



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: February 9, 2006

RE: BriMar Wood Innovations, Inc. / 039-22330-00645

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Registration

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FN-REGIS.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

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Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204-2251
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Mr. Brian Roe, President
BriMar Wood Innovations, Inc.
2108 Eisenhower Drive North
Goshen, Indiana 46526

February 9, 2006

Re: Registered Construction and Operation Status,
039-22330-00645

Dear Mr. Roe:

The application from BriMar Wood Innovations, Inc., received on December 7, 2005, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-5.1, it has been determined that the following stationary custom finish wood panel manufacturing plant, located at 2108 Eisenhower Drive North, Goshen, Indiana 46526, is classified as registered:

- (a) One (1) spray booth for applying stain, sealer and topcoat, using a low pressure air atomization spray gun, identified as SB1, constructed in 2005, with a maximum capacity of 1 gallon of coatings and solvent per hour, with particulate emissions controlled by dry filters, and exhausting to stack SB#1.
- (b) Woodworking equipment, identified as WO1, constructed in 2005, with a total maximum capacity of 500 pounds of wood per hour, using five (5) portable bag filters to control particulate emissions, and exhausting inside the building.
- (c) One (1) natural gas-fired air make-up unit, identified as H1, constructed in 2005, with a maximum capacity of 1.3 MMBtu/hr, and exhausting to stack H#1.

The following conditions shall be applicable:

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

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

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

Pursuant to 326 IAC 6-3-2(d), particulate from the surface coating operation (SB1) shall be controlled by a dry particulate filter, and the Permittee 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 Permittee 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 exhaust or accumulates on the ground.
- (b) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

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

326 IAC 8-2-10 (Surface Coating Emission Limitations: Flat Wood Panels)

Pursuant to 326 IAC 8-2-10, 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.

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

Pursuant to 326 IAC 6-3-2(e), the particulate from the woodworking operations (WO1) shall be limited by the following:

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

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

The bag filters shall be in operation at all times the woodworking operations (WO1) are in operation, in order to comply with this limit.

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

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

**Compliance Data Section
Office of Air Quality
100 North Senate Avenue**

Indianapolis, IN 46204-2251

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

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

Pursuant to Contract No. A305-5-65, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Stephen Treimel, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7902 to speak directly to Mr. Treimel. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, Indianapolis, Indiana, 46204-2251 or call (800) 451-6027, ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

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

ERG/ST

cc: File - Elkhart County
Elkhart County Health Department
Air Compliance – Paul Karkiewicz
Northern Regional Office
Permit Tracking
Compliance Data Section

Registration Annual Notification

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

Company Name:	BriMar Wood Innovations, Inc.
Address:	2108 Eisenhower Drive North
City:	Elkhart, Indiana 46526
Authorized individual:	Brian Roe, President
Phone #:	(574) 535-0024
Registration #:	039-22330-00645

I hereby certify that BriMar Wood Innovations, Inc. is still in operation and is in compliance with the requirements of Registration 039-22330-00645.

Name (typed):
Title:
Signature:
Date:

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

Technical Support Document (TSD) for a Registration

Source Background and Description

Source Name:	BriMar Wood Innovations, Inc.
Source Location:	2108 Eisenhower Drive North, Goshen, Indiana 46526
County:	Elkhart
SIC Code:	2431, 2521
Operation Permit No.:	039-22330-00645
Permit Reviewer:	ERG/ST

The Office of Air Quality (OAQ) has reviewed an application from BriMar Wood Innovations, Inc. relating to the construction and operation of a stationary custom finish wood panel manufacturing plant.

Unpermitted Emission Units and Pollution Control Equipment

The source consists of the following unpermitted emission units:

- (a) One (1) spray booth for applying stain, sealer and topcoat, using a low pressure air atomization spray gun, identified as SB1, constructed in 2005, with a maximum capacity of 1 gallon of coatings and solvent per hour, with particulate emissions controlled by dry filters, and exhausting to stack SB#1.
- (b) Woodworking equipment, identified as WO1, constructed in 2005, with a total maximum capacity of 500 pounds of wood per hour, using five (5) portable bag filters to control particulate emissions, and exhausting inside the building.
- (c) One (1) natural gas-fired air make-up unit, identified as H1, constructed in 2005, with a maximum capacity of 1.3 MMBtu/hr, and exhausting to stack H#1.

