MALCOLM PIRNIE

MALCOLM PIRNIE, INC.
INDEPENDENT ENVIRONMENTAL ENGINEERS, SCIENTISTS & CONSULTANTS

June 22, 1999


Mr. Johnny Edwards
Florida Department of Environmental Protection
Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Re: Merillat Corporation Permit Application
File 0830137-001-AC

Dear Mr. Edwards:

As requested by the Florida Department of Environmental Protection (DEP), enclosed are four updated copies of the Merillat Corporation Air Permit Application. Please notice that this version of the application includes specific information regarding the facility location and a new professional engineer's certification. In response to item 3 in the DEP's completeness review letter dated June 10, 1999, we offer the following:

- To comply with the VHAP emission limits for finishing operations prescribed under 40 CFR Part 63, Subpart JJ, Merillat will use either compliant materials or a weighted average VHAP content compliance basis.

- Compliance with the emission limits for contact adhesives will be achieved by using compliant materials.

- Merillat will not rely on air pollution control devices to comply with the emission limits (please recognize that Table 1 submitted to the DEP on June 2, 1999, is simply a summary of the emission limits directly from the regulation).

- A finishing material NESHAP averaging report from another Merillat facility is attached as an example to indicate how the proposed facility will demonstrate compliance with the VHAP emission limits.

- Finishing materials will be applied manually by operators using spray guns in application spray booths. Since continuous coaters will not be used, 40 CFR 63.804(g)(3) is not applicable.

MALCOLM PIRNIE



We trust that the enclosed materials address the items identified in the DEP's completeness review letters dated May 28, 1999 and June 10, 1999. If you have any questions or concerns regarding the enclosed, please contact me at (757) 873-4411.

Sincerely,

MALCOLM PIRNIE, INC.

Joel S. Cohn

Joel S. Cohn, P.E.
Project Engineer

ld
2767-014

Enclosures

c: Jim Olszewski, Merillat Industries (w/enclosure)

JSCL62299.DOC

# Reg Specific Finishing Emissions/Product Usage Summary

*Product Usage Summary followed by the Chemical Usage and Emission Summary.*

Sections Shown: Source; Emissions HAVE NOT been adjusted for Hazardous Waste entries;

Printed 05/21/1999 From 05/19/1999 to 05/19/1999 Data File :C:\REGMET\MER1299.MDB



**Permit ID:** 10830 MERILLAT CORPORATION, ATKINS

**Emission Sources queried in this report's data:**

| Facility ID | Equipment ID | Description | Transfer Efficiency[1] | PM Control Efficiency[1] | VOC Control Efficiency[1] | Control Efficiency[2] |
|---|---|---|---|---|---|---|
| 24311MRLLTRO | FS-1 | Spray Booths | 75.000% | 99.000% | NA | NA |

[1] Transfer, PM, and VOC Efficiencies apply only to Finishing Sources [2] Total Control Efficiency for Boilers and Wood Dust

