde
Wood working Operation (WO1)	8.28	8.28	N/A	0.00	0.00	0.00	0.00	N/A	0.00	0.00	N/A
Air Make-up Unit and Office Heaters (H1 through H3)	0.04	0.15	N/A	0.01	1.93	0.11	1.62	N/A	0.04	1.40E-03	Formaldehyde
Total	14.20	14.31	N/A	0.01	1.93	23.91	1.62	N/A	0.08	0.04	Formaldehyde

Uncontrolled Potential to Emit After Current Revision (039-32426-00645)											
Emission Units/ID	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	GHGs	HAP	Worst Single HAP	
Spray Booths (SB1, SB2, and SB3)	2.47	2.47	2.47	0.00	0.00	21.51	0.00	0.00	2.00	0.78	Toluene
Wood working Operation (WO1)	8.28	8.28	8.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
Natural Gas Combustion (HU1 through HU13)	0.02	0.09	0.09	0.01	1.16	0.06	0.97	1399.76	0.02	3.94E-05	Toluene
Total	10.78	10.84	10.84	0.01	1.16	21.58	0.97	1399.76	2.02	0.78	Toluene

Potential to Emit After Current Revision (039-32426-00645) after Integral Woodworking Controls*											
Emission Units/ID	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO	GHGs	HAP	Worst Single HAP	
Spray Booth (SB1, SB2, and SB3)	2.47	2.47	2.47	0.00	0.00	21.51	0.00	0.00	2.00	0.78	Toluene
Wood working Operation (WO1)*	0.42	0.42	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A
Natural Gas Combustion (HU1 through HU13)	0.02	0.09	0.09	0.01	1.16	0.06	0.97	1399.76	0.02	3.94E-05	Toluene
Total	2.91	2.98	2.98	0.01	1.16	21.58	0.97	1399.76	2.02	0.78	Toluene

*In October of 1993 a Final Order Granting Summary Judgment was signed by an Administrative Law Judge ("ALJ") Garretson 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 from woodworking operations were calculated after consideration of the controls for purposes of determining permit level and 326 IAC 6-3-2 (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 controls.

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

**Company Name: BriMAR Wood Innovations, Inc.
Source Address: 2108 Eisenhower Drive North, Goshen, Indiana 46526
Administrative Amendment No.: 039-32426-00645
Reviewer: Deena Patton**

Spray Booth 1 through Spray Booth 3 (total)

Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Combined Maximum Usage (gal/hour)	Combined Maximum Usage (gal/day)	Pounds VOC per gallon of coating	Combined Potential VOC pounds per hour	Combined Potential VOC pounds per day	Combined Potential VOC tons per year	Combined Particulate Potential (ton/yr)	lb VOC/gal solids	Transfer Efficiency
STAINS															
NGR Stain	6.8	97.64%	0.0%	97.6%	0.0%	2.36%	0.075	1.80	6.67	0.50	12.00	2.19	0.03	282.58	50%
Spray Stain VRAJ2*	7.8	96.00%	0.0%	96.0%	0.0%	4.00%	0.075	1.80	7.53	0.56	13.55	2.47	0.05	188.16	50%
COATINGS															
Sherwood Vinyl Sealer	9.4	81.00%	0.0%	81.0%	0.0%	19.00%	0.375	9.00	7.63	2.86	68.67	12.53	1.47	40.16	50%
Sherwood CAB Acrylic Lacquer	7.4	74.00%	0.0%	74.0%	0.0%	26.00%	0.225	5.40	5.49	1.24	29.65	5.41	0.95	21.12	50%
CLEANING SOLVENT															
Lacquer Thinner	6.6	100.00%	0.0%	100.0%	0.0%	0.00%	0.038	0.91	6.59	0.25	6.01	1.10	0.00	NA	50%
Total (for all three booths) =							0.71	17.11		4.91	117.88	21.51	2.47		
Total for each single booth =							0.24	5.704		1.64	39.29	7.17	0.82		

METHODOLOGY

* Maximum Usage as reported by source, based on materials used during an actual production run. Operator applies stain, sealer and topcoat to the wood panels in sequence to produce the finished product. Only one stain is used on any panel. Worst case stain is reflected in totals.
Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) * Weight % Organics) / (1-Volume % water)
Pounds of VOC per Gallon Coating = (Density (lb/gal) * Weight % Organics)
Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr)
Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (24 hr/day)
Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) * Gal of Material (gal/unit) * Maximum (units/hr) * (8760 hr/yr) * (1 ton/2000 lbs)
Particulate Potential Tons per Year = (units/hour) * (gal/unit) * (lbs/gal) * (1- Weight % Volatiles) * (1-Transfer efficiency) * (8760 hrs/yr) * (1 ton/2000 lbs)
Pounds VOC per Gallon of Solids = (Density (lbs/gal) * Weight % organics) / (Volume % solids)

**Appendix A: Emissions Calculations
Hazardous Air Pollutants (HAPs)
From Surface Coating Operations**

Company Name: BriMAr Wood Innovations, Inc.
Source Address: 2108 Eisenhower Drive North, Goshen, Indiana 46526
Administrative Amendment No.: 039-32426-00645
Reviewer: Deena Patton

Spray Booth 1 through Spray Booth 3 (total)

Material	Density (Lb/Gal)	Maximum Usage (gal/hour)	Weight % Xylene	Weight % Toluene	Weight % MIBK	Weight % Ethylbenzene	Weight % Chromium	Weight % Methanol	Xylene Emissions (ton/yr)	Toluene Emissions (ton/yr)	MIBK Emissions (ton/yr)	Ethylbenzene Emissions (ton/yr)	Chromium Emissions (ton/yr)	Methanol Emissions (ton/yr)
STAINS														
NGR Stain	6.8	0.075	0.00%	0.00%	0.00%	0.00%	0.99%	0.00%	0.00	0.00	0.00	0.00	0.02	0.00
Spray Stain VRAJ2*	7.8	0.075	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00	0.00	0.00	0.00	0.00	0.00
COATINGS														
Sherwood Vinyl Sealer	9.4	0.375	2.00%	4.00%	3.00%	0.40%	0.00%	0.00%	0.31	0.62	0.46	0.06	0.00	0.00
Sherwood CAB Acrylic Lacquer	7.4	0.225	3.00%	0.00%	0.00%	0.60%	0.00%	0.00%	0.22	0.00	0.00	0.04	0.00	0.00
CLEANING SOLVENT														
Lacquer Thinner	6.6	0.038	5.00%	15.00%	0.00%	0.90%	0.00%	3.00%	0.05	0.16	0.00	0.01	0.00	0.03

Total Single HAPs (for all three booths) = **0.58** **0.78** **0.46** **0.12** **0.02** **0.03**
Total HAPs (for all three booths) = **2.00**

Total Single HAPs (for each single booth) = **0.19** **0.26** **0.15** **0.04** **0.01** **0.01**
Total HAPs (for each single booth) = **0.67**

METHODOLOGY

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

**Appendix A: Emission Calculations
Particulate Emissions From Woodworking Operations**

**Company Name: BriMAR Wood Innovations, Inc.
Source Address: 2108 Eisenhower Drive North, Goshen, Indiana 46526
Administrative Amendment No.: 039-32426-00645
Reviewer: Deena Patton**

Woodworking Operations WO1

Baghouse ID Dust Collectors	Process Weight Rate (lbs/hour)	Sawdust Collected* (lbs/hour)	Collection/ Control Efficiency (%)	Uncontrolled PTE of PM/PM10/PM2.5 (tons/year)	Uncontrolled PTE of PM/PM10/PM2.5 (lbs/hour)	Controlled PTE of PM/PM10/PM2.5 (tons/year)	Controlled PTE of PM/PM10/PM2.5 (lbs/hour)	326 IAC 6-3-2 Allowable PM Emission Rate (lbs/hour)
DC1 (Delta Model)	52	0.11	90.0%	0.54	0.12	0.05	0.01	0.551
DC2 (Delta Model)	133	0.28	95.0%	1.29	0.29	0.06	0.01	0.67
DC3 (Delta Model)	133	0.28	95.0%	1.29	0.29	0.06	0.01	0.67
DC4 (Delta Model)	133	0.28	95.0%	1.29	0.29	0.06	0.01	0.67
DC5 (Delta Model)	133	0.28	95.0%	1.29	0.29	0.06	0.01	0.67
DC6 (Dantherm Filtration)	133	0.28	95.0%	1.29	0.29	0.06	0.01	0.67
DC7 (Dantherm Filtration)	133	0.28	95.0%	1.29	0.29	0.06	0.01	0.67
Worst Case PTE (tons/yr)			TOTALS	8.28		0.42		

*Based on reported amount of sawdust collected from 8 hours of operations per day
Assume all PM is equal to PM10. Assume all sawdust collected is PM / PM10.
The dust collectors exhaust inside the building.

PTE of PM/PM10 Uncontrolled (tons/year) = Sawdust Collected (lbs/hour) / (Control Efficiency %) x 8760 (hours/year) x 1 ton/2000 lbs
PTE of PM/PM10 Uncontrolled (lbs/hour) = Sawdust Collected (lbs/hour) / (Control Efficiency %)
PTE of PM/PM10 Controlled (tons/year) = Sawdust Collected (lbs/hour) x (1 - Control Efficiency %) x 8760 (hours/year) x 1 ton/2000 lbs
PTE of PM/PM10 Controlled (lbs/hour) = Sawdust Collected (lbs/hour) x (1 - Control Efficiency %)
326 IAC 6-3-2 Allowable PM Emission Rate (lbs/hour) = 4.1 x process weight rate (tons/hour)^{0.67}

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

**Company Name: BriMAr Wood Innovations, Inc.
Source Address: 2108 Eisenhower Drive North, Goshen, Indiana 46526
Administrative Amendment No.: 039-32426-00645
Reviewer: Deena Patton**

Heat Input Capacity MMBtu/hr	HHV mmBtu mmscf	Potential Throughput MMCF/yr
2.7	1020	23.2

Emission Factor in lb/MMCF	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.02	0.09	0.09	0.01	1.16	0.06	0.97

*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

See page 2 for HAPs emissions calculations.

updated 7/11

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

**Company Name: BriMAr Wood Innovations, Inc.
 Source Address: 2108 Eisenhower Drive North, Goshen, Indiana 46526
 Administrative Amendment No.: 039-32426-00645
 Reviewer: Deena Patton**

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	2.4E-05	1.4E-05	8.7E-04	2.1E-02	3.9E-05

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	5.8E-06	1.3E-05	1.6E-05	4.4E-06	2.4E-05

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.
 See Page 3 for Greenhouse Gas calculations.

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

**Company Name: BriMAr Wood Innovations, Inc.
 Source Address: 2108 Eisenhower Drive North, Goshen, Indiana 46526
 Administrative Amendment No.: 039-32426-00645
 Reviewer: Deena Patton**

	Greenhouse Gas		
Emission Factor in lb/MMcf	CO2 120,000	CH4 2.3	N2O 2.2
Potential Emission in tons/yr	1,391	0.03	0.03
Summed Potential Emissions in tons/yr	1,391		
CO2e Total in tons/yr	1,400		

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).

updated 7/11



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

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

TO: Brian Roe
BriMar Wood Innovations, Inc
2108 Eisenhower Drive North
Goshen, IN 46526

DATE: November 16, 2012

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

SUBJECT: Final Decision
Administrative Amendment
039-32426-00645

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:
Mark Ahonen (Cornerstone Environmental Health & Safety, 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.

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	MIDENNEY 11/16/2012 BriMar Wood Innovations, Inc 039-32426-00645 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

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		Brian Roe BriMar Wood Innovations, Inc 2108 Eisenhower Drive North Goshen IN 46526 (Source CAATS) via confirm delivery										
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		Elkhart County Board of Commissioners 117 North Second St. Goshen IN 46526 (Local Official)										
5		Mark Ahonen Cornerstone Environmental Health and Safety, Inc. 800 Lennox Court Zionsville IN 46077 (Consultant)										
6												
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12												
13												
14												
15												

Total number of pieces Listed by Sender 4	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.
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