Existing Approvals

No previous air approvals have been issued to this source.

Enforcement Issue

- (a) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper authorization (a Registration). The subject equipment is listed in this Technical Support Document under the condition entitled "Unpermitted Emission Units and Pollution Control Equipment".
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed Registration is intended to satisfy the requirements of the construction permit rules..

Recommendation

The staff recommends to the Commissioner that the construction and operation 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.

A complete application for the purposes of this review was received on December 7, 2005.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 4).

Potential to Emit of the Source Before Controls

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

The following table reflects the existing source potential to emit. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit:

Pollutant	Potential to Emit (tons/year)
PM	5.85
PM10	5.85
PM2.5	5.85
SO ₂	0.0
VOC	15.8
CO	0.5
NO _x	0.6

HAPs	Potential to Emit (tons/year)
Xylene	1.66
Toluene	0.01
Formaldehyde	0.04
Ethylbenzene	0.24
Total	1.96

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is equal to or greater than ten (10) tons per year and less than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-5.5. A registration will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) 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, the source is not subject to the provisions of 326 IAC 2-7.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	Attainment
PM 2.5	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Nonattainment
CO	Attainment
Lead	Attainment

- (a) Elkhart County has been classified as unclassifiable or attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as surrogate for PM_{2.5} emissions. See the State Rule Applicability – Entire Source section.
- (b) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Elkhart County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for nonattainment new source review. See the State Rule Applicability – Entire Source section.
- (c) 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. See the State Rule Applicability – Entire Source section.
- (d) Fugitive Emissions
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

New Source PSD and Emission Offset Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	0.78
PM-10	0.78
PM _{2.5}	0.78
SO ₂	0.0
VOC	15.8
CO	0.5
NO _x	0.6
Single HAP	1.66
Combination HAPs	1.96

This new source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater, no nonattainment pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2 and 2-3, the PSD and Emission Offset requirements do not apply.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

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

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

This status is based on the potential to emit calculations of the source (see Appendix A). This is the first air approval issued to this source.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Parts 61, 63) included in the permit for this source.
- (c) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations (40 CFR 63, Subpart JJ, 326 IAC 20-14-1) because this source is not a major source of HAPs as defined in 40 CFR 63.2.

State Rule Applicability – Entire Source

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

This source will be constructed after the applicability date of August 7, 1977, however, it is not in one of the 28 listed source categories defined in 326 IAC 2-2-1(y)(1) and the uncontrolled potential to emit of all attainment regulated pollutants is less than 250 tons per year. Therefore, the requirements of 326 IAC 2-2 (PSD) are not applicable.

326 IAC 2-3 (Emission Offset)

This source is located in Elkhart County. Elkhart County was designated as a nonattainment area for the 8-hour ozone standard on June 15, 2004. The potential to emit of VOC and NOx of this source, after limits, is less than 100 tons per year. Therefore, this source is a minor source under Emission Offset. Any future modifications that increase VOC or NOx emissions must be reviewed in accordance with 326 IAC 2-3.

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

The requirements of 326 IAC 2-4.1 are not applicable to this source, since 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.

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting), because it is located in Elkhart County, it is not required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, and it does not emit PM, PM10, PM2.5, NOx, CO, or SO2 into the ambient air at levels equal to or greater than one hundred (100) tons per year.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in 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 in a six (6) hour period 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 - Surface Coating Operations

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

Pursuant to 326 IAC 6-3-2(d), particulate from the surface coating operation (SB1) shall be controlled by a dry particulate filter, and the Permittee 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 Permittee 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 exhaust or accumulates on the ground.
- (b) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

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

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

The potential to emit of the surface coating booth (SB1) is less than twenty-five (25) tons of VOCs per year. Therefore, the requirements of 326 IAC 8-1-6 are not applicable.

326 IAC 8-2-10 (Surface Coating Emission Limitations: Flat Wood Panels)

The surface coating booth was constructed after July 1, 1990, is located in Elkhart County, applies surface coatings to flat wood panels, and has actual emissions of greater than fifteen pounds of volatile organic compounds per day before add-on controls. Pursuant to 326 IAC 8-2-10, 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.

Based on information provided by the source and the calculations, (see TSD, Appendix A, page 1) the Permittee complies with the VOC limits.

State Rule Applicability - Woodworking Operations

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

Pursuant to 326 IAC 6-3-2(e), the particulate from the woodworking operations (WO1) shall be limited by the following:

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

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

The bag filters shall be in operation at all times the woodworking operations (WO1) are in operation, in order to comply with this limit.

Conclusion

The construction and operation of this stationary custom finish wood panel manufacturing plant shall be subject to the conditions of the attached Registration 039-22330-00645.

Appendix A: Emission Calculations
 VOC and Particulate Emissions from Surface Coating Operations

TSD Appendix

Company Name: BriMar Wood Innovations, Inc.
 Address: 2108 Eisenhower Drive North, Goshen, Indiana 46526
 Registration: 039-22330-00645
 Reviewer: ERG/ST
 Date: February 6, 2006

Spray Booth SB1

Material	Density (lbs/gal)	Weight % Water	Weight % VOC	Weight % Solids	Maximum Usage * (gals/hour)	VOC (lbs/gal)	PTE of VOC (lbs/hour)	PTE of VOC (tons/year)	PTE of PM/PM10 Before Controls (tons/year)
Stain Blend 3032	6.38	0.0%	100%	0.0%	0.075	6.38	0.48	2.10	0.00
Stain Blend 3087	6.80	0.0%	100%	0.0%	0.075	6.80	0.51	2.23	0.00
Lacquer Sealer R-1849	7.74	0.0%	60.84%	27.72%	0.225	4.71	1.06	4.64	1.06
Lacquer Topcoat L-4743	7.74	0.0%	60.66%	27.88%	0.375	4.70	1.76	7.71	1.77
Lacquer Thinner 4271	7.16	0.0%	100%	0.0%	0.038	7.16	0.27	1.19	0.00
Totals							3.60	15.78	2.83

* Maximum Usage as reported by source, based on materials used during an actual production run. Operator applies stain, sealer and topcoat to the wood panel to produce the finished product. Only one stain is used on any panel. Worst case stain is reflected in totals.
 Assume transfer efficiency of 50% for air atomization guns and control efficiency of 80% for dry filters.
 Assume all VOC is emitted.

METHODOLOGY

VOC (lbs/gal) = Density (lbs/gal) x Weight % VOC (%)

PTE of VOC (lbs/hour) = Density (lbs/gal) x Weight % VOC x Maximum Usage (gals/hour)

PTE of VOC (tons/year) = Density (lbs/gal) x Weight % VOC x Maximum Usage (gals/hour) x 8760 (hours/year x 1 ton/2000 lbs)

PTE of PM/PM10 Before Controls (tons/year) = Density (lbs/gal) x Weight % Solids x Maximum Usage (gals/hour) x 8760 (hours/year) x 1 ton/2000 lbs x (1 - Tran %)

PTE of PM/PM10 After Controls (tons/year) = PTE PM/PM10 Before Controls (tons/year) x (1 - Control Efficiency %)

Compliance with 326 IAC 8-2-10:

The Permittee coats 500 pounds of panels per hour. Each 4' x 8' panel weighs approximately 20 pounds.
 500 pounds wood per hour / 20 pounds wood per panel x 32 square feet per panel = 800 square feet of panels per hour.
 3.6 pounds of VOC per hour / 800 square feet of panels per hour = 4.5 pounds of VOC per 1,000 square feet of panels.

PTE of PM/PM10 After Controls (tons/year)
0.00
0.00
0.21
0.35
0.00
0.57

s in sequence

Transfer Efficiency