ApplicationSystemID: FS-1 Spray Booths

ApplicationMethod: All Spray Applications

**Product Summary:**

| Product ID: | Amount (gal) | Solids(Lbs) Used | Solids(Lbs) Emitted | VOC(Lbs) Used | VOC(Lbs) Emitted | #VOC/ #Solid | VHAP(lbs) Used | VHAPS(lbs) Emitted | #VHAP /# Solid | HAP(lbs) Used | HAPS(lbs) Emitted | #HAP/ # Solid |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Regular Product Usage | | | | | | | | | | | | |
| 371-W6V-620-A | 11.0 | 2.11 | 5.3E-4 | 32.9 | 32.9 | 15.62 | 1.64 | 1.64 | 0.78 | 1.64 | 1.64 | 0.78 |
| 373-W6-1070 | 0.11 | 7.0E-2 | 1.8E-5 | 0.71 | 0.71 | 10.19 | 0.56 | 0.56 | 8.00 | 0.56 | 0.56 | 8.00 |
| 373-W6V-1114 | 1.00 | 0.30 | 7.6E-5 | 2.96 | 2.96 | 9.75 | 0.21 | 0.21 | 0.69 | 0.21 | 0.21 | 0.69 |
| 373-W6V-1116 | 2.00 | 2.50 | 6.3E-4 | 13.5 | 13.5 | 5.39 | 1.44 | 1.44 | 0.58 | 1.44 | 1.44 | 0.58 |
| 373-W6V-1130-C | 40.0 | 14.2 | 3.5E-3 | 267.2 | 267.2 | 18.83 | 3.89 | 3.89 | 0.27 | 3.89 | 3.89 | 0.27 |
| 373-W6V-1135-C | 38.0 | 3.79 | 9.5E-4 | 106.9 | 106.9 | 28.24 | 2.69 | 2.69 | 0.71 | 2.69 | 2.69 | 0.71 |
| 50-C6V-1764 | 4.21 | 9.92 | 2.5E-3 | 23.1 | 23.1 | 2.33 | 7.97 | 7.97 | 0.80 | 7.97 | 7.97 | 0.80 |
| 542-D6V-3873-C | 30.0 | 16.3 | 4.1E-3 | 183.3 | 183.3 | 11.22 | 11.5 | 11.5 | 0.70 | 11.5 | 11.5 | 0.70 |
| 543-D6-479-8 | 30.0 | 3.48 | 8.7E-4 | 226.8 | 226.8 | 65.19 | 43.4 | 43.4 | 12.47 | 43.4 | 43.4 | 12.47 |
| 546-D6V-2733 | 40.0 | 6.59 | 1.6E-3 | 264.8 | 264.8 | 40.17 | 4.90 | 4.90 | 0.74 | 4.90 | 4.90 | 0.74 |
| 548-D6V-2749 | 18.0 | 3.00 | 7.5E-4 | 128.5 | 128.5 | 42.79 | 1.13 | 1.13 | 0.38 | 1.13 | 1.13 | 0.38 |
| 830-70C6-1170-A | 151.0 | 457.6 | 0.11 | 780.7 | 780.7 | 1.71 | 209.7 | 209.7 | 0.46 | 209.7 | 209.7 | 0.46 |
| 830-C6-1165 | 153.0 | 414.3 | 0.10 | 792.5 | 792.5 | 1.91 | 185.6 | 185.6 | 0.45 | 185.6 | 185.6 | 0.45 |
| 830-FC6-1027 | 0.78 | 2.07 | 5.2E-4 | 4.26 | 4.26 | 2.06 | 0.62 | 0.62 | 0.30 | 0.62 | 0.62 | 0.30 |
| 830-L6V-1640 | 18.0 | 10.6 | 2.6E-3 | 117.7 | 117.7 | 11.14 | 8.39 | 8.39 | 0.79 | 8.39 | 8.39 | 0.79 |
| 830-PJ6-364 | 12.0 | 56.3 | 1.7E-2 | 42.4 | 42.4 | 0.64 | 21.7 | 21.7 | 0.33 | 21.7 | 21.7 | 0.33 |
| 920-W6-1151 | 0.22 | 0.36 | 9.0E-5 | 1.30 | 1.30 | 3.61 | 0.23 | 0.23 | 0.64 | 0.23 | 0.23 | 0.64 |
| 920-W6-1170-A | 1.00 | 1.35 | 3.4E-4 | 6.01 | 6.01 | 4.46 | 1.03 | 1.03 | 0.76 | 1.03 | 1.03 | 0.76 |
| 920-W6V-1266-A | 15.0 | 9.48 | 2.4E-3 | 93.2 | 93.2 | 9.82 | 4.56 | 4.56 | 0.48 | 4.56 | 4.56 | 0.48 |

**roduct Summary (continued):**

| roduct ID: | Amount (gal) | Solids(Lbs) Used | Solids(Lbs) Emitted | VOC(Lbs) Used | VOC(Lbs) Emitted | #VOC/ #Solid | VHAP(lbs) Used | VHAPS(lbs) Emitted | #VHAP /# Solid | HAP(lbs) Used | HAPS(lbs) Emitted | #HAP/ # Solid |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CC #125 | 29.0 | 50.5 | 1.3E-2 | 163.0 | 163.0 | 3.23 | 0 | 0 | 0.00 | 0 | 0 | 0.00 |
| :C-1106 | 40.0 | 0 | 0 | 281.2 | 281.2 | NA | 11.2 | 11.2 | NA | 11.2 | 11.2 | NA |
| **otal Regular Usage** | Total Amount (gal) | Total Solids (Lbs)Used | Total Solids (Lbs) Emitted | Total VOC (Lbs) Used | Total VOC (Lbs) Emitted | #VOC/ #Solid | Total VHAP (lbs) Used | Total VHAPS (lbs) Emitted | #VHAP /# Solid | Total HAP (lbs) Used | Total HAPS (lbs) Emitted | #HAP/ # Solid |
| | 632.3 | 1,074.8 | 0.27 | 3,532.9 | 3,532.9 | 3.29 | 522.4 | 522.4 | 0.49 | 522.4 | 522.4 | 0.49 |
| **pplication ystem rand Totals:** | Total Gallons Used | Total Solids (Lbs)Used | Total Solids (Lbs) Emitted | Total VOC (Lbs) Used | Total VOC (Lbs) Emitted | #VOC/ #Solid | Total VHAP (lbs) Used | Total VHAPS (lbs) Emitted | #VHAP /# Solid | Total HAP (lbs) Used | Total HAPS (lbs) Emitted | #HAP/ # Solid |
| | 632.3 | 1,074.8 | 0.27 | 3,532.9 | 3,532.9 | 3.29 | 522.4 | 522.4 | 0.49 | 522.4 | 522.4 | 0.49 |

If you have VOC Control devices, you can use this ratio, Lbs VHAPS Emitted/ Lbs Solids Used: 0.49

# Department of Environmental Protection

## Division of Air Resources Management

## APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

### I. APPLICATION INFORMATION

**Identification of Facility**

| | |
|---|---|
| 1. Facility Owner/Company Name: Merillat Corporation | |
| 2. Site Name: Ocala Facility | |
| 3. Facility Identification Number: [✓] Unknown | |
| 4. Facility Location: Ocala, Florida<br>Street Address or Other Locator: SW 38th Street between SR 40 and SW 20th Street<br>City: Ocala County: Marion Zip Code: 34474 | |
| 5. Relocatable Facility?<br>[ ] Yes [✓] No | 6. Existing Permitted Facility?<br>[ ] Yes [✓] No |

**Application Contact**

| |
|---|
| 1. Name and Title of Application Contact: Jim Olszewski, Manager of Facilities, Engineering & Environmental Services |
| 2. Application Contact Mailing Address:<br>Organization/Firm: Merillat Industries, Inc.<br>Street Address: 5353 West U.S. No. 223<br>City: Adrian State: MI Zip Code: 49221 |
| 3. Application Contact Telephone Numbers:<br>Telephone: (517) 264-9228 Fax: (517) 263-5062 |

**Application Processing Information (DEP Use)**

| | |
|---|---|
| 1. Date of Receipt of Application: | |
| 2. Permit Number: | |
| 3. PSD Number (if applicable): | |
| 4. Siting Number (if applicable): | |

4. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein*, that:*

*(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and*

*(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.*

*If the purpose of this application is to obtain a Title V source air operation permit (check here [ ], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.*

*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ✓ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.*

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.*

STATE OF FLORIDA REGISTERED ENGINEER

Signature: Victor A. Hurlburt

Date: 6/17/99

(seal)

* Attach any exception to certification statement.

## II. FACILITY INFORMATION

## A. GENERAL FACILITY INFORMATION

**Facility Location and Type**

| | | | |
|---|---|---|---|
| 1. Facility UTM Coordinates:<br>Zone: 17 East (km): North (km): | | | |
| 2. Facility Latitude/Longitude:<br>Latitude (DD/MM/SS): 29 ° 10' 30" Longitude (DD/MM/SS): 82 ° 11' 15" | | | |
| 3. Governmental Facility Code:<br>0 | 4. Facility Status Code:<br>C | 5. Facility Major Group SIC Code:<br>24 | 6. Facility SIC(s):<br>2434 |
| 7. Facility Comment (limit to 500 characters):<br>For additional information regarding the proposed facility, see Attachment A. | | | |

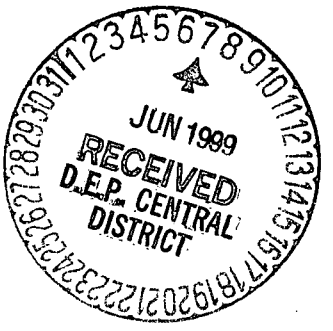
**Facility Contact**

| |
|---|
| 1. Name and Title of Facility Contact:<br>Jim Olszewski, Manager of Facilities, Engineering, & Environmental Services |
| 2. Facility Contact Mailing Address:<br>Organization/Firm: Merillat Industries, Inc.<br>Street Address: 5353 West U.S. No. 223<br>City: Adrian State: MI Zip Code: 49221 |
| 3. Facility Contact Telephone Numbers:<br>Telephone: (517) 264-9228 Fax: (517) 263-5062 |

MALCOLM PIRNIE

MALCOLM PIRNIE, INC.
INDEPENDENT ENVIRONMENTAL ENGINEERS, SCIENTISTS & CONSULTANTS

June 2, 1999




Mr. Johnny Edwards
Florida Department of Environmental Protection
Central District
3319 Maguire Boulevard, Suite 232
Orlando, Florida 32803-3767

Re: Merillat Corporation Permit Application
File 0830137-001-AC

Dear Mr. Edwards:

On behalf of Merillat Corporation, enclosed for your review is information pertaining to compliance with the National Emission Standards for Wood Furniture Manufacturing Operations (40 CFR 63, Subpart JJ). This information is provided in response to the Florida Department of Environmental Protection's (DEP) completeness review regarding the Merillat Corporation permit application.

If you have any questions regarding the enclosed or Merillat's permit application, please do not hesitate to contact me at (757) 873-4411.

Sincerely,

MALCOLM PIRNIE, INC.

Joel S. Cohn

Joel S. Cohn, P.E.
Project Engineer

scp
2767-014

Enclosure

c: Jim Olszewski, Merillat Industries (w/enclosure)

JSCL0602


## NESHAP COMPLIANCE

Merillat recognizes that the proposed Ocala facility will be subject to the National Emission Standards for Wood Furniture Manufacturing Operations (Wood Furniture NESHAP) promulgated under 40 CFR Part 63, Subpart JJ. As such, the facility will be operated in a fashion to comply with the applicable standards. The Wood Furniture NESHAP places emission limits on the finishing materials and adhesives used by the wood furniture industry. In addition, the regulation requires the implementation of specified work practices aimed at reducing emissions.

The applicable NESHAP contains emission limits associated with finishing operations, the use of contact adhesives, and the use of materials for spray booth cleaning operations. The provisions of the rule allow facilities to comply with the emission limits for finishing operations by meeting any one of the following:

- achieving a weighted average volatile hazardous air pollutant (VHAP) content across all coatings applied
- using compliant materials for each type of finishing material applied
- through the use of air pollution control systems
- using any combination of the above.

For the use of contact adhesives, the rule allows facilities to comply by using compliant adhesives based on VHAP content or by using air pollution control systems. For cleaning operations, the rule specifies a maximum VOC content of materials used for spray booth cleaning.

The Wood Furniture NESHAP also includes provisions addressing work practice standards. Work practices standards are required for finishing operations and cleaning operations. The standards for finishing operations focus on reducing emissions from transfer equipment leaks, storage containers, and application equipment. The cleaning of spray guns, spray booth cleaning, washoff tank cleaning, and general cleaning activities are addressed by the cleaning operations

provisions of the rule. In addition, the rule requires operator training for the proper application of the finishing materials, clean-up procedures, and equipment use, and requires the development of an implementation plan to ensure that the required work practice standards are implemented at affected facilities.

Merillat will fully comply with the requirements of the Wood Furniture NESHAP as summarized in the attached tables. Compliance with the emission limits pertaining to the finishing operations will be achieved either on a weighted average VHAP content basis or by using compliant materials. Merillat will comply with the emission limits for contact adhesives and cleaning materials by using compliant materials. Additionally, Merillat will implement the work practice standards prescribed by the rule at the proposed Ocala facility.

## TABLE 1. SUMMARY OF EMISSION LIMITS

| Emission point | Existing source | New source |
|---|---|---|
| Finishing Operations | | |
| (a) Achieve a weighted average VHAP content across all coatings (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied); | 1.0[a] | 0.8[a] |
| (b) Use compliant finishing materials (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied); | | |
| - stains | 1.0[a] | 1.0[a] |
| - washcoats | 1.0[a b] | 0.8[a b] |
| - sealers | 1.0[a] | 0.8[a] |
| - topcoats | 1.0[a] | 0.8[a] |
| - basecoats | 1.0[a b] | 0.8[a b] |
| - enamels | 1.0[a b] | 0.8[a b] |
| - thinners (maximum % HAP allowable); or | 10.0 | 10.0 |
| (c) As an alternative, use control device; or | 1.0[c] | 0.8[c] |
| (d) Use any combination of (a),(b), and (c) | 1.0 | 0.8 |
| Cleaning Operations | | |
| Strippable spray booth material (maximum VOC content, kg VOC/kg solids [lb VOC/lb solids]) | 0.8 | 0.8 |
| Contact Adhesives | | |
| (a) Use compliant contact adhesives (maximum kg VHAP/kg solids [lb VHAP/lb solids], as applied) based on following criteria | | |
| i. For aerosol adhesives, and for contact adhesives applied to nonporous substrates | NA[d] | NA[d] |
| ii. For foam adhesives used in products that meet flammability requirements | 1.8 | 0.2 |
| iii. For all other contact adhesives (including foam adhesives used in products that do not meet flammability requirements); or | 1.0 | 0.2 |
| (b) Use a control device | 1.0[e] | 0.2[e] |

[a]The limits refer to the VHAP content of the coating, as applied.
[b]Washcoats, basecoats, and enamels must comply with the limits presented in this table if they are purchased premade, that is, if they are not formulated onsite by thinning other finishing materials. If they are formulated onsite, they must be formulated using compliant finishing materials, i.e., those that meet the limits specified in this table, and thinners containing no more than 3.0 percent HAP by weight.
[c]The control device must operate at an efficiency that is equivalent to no greater than 1.0 kilogram (or 0.8 kilogram) of VHAP being emitted from the affected emission source per kilogram of solids used.
[d]There is no limit on the VHAP content of these adhesives.
[e]The control device must operate at an efficiency that is equivalent to no greater than 1.0 kilogram (or 0.2 kilogram) of VHAP being emitted from the affected emission source per kilogram of solids used.

TABLE 2. SUMMARY OF WORK PRACTICE STANDARDS[a]

| EMISSION SOURCE | WORK PRACTICE |
|---|---|
| **Finishing Operations** | |
| Transfer equipment leaks | Develop written inspection and maintenance plan to address and prevent leaks. The plan must identify a minimum inspection frequency of 1/month. |
| Storage containers, including mixing equipment | When such containers are used for HAP or HAP-containing materials, keep covered when not in use. |
| Application equipment | Discontinue use of air spray guns.[b] |
| Finishing materials | Demonstrate that usage of HAP of potential concern have not increased except as allowed by proposed standards; document in the formulation assessment plan. |
| **Cleaning Operations** | |
| Gun/line cleaning | - Collect cleaning solvent into a closed container.<br>- Cover all containers associated with cleaning when not in use. |
| Spray booth cleaning | Do not use solvents except as allowed by the rule. |
| Washoff/general cleaning | - Do not use chemicals that are listed in Table 4 of the rule in concentrations subject to MSDS reporting, as required by OSHA.<br>- Keep washoff tank covered when not in use.<br>- Minimize dripping by tilting and/or rotating part to drain as much solvent as possible and allowing sufficient dry time.<br>- Maintain a log of the quantity and type of solvent used for washoff and cleaning, as well as the quantity of waste solvent shipped offsite, and the fate of this waste (recycling or disposal).<br>- Maintain a log of the number of pieces washed off, and the reason for the wash off. |
| **Miscellaneous** | |
| Operator training | All operators shall be trained on proper application, cleanup, and equipment use. The training program shall be written and retained onsite. |
| Implementation plan | Develop a plan to implement these work practice standards and maintain onsite. |

[a] The work practice standards apply to both existing and new major sources.

[b] Air guns will be allowed only in the following instances:

- when they are used in conjunction with coatings that emit less than 1.0 kg VOC per kg of solids used;
- touchup and repair under limited conditions;
- when spray is automated;
- when add-on controls are employed;
- if the cumulative application is less than 5 percent of the total gallons of coating applied; or
- if the permitting agency determines that it is economically or technically infeasible to use other application technologies.

Merillat®

AMERICA'S CABINETMAKER

May 24, 1999

Alan D. Zahm, P.E.
State of Florida
Department of Environmental Protection
Air Resource Section, Central District
3319 Maguire Boulevard
Suite 232
Orlando, Florida 32803-3767


0830137-001-AC

Dear Mr. Zahm,

SUBJECT: MERILLAT AIR PERMIT APPLICATION, OCALA FACILITY

With reference to our meeting of May 12, 1999 at your office, enclosed you will find our permit application for our proposed Merillat Ocala facility. This application does incorporate the suggestions that you made at that meeting. As we stated then, the exact site in Ocala has not yet been selected. We are presently in the final stages of that process, and anticipate that decision within the next two weeks. We will provide the address and location data as soon as it is available.

You will also find enclosed a check for $5250.

If you have any questions, please call me directly at 517 264 9228. You may also call our consultant, Joel Cohn with Malcolm Pirnie at 757 873 4411.

Thank you for your assistance and assurance of an expedited review.

Sincerely,

James Olszewski
Corporate Manager, Facilities Engineering and Environmental Affairs

Enclosure (1)

# PERMIT DATA FORM

CHECK IF NEW: ✓

SITE WAFR ID# AIR ID#: _____

SITE/WAFR/FACILITY NAME: Merillat Corp 0830137-001-AC

PROJECT NAME: Ocala Cabinetmaking Facility

DESC: _____

TYPE CODE: AC SUBCODE: ~~1B~~ ~~AAT~~ 2nd OO CHECK IF: GP__ EXEMPT__

~~- ONLY 1 APPLICATION -~~

CORRECT FEE: 5250.00

PROCESSOR: AZ AMOUNT RCV'D: 5250 -

DW ONLY : _____ AMOUNT REFUND: —

NPDES: YES __ NO__ MONIES DUE: —

SIC # _____

Merillat®

AMERICA'S CABINETMAKER™

# MERILLAT INDUSTRIES, INC.

P.O. BOX 1946 — ADRIAN, MICHIGAN 49221

74-1292
724

National Bank of Detroit - Dearborn

| DATE | CHECK NO. |
|---|---|
| 5/20/99 | 710245 |

AMOUNT

PAY EXACTLY $5,250.00

PAY TO THE ORDER OF:

FLORIDA DEPARTMENT OF
ENVIRONMENTAL PROTECTION
3319 MAGYAR BLVD SUITE 232
ORLANDO FL 32803-3767

MERILLAT INDUSTRIES, INC.

⑈710245⑈ ⑆072412927⑆ 439246⑈

MALCOLM PIRNIE

# AIR PERMIT APPLICATION
# OCALA FACILITY

# MERILLAT CORPORATION

0830137-001-AC

**MAY 1999**


**Prepared by:**

**MALCOLM PIRNIE, INC.**
**11832 Rock Landing Drive**
**Newport News, Virginia 23606**

2767-014

# INTRODUCTION

Merillat Corporation (Merillat), a division of Merillat Industries, Incorporated and owned by the MASCO Corporation, is proposing to construct a wood furniture manufacturing facility in Ocala, Florida. The operations at the proposed facility will include woodworking and finishing operations for the manufacturing of kitchen and bath cabinets. The woodworking operations will include machinery for forming wood cabinet frames and doors with associated baghouse dust collection systems to minimize emissions of particulate matter to the atmosphere. The finishing process will involve the application of stains, toners, sealers, and top-coatings to wood cabinet components and will generate air emissions of volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). Emissions of particulate matter and VOCs from the proposed facility will each be limited to below 250 tons per year. Therefore, the proposed facility will be exempt from review under the Prevention of Significant Deterioration (PSD) regulation.

Merillat is submitting this air permit application for review by the Florida Department of Environmental Protection (DEP). The application contains details pertaining to the proposed Merillat facility and includes completed DEP permit application forms on the following pages. Also, process description information is included as Attachment A and detailed emission calculations are included as Attachment B. Although the final design of the facility has not yet been completed, the emissions data presented in the application represent maximum expected or worst-case emissions.

# Department of Environmental Protection

## Division of Air Resources Management

## APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

### I. APPLICATION INFORMATION

**Identification of Facility**

| | |
|---|---|
| 1. Facility Owner/Company Name: Merillat Corporation | |
| 2. Site Name: Ocala Facility | |
| 3. Facility Identification Number: | [✓] Unknown |
| 4. Facility Location: Ocala, Florida<br>Street Address or Other Locator: specific site location in Ocala not yet determined<br>City: Ocala County: Marion Zip Code: | |
| 5. Relocatable Facility?<br>[ ] Yes [✓] No | 6. Existing Permitted Facility?<br>[ ] Yes [✓] No |

**Application Contact**

| |
|---|
| 1. Name and Title of Application Contact: Jim Olszewski, Manager of Facilities, Engineering & Environmental Services |
| 2. Application Contact Mailing Address:<br>Organization/Firm: Merillat Industries, Inc.<br>Street Address: 5353 West U.S. No. 223<br>City: Adrian State: MI Zip Code: 49221 |
| 3. Application Contact Telephone Numbers:<br>Telephone: (517) 264-9228 Fax: (517) 263-5062 |

**Application Processing Information (DEP Use)**

| | |
|---|---|
| 1. Date of Receipt of Application: | |
| 2. Permit Number: | |
| 3. PSD Number (if applicable): | |
| 4. Siting Number (if applicable): | |

## Purpose of Application

### Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial Title V air operation permit for an existing facility which is classified as a Title V source.

[ ] Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number:_____

[ ] Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number:_____

Operation permit number to be revised:_____

[ ] Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected:_____

[ ] Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised:_____

Reason for revision:_____

### Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[✓] Air construction permit to construct or modify one or more emissions units.

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official:
   JOHN D. THURMAN V.P.-FINANCE & TREASURER
2. Owner/Authorized Representative or Responsible Official Mailing Address:
   Organization/Firm: MERILLAT CORPORATION
   Street Address: 5353 WEST U.S. 223
   City: ADRIAN State: MI Zip Code: 49221
3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
   Telephone: (517) 264-9103 Fax: (517) 265-3325
4. Owner/Authorized Representative or Responsible Official Statement:

   *I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [✓], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

   John D. Thurman — 5/24/99

   Signature Date

* Attach letter of authorization if not currently on file.

**Professional Engineer Certification**

1. Professional Engineer Name: Victor A. Hurlburt
   Registration Number: No. 33836
2. Professional Engineer Mailing Address:
   Organization/Firm: Malcolm Pirnie, Inc.
   Street Address: 2301 Maitland Center Parkway, Suite 142
   City: Maitland State: FL Zip Code: 32751-7414
3. Professional Engineer Telephone Numbers:
   Telephone: (407) 660-1133 Fax: (407) 660-9550

4. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein*, that:*

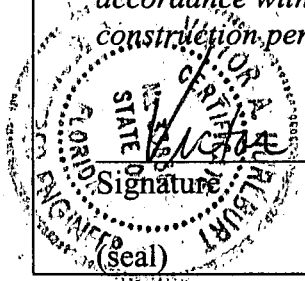
*(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and*

*(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.*

*If the purpose of this application is to obtain a Title V source air operation permit (check here [ ], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.*

*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.*

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.*




Signature (seal)

5/19/99
Date

* Exception to certification statement:

This certification statement is limited to above items (1) and (2). Since final designs have not been completed for the proposed facility, it is not possible to provide certification of the engineering features of the emission units as stated in the fourth paragraph above.

**Scope of Application**

| Emissions Unit ID | Description of Emissions Unit | Permit Type | Processing Fee |
|---|---|---|---|
| 1 | Woodworking equipment including saws, borers, routers, shaping/carving, sanding and brushing machines. | AC1F (<5 TPY) | $250 |
| 2 | Finishing material application spray booths and curing ovens and glue/adhesive applicators. | AC1F (>100 TPY) | $5,000 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**Application Processing Fee**

Check one: [ ✓ ] Attached - Amount: $ 5,250.00 [ ] Not Applicable

**Construction/Modification Information**

1. Description of Proposed Project or Alterations:

Proposed construction of a wood cabinet manufacturing facility.

See Attachment A for a description of proposed operations.

2. Projected or Actual Date of Commencement of Construction: July 1999

3. Projected Date of Completion of Construction: March 2000

**Application Comment**

None

## II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

**Facility Location and Type**

| | | | |
|---|---|---|---|
| 1. Facility UTM Coordinates: not yet determined<br>Zone: 17 East (km): North (km): | | | |
| 2. Facility Latitude/Longitude: not yet determined<br>Latitude (DD/MM/SS): Longitude (DD/MM/SS): | | | |
| 3. Governmental Facility Code:<br>0 | 4. Facility Status Code:<br>C | 5. Facility Major Group SIC Code:<br>24 | 6. Facility SIC(s):<br>2434 |
| 7. Facility Comment (limit to 500 characters):<br>For additional information regarding the proposed facility, see Attachment A. Specific site location in Ocala, Florida has not yet been selected. | | | |

**Facility Contact**

| |
|---|
| 1. Name and Title of Facility Contact:<br>Jim Olszewski, Manager of Facilities, Engineering, & Environmental Services |
| 2. Facility Contact Mailing Address:<br>Organization/Firm: Merillat Industries, Inc.<br>Street Address: 5353 West U.S. No. 223<br>City: Adrian State: MI Zip Code: 49221 |
| 3. Facility Contact Telephone Numbers:<br>Telephone: (517) 264-9228 Fax: (517) 263-5062 |

## Facility Regulatory Classifications

**Check all that apply:**

| | |
|---|---|
| 1. [ ] Small Business Stationary Source? | [ ] Unknown |
| 2. [✓] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)? | |
| 3. [ ] Synthetic Minor Source of Pollutants Other than HAPs? | |
| 4. [✓] Major Source of Hazardous Air Pollutants (HAPs)? | |
| 5. [ ] Synthetic Minor Source of HAPs? | |
| 6. [ ] One or More Emissions Units Subject to NSPS? | |
| 7. [✓] One or More Emission Units Subject to NESHAP? | |
| 8. [ ] Title V Source by EPA Designation? | |
| 9. Facility Regulatory Classifications Comment (limit to 200 characters):<br><br>The proposed facility will be a major source of VOC emissions based on potential VOC emissions greater than 100 tons per year, and a major source of HAP emissions based on potential HAP emissions above the 10/25 tons per year thresholds. | |

## List of Applicable Regulations

| |
|---|
| 40 CFR 63, Subpart JJ - National Emission Standards for Wood Furniture Manufacturing Operations |
| 62-210.300 (1) Air Construction Permits |
| 62-210.300 (2) Air Operation Permits |
| 62-212 Preconstruction Review (General Requirements only) |
| 62-213 Operation Permits for Major Sources of Air Pollution |
| 62-296.712 Miscellaneous Manufacturing Process Operations |
| 62-297.620 Exceptions and Approval of Alternate Procedures and Requirements (alternative standard of 5 % opacity for units equipped with a baghouse. Proposed in lieu of 62-296.712) |
| |
| |
| |

## B. FACILITY POLLUTANTS

**List of Pollutants Emitted**

| 1. Pollutant Emitted | 2. Pollutant Classif. | 3. Requested Emissions Cap lb/hour | tons/year | 4. Basis for Emissions Cap | 5. Pollutant Comment |
|---|---|---|---|---|---|
| VOC | A | | 247 | ESCPSD | Proposed facility-wide VOC emission limit |
| HAPS | A | | | | |
| PM | B | | | | |
| PM10 | B | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

## C. FACILITY SUPPLEMENTAL INFORMATION

**Supplemental Requirements**

| |
|---|
| 1. Area Map Showing Facility Location:<br>[ ] Attached, Document ID: ____ [ ] Not Applicable [✓ ] Waiver Requested (a specific site location in Ocala has not yet been finalized). |
| 2. Facility Plot Plan:<br>[ ] Attached, Document ID:_____ [ ] Not Applicable [ ✓] Waiver Requested |
| 3. Process Flow Diagram(s):<br>[ ✓] Attached, Document ID: Attachment A [ ] Not Applicable [ ] Waiver Requested |
| 4. Precautions to Prevent Emissions of Unconfined Particulate Matter:<br>[ ] Attached, Document ID:_____ [ ✓] Not Applicable [ ] Waiver Requested |
| 5. Fugitive Emissions Identification:<br>[ ] Attached, Document ID:_____ [ ✓] Not Applicable [ ] Waiver Requested |
| 6. Supplemental Information for Construction Permit Application:<br>[ ] Attached, Document ID:_____ [ ✓] Not Applicable |
| 7. Supplemental Requirements Comment: |

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

8. List of Proposed Insignificant Activities:
   [ ] Attached, Document ID: [✓] Not Applicable

9. List of Equipment/Activities Regulated under Title VI:
   [ ] Attached, Document ID:_____
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [✓] Not Applicable

10. Alternative Methods of Operation:
    [ ] Attached, Document ID:_____ [✓] Not Applicable

11. Alternative Modes of Operation (Emissions Trading):
    [ ] Attached, Document ID:_____ [✓] Not Applicable

12. Identification of Additional Applicable Requirements:
    [ ] Attached, Document ID:_____ [✓] Not Applicable

13. Risk Management Plan Verification:
    [ ] Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID:_____) or previously submitted to DEP (Date and DEP Office:_____)
    [ ] Plan to be submitted to CEPPO (Date required:_____)
    [✓] Not Applicable

14. Compliance Report and Plan:
    [ ] Attached, Document ID:_____ [✓] Not Applicable

15. Compliance Certification (Hard-copy Required):
    [ ] Attached, Document ID:_____ [✓] Not Applicable

## III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

### A. GENERAL EMISSIONS UNIT INFORMATION
### (All Emissions Units)

**Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[✓] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[✓] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Miscellaneous woodworking equipment including saws, borers, routers, shaping/carving, sanding and brushing machines.

4. Emissions Unit Identification Number: ID: 1 — [ ] No ID [ ] ID Unknown

| 5. Emissions Unit Status Code: | 6. Initial Startup Date: | 7. Emissions Unit Major Group SIC Code: | 8. Acid Rain Unit? |
|---|---|---|---|
| C | April 2000 | 24 | [ ] |

9. Emissions Unit Comment: (Limit to 500 Characters)

**Emissions Unit Information Section: 1 of 2**

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Baghouse (fabric filter) dust collection systems.

2. Control Device or Method Code(s): 018

**Emissions Unit Details**

| | | |
|---|---|---|
| 1. Package Unit: N/A<br>Manufacturer: | Model Number: | |
| 2. Generator Nameplate Rating: | MW | |
| 3. Incinerator Information:<br>Dwell Temperature:<br>Dwell Time:<br>Incinerator Afterburner Temperature: | | °F<br>seconds<br>°F |

## B. EMISSIONS UNIT CAPACITY INFORMATION
## (Regulated Emissions Units Only)

**Emissions Unit Operating Capacity and Schedule**

| | | |
|---|---|---|
| 1. Maximum Heat Input Rate: | | mmBtu/hr |
| 2. Maximum Incineration Rate: | lb/hr | tons/day |
| 3. Maximum Process or Throughput Rate: | | |
| 4. Maximum Production Rate: 193 cabinets/hour ; 910,000 cabinets/yr | | |
| 5. Requested Maximum Operