



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: June 27, 2005
RE: J & N Stone, Inc / 039-18885-00600
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.
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Mr. Jeff Lengacher
J & N Stone, Inc.
905 East Waterford
Wakarusa, IN 46573

June 27, 2005

Dear Mr. Lengacher:

Re: Exempt Construction and Operation Status,
039-18885-00600

The application from J & N Stone, Inc., received on April 1, 2004, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2 1.1-3, it has been determined that the following, to be located at 905 East Waterford, in Wakarusa, Indiana 46573, is classified as exempt from air pollution permit requirements:

- (a) One (1) pre-cast stone molding operation, and
- (b) One (1) mantle wood parts surface coating booth, identified as EU1.

The following conditions shall be applicable:

(1) 326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), 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.

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

Pursuant to 326 IAC 8-2-12(b), the Permittee shall apply all coating material, 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:

J & N Stone, Inc.
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SDF

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- (a) airless spray application system,
- (b) air-assisted airless spray application system,
- (c) electrostatic spray application system,
- (d) electrostatic bell or disc application system,
- (e) heated airless spray application system,
- (f) roller coat, brush, or wipe application system, or
- (g) dip and drain application system.

This exemption is the first air approval issued to this source.

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.

Sincerely,

Nisha Sizemore, Section Chief
Permits Branch
Office of Air Quality

SDF

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

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

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name: J & N Stone, Inc.
Source Location: 905 East Waterford, Wakarusa, Indiana 46573
County: Elkhart
SIC Code: 3272
Exemption No.: 039-18885-00600
Permit Reviewer: SDF

The Office of Air Quality (OAQ) has reviewed an application from J & N Stone relating to the construction and operation of one (1) pre-cast stone molding operation and one (1) mantle wood parts surface coating booth, identified as EU1.

Existing Approvals

This exemption will be the source's first operating approval.

Enforcement Issue

There are no enforcement actions pending.

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 on June 24, 2004 and June 22, 2005.

Emission Calculations

PM, PM10, VOC, and HAP emissions will be generated at the proposed surface coating booth. The proposed stone molding operation will generate a negligible amount of PM and PM10 emissions.

The following calculations determine the source unrestricted potential emissions and the estimated source emissions after controls.

Unrestricted Potential Emissions:

Stone Molding Operation:

J & N Stone operates a stone molding operation. Cement is first unloaded and delivered to a mixer where water is introduced and the cement mixed. The cement is then poured into various molds where the cement dries and forms the various products.

The emissions generated (PM and PM10) are determined to be negligible because the dry material is unloaded, delivered to the mixer, and mixed, in a completely enclosed system with no bin vents. There are no emissions after the mixer because the cement is in a slurry form.

Surface Coating Booth:

The following calculations determine the unrestricted emissions from the surface coating booth based on the worst case coating combination, material properties obtained from the Material Safety Data Sheets (MSDS), a transfer efficiency of 75%, emissions before controls, and 8760 hours of operation.

PM/PM10: $\text{lb/gal} * \text{gal/unit} * \text{unit/hr} * (1 - \text{wt frac. volatiles}) * (1 - \text{frac. transfer}) * 8760 \text{ hr/yr} * 1/2000 \text{ ton/lb} = \text{tons PM/yr}$

Coating	lb/gal	Gal/unit	unit/hr	wt fraction volatiles	fraction transfer	tons PM/yr	tons PM10/yr*
Sealer	7.81	0.03	5	0.71	0.75	0.37	0.37
Stain	7.30	0.03	5	0.58	0.75	0.50	0.50
Total						0.87	0.87

* PM10 is determined to be equal to PM

VOC: $\text{lb/gal} * \text{gal/unit} * \text{unit/hr} * \text{fraction VOC} * 8760 \text{ hr/yr} * 1/2000 \text{ ton/lb} = \text{tons VOC/yr}$

Coating	lb/gal	gal/unit	unit/hr	fraction VOC	tons VOC/yr
Sealer	7.81	0.03	5	0.71	3.64
Stain	7.30	0.03	5	0.58	2.78
Total					6.42

HAP:

The only HAP associated with the surface coating booth is dibutyl phthalate which is generated when the sealer is applied. The following calculations determine the dibutyl phthalate emissions based on the worst case coating combination, material properties obtained from the Material Safety Data Sheets (MSDS), emissions before controls, and 8760 hours of operation.

VOC: $7.81 \text{ lb/gal} * 0.03 \text{ gal/unit} * 5 \text{ unit/hr} * 0.02 \text{ (fraction HAP)} * 8760 \text{ hr/yr} * 1/2000 \text{ ton/lb} = 0.10 \text{ ton HAP/yr}$

Total Unrestricted Potential Emissions:

The following table lists the total source unrestricted potential emissions.

	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)
Paint Booth	0.87	0.87	-	-	6.42	-
Stone Molding Operation	neg.	neg.	-	-	-	-
Total	0.87	0.87	-	-	6.42	-

	Worst Case Single HAP (tons/yr)	Combined HAPs (tons/yr)
Paint Booth	0.10	0.10
Stone Molding Operation	-	-
Total	0.10	0.10

Emissions After Controls:

Stone Molding Operation:

The stone molding operation emissions before and after application of all controls are determined to be negligible.

Surface Coating Booth:

The PM and PM10 emissions from the surface coating booth are controlled. The following calculations determine the PM and PM10 emissions after controls from the booth based on the estimated emissions before controls and an overall control efficiency of 95%.

$$\begin{aligned} \text{PM: } & 0.87 \text{ ton PM/yr} * (1 - 0.95) = 0.04 \text{ ton PM/yr} \\ \text{PM10: } & 0.87 \text{ ton PM10/yr} * (1 - 0.95) = 0.04 \text{ ton PM10/yr} \end{aligned}$$

All other source emissions are uncontrolled. Therefore, the emissions after controls equal the estimated emissions before controls.

The following table lists the estimated source emissions after controls.

	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)
Paint Booth	0.04	0.04	-	-	6.42	-

Worst Case Single HAP (tons/yr)	Combined HAPs (tons/yr)
0.10	0.10

Total Emissions After Application of All Controls:

The following table lists the total source emissions after application of all controls.

	PM (tons/yr)	PM10 (tons/yr)	SO2 (tons/yr)	NOx (tons/yr)	VOC (tons/yr)	CO (tons/yr)
Paint Booth	0.04	0.04	-	-	6.42	-
Stone Molding Operation	neg.	neg.	-	-	-	-
Total	0.04	0.04	-	-	6.42	-

	Worst Case Single HAP (tons/yr)	Combined HAPs (tons/yr)
Paint Booth	0.10	0.10
Stone Molding Operation	-	-
Total	0.10	0.10

Potential to Emit 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.”

Pollutant	Potential to Emit (tons/yr)
PM	0.87
PM-10	0.87
SO ₂	-
VOC	6.42
CO	-
NO _x	-

HAPs	Potential to Emit (tons/yr)
Dibutyl Phthalate	0.10

The potential to emit of all of the pollutants are less than the levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3. An exemption will be issued.

County Attainment Status

The source is located in Elkhart County.

Pollutant	Status
PM-10	attainment
PM2.5	attainment
SO ₂	attainment
NO _x	attainment
1-hour ozone	attainment
8-hour ozone	nonattainment
CO	attainment
Lead	attainment

Federal Rule Applicability

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

(b) 40 CFR 63, Subpart JJ, National Emission Standards for Wood Furniture Manufacturing Operations

40 CFR 63, Subpart JJ does not apply because the source is not a major source of HAPs as defined in 63.2.

(c) 40 CFR 63, Subpart QQQQ, National Emission Standards: Surface Coating of Wood Building Products

40 CFR 63, Subpart QQQQ does not apply because the source is not a major source of HAPs.

State Rule Applicability – Entire Source

(a) 326 IAC 5-1 (Visible Emissions Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), 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 – Individual Facilities

(a) 326 IAC 6-3-2 (Particulate Emission Limitations):

Pursuant to 326 IAC 6-3-1(b)(14), processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour, are exempt from the requirements of 326 IAC 6-3.

The source potential PM(PM10) emissions (0.20 lb/hr) are less than exempt level of 0.551 lb/hr.

$$0.87 \text{ tons PM(PM10)/yr} * 2000 \text{ lb/ton} * 1/8760 \text{ yr/hr} = 0.20 \text{ lb PM(PM10)/hr}$$

Thus, the requirements of 326 IAC 6-3 do not apply.

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

The requirements of 326 IAC 8-2-10 do not apply because the source is not a flatwood panel manufacturing and surface coating operation.

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

Pursuant to 326 IAC 8-2-12(a), this section applies 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 requirements of 326 IAC 8-2-12 apply to the proposed surface coating booth because the parts coated are wood furnishings made of solid wood and which have actual emissions of 15 pounds of VOC per day and the construction of which commences after July 1, 1990.

Pursuant to 326 IAC 8-2-12(b), the Permittee shall apply all coating material, 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:

- (a) airless spray application system,
- (b) air-assisted airless spray application system,
- (c) electrostatic spray application system,
- (d) electrostatic bell or disc application system,
- (e) heated airless spray application system,
- (f) roller coat, brush, or wipe application system, or
- (g) dip and drain application system.

(d) 326 IAC 8-11-1 (Wood Furniture Coating):

The requirements of 326 IAC 8-11-1 do not apply because the source is not a wood furniture manufacturing operation located in Lake, Porter, Clark, or Floyd Counties.

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

The requirements of 326 IAC 8-1-6 do not apply because the proposed surface coating booth is subject to the requirements of 326 IAC 8-2-12.

Conclusion

The construction and operation of the proposed pre-cast stone molding and mantle wood parts surface coating operation shall be subject to the conditions of Exemption No. 039-18885-00600.