



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: March 10, 2006
RE: Builders Marble Company / 057-15920-00057
FROM: Paul Dubenetzky
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, Room 1049, 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.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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John Burkhard
Builders Marble Company
16525 Southpark Drive
Westfield, IN 46074-8347

March 10, 2006

Re: Exempt Construction and Operation Status
057-15920-00057

Dear Mr. Burkhard,

The application from Builders Marble Company, received on July 22, 2002, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that your emission source, a counter top manufacturing plant located at 16525 Southpark Drive, Westfield, IN 46074-8347, is classified as exempt from air pollution permit requirements. The emission source consists of the following emission units:

- (a) one (1) air makeup unit, natural gas fired, rated at 0.075 million British thermal units per hour.
- (b) one (1) gel coat spray booth, with a maximum capacity of 3.22 pounds of gel coat per hour.
- (c) one (1) resin casting operation, with a maximum capacity of 375 pounds of resin per hour.
- (d) one (1) grinding / polishing booth, with a process weight rate of 378 pounds per hour.

The following conditions shall be applicable:

- 1. Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:
 - (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- 2. Pursuant to 326 IAC 6-3-2(e), the particulate matter emissions from the gel coat spray booth shall be limited by the following equation for process weight rates up to sixty thousand (60,000) pounds per hour:

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

For a process weight rate of 0.1875 tons per hour, this equation provides an emission limit of 1.34 pounds per hour.

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.

Any change or modification which may increase the potential particulate matter (PM) emissions to five (5) tons per year or more or increase the potential volatile organic compound (VOC) emissions to ten (10) tons per year or more from the equipment covered in this exemption letter must be approved by the Office of Air Quality (OAQ) before such change may occur.

Sincerely,

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

ARD

cc: File - Hamilton County
Hamilton County Health Department
Air Compliance Section Inspector - Marc Goldman
Permit Tracking
Compliance Data Section

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Description and Location

Source Name:	Builders Marble Company
Source Location:	16525 Southpark Drive, Westfield, IN 46074-8347
County:	Hamilton
SIC Code:	3088
Exemption No.:	057-15920-00057
Permit Reviewer:	Allen R. Davidson

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The emission source is located in Hamilton County.

Pollutant	Status
PM ₁₀	attainment
PM _{2.5}	nonattainment
SO ₂	attainment
NO ₂	attainment
1-hour Ozone	attainment
8-hour Ozone	nonattainment
CO	attainment
Lead	attainment

- (a) 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. Hamilton 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 emission offset, 326 IAC 2-3.
- (b) U.S. EPA, in the Federal Register Notice 70 FR 943 dated January 5, 2005, has designated Hamilton County as nonattainment for PM_{2.5}. On March 7, 2005 the Indiana Attorney General's Office, on behalf of IDEM, filed a lawsuit with the Court of Appeals for the District of Columbia Circuit challenging U.S. EPA's designation of nonattainment areas without sufficient data. However, in order to ensure that sources are not potentially liable for a violation of the Clean Air Act, the OAQ is following the U.S. EPA's guidance to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions pursuant to the requirements of Emission Offset, 326 IAC 2-3.
- (c) Hamilton County has been classified as attainment or unclassifiable in Indiana for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

See "Permit Level Determination – PSD or Emission Offset" for more details regarding PSD or Emission Offset applicability.

Background and Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed an application, submitted by Builders Marble Company on July 22, 2002, relating to the construction and operation of a counter top manufacturing plant located at 16525 Southpark Drive, Westfield, IN 46074-8347. The emission source consists of the following emission units:

- (a) one (1) air makeup unit, natural gas fired, rated at 0.075 million British thermal units per hour.
- (b) one (1) gel coat spray booth, with a maximum capacity of 3.22 pounds of gel coat per hour.
- (c) one (1) resin casting operation, with a maximum capacity of 375 pounds of resin per hour.
- (d) one (1) grinding / polishing booth.

Enforcement Issues

There are no enforcement actions pending against this emission source.

Emission Calculations

VOC emissions from the gel coat spray booth and the resin casting operation were estimated by multiplying the usage by weight of each resin or gel coat by the emission factor that is appropriate for the styrene monomer and/or methyl methacrylate content for each resin or gel coat, then summing the emissions from all resins and gel coats. Emission factors used were obtained from "Unified Emission Factors for Open Molding of Composites," Composites Fabricators Association, July 23, 2001 addendum.

See Appendix A of this document for detailed emission calculations.

Permit Level Determination

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission 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, IDEM, or the appropriate local air pollution control agency."

The following table reflects the new source potential to emit. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential to Emit (tons/yr)
PM	3.8
PM ₁₀	3.8
SO ₂	0.0
VOC	9.9
CO	0.0
NO _x	0.0

HAPs	Potential to Emit (tons/yr)
Styrene	8.3
Total	8.3

The potential to emit (as defined in 326 IAC 2-7-1(29)) particulate matter (PM) is less than five (5) tons per year, and the potential to emit volatile organic compounds (VOC) is less than ten (10) tons per year. Therefore, the application does not require review under 326 IAC 2-5.1 and can be classified as exempt under 326 IAC 2-1.1-3.

Federal Rule Applicability Determination

326 IAC 12 and 40 CFR Part 60 (New Source Performance Standards (NSPS))

There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this new source.

326 IAC 14, 326 IAC 20 and 40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants (NESHAPs))

This source is not subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Reinforced Plastics Composites Production (40 CFR Part 63, Subpart WWWW and 326 IAC 20-56) because the source is not a major source of HAPs. As a result, there are no NESHAP rules applicable to this new source.

State Rule Applicability Determination – Entire Source

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

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

326 IAC 2-3 (Emission Offset)

This source is not a major source for Emission Offset, 326 IAC 2-3. No nonattainment pollutant has the potential to emit at a rate of 100 tons per year or more. Therefore, pursuant to 326 IAC 2-3, the Emission Offset requirements do not apply.

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

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

326 IAC 2-6 (Emission Reporting)

This source is located in Hamilton County and the potential to emit every criteria pollutant is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 2-7 (Part 70 Permit Program)

The potential to emit particulate matter (PM) and particulate matter with an aerodynamic diameter less than or equal to ten (10) micrometers (PM₁₀) are both less than 100 tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

326 IAC 5-1 (Opacity Limitations)

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

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

State Rule Applicability Determination – Resin Casting Operation and Gel Coat Spray Booth

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

The gel coat spray booth is not subject to 326 IAC 6-3-2(d) since the source's plastics composites fabricating manufacturing process does not produce reinforced plastics composites. It is instead subject to 326 IAC 6-3-2(e).

Pursuant to 326 IAC 6-3-2(e), the particulate matter emissions from the gel coat spray booth shall be limited by the following equation for process weight rates up to sixty thousand (60,000) pounds per hour:

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

For a process weight rate of 0.1875 tons per hour, this equation provides an emission limit of 1.34 pounds per hour. Control equipment is not required in order to comply with this limit.

326 IAC 8-1-6 (General VOC Reduction Requirements)

The resin casting operation and the gel coat spray booth are not subject to 326 IAC 8-1-6 (General Reduction Requirements) because the potential to emit volatile organic compounds is less than twenty-five (25) tons per year. Therefore, the BACT (best available control technology) requirements do not apply.

State Rule Applicability Determination – Grinding and Polishing Booth

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

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

Conclusion and Recommendation

The construction and operation of this counter top manufacturing plant shall be subject to the conditions of the attached Exemption No. 057-15920-00057. The staff recommend to the Commissioner that this Exemption be approved.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only
MMBtu/hr <100**

Company Name: Builders Marble Company
Address City IN Zip: 16525 Southpark Drive, Westfield IN 46074
ID: 057-15920-00057
Reviewer: Allen R. Davidson
Date: 01/31/06

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

0.075

0.7

Pollutant

	PM*	PM ₁₀ *	SO ₂	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	negligible	negligible	negligible	negligible	negligible	negligible

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

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

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	0.0021	0.0012	0.0750	1.8000	0.0034
Potential Emission in tons/yr	negligible	negligible	negligible	negligible	negligible

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	0.0005	0.0011	0.0014	0.0004	0.0021
Potential Emission in tons/yr	negligible	negligible	negligible	negligible	negligible

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

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

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

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

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

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

Appendix A: Emissions Calculations

Company Name: Builders Marble Company
Address City IN Zip: 16525 Southpark Drive, Westfield IN 46074
ID: 057-15920-00057
Reviewer: Allen R. Davidson
Date: 01/31/06

<i>Resin</i>	<i>Manual</i>	EF =	0.126 *	31.5% styrene *	2000	=	79.38 lb emitted
							ton applied
8.34 lb *	30 gal *	1.5 unit *		ton applied *	79.38 lb emitted	=	1.78605 lb emitted
gal	unit	hr	2000 lb applied	ton applied	hr		hr
		1.78605 lb emitted *	ton *	8760 hr		=	7.82 ton emitted
		hr	2000 lb	yr			yr

<i>Gel Coat</i>	<i>Atomized</i>	EF = ((1.03646 *	48.0% styrene) -	0.195) *	2000	=	605.0016 lb emitted
								ton applied
8.5902 lb *	0.25 gal *	1.5 unit *		ton applied *	605.0016 lb emitted	=	0.113438 lb emitted	
gal	unit	hr	2000 lb applied	ton applied	hr		hr	
		0.11344 lb emitted *	ton *	8760 hr		=	0.50 ton emitted	
		hr	2000 lb	yr			yr	

Process Weight Rate (PWR):

Resin:	<u>8.34 lb *</u>	<u>30 gal *</u>	<u>1.5 unit *</u>	<u>375.3 lb</u>
	gal	unit	hr	hr
Gel Coat:	<u>8.5902 lb *</u>	<u>0.25 gal *</u>	<u>1.5 unit *</u>	<u>3.221325 lb</u>
	gal	unit	hr	hr
Total PWR:				<u>378.52133 lb</u>
				hr

<i>Mold Release Agent</i>	$\frac{0.378521 \text{ lb}^*}{\text{hr}}$	95% VOC *	$\frac{\text{ton}^*}{2000 \text{ lb}}$	$\frac{8760 \text{ hr}}{\text{yr}}$	=	$1.58 \frac{\text{ton emitted}}{\text{yr}}$
Total of source VOC emissions =						$9.89 \frac{\text{ton emitted}}{\text{yr}}$

<i>Gel Coat Atomized</i>		$\frac{3.221 \text{ lb}^*}{\text{hr}}$	52.0% solids *	20% as PM	=	$0.335018 \frac{\text{lb}}{\text{hr}}$
	$\frac{0.335018 \text{ lb}^*}{\text{hr}}$		$\frac{\text{ton}^*}{2000 \text{ lb}}$	$\frac{8760 \text{ hr}}{\text{yr}}$	=	$1.47 \frac{\text{ton emitted}}{\text{yr}}$

<i>Grinding & Polishing</i>	$\frac{0.55 \text{ lb}^*}{\text{hr}}$		$\frac{\text{ton}^*}{2000 \text{ lb}}$	$\frac{8760 \text{ hr}}{\text{yr}}$	=	$2.41 \frac{\text{ton emitted}}{\text{yr}}$
Total of source PM/PM ₁₀ emissions =						$3.88 \frac{\text{ton emitted}}{\text{yr}}$

The following calculations determine the gel coat booth's emission limit under 326 IAC 6-3-2:

$$E = 4.1 * (0.1875 \wedge 0.67) = 1.336 \text{ lb/hr}$$

$$1.336 \text{ lb/hr} * 8760 \text{ hr/yr} / 2000 \text{ lb/ton} = 5.85 \text{ ton/yr}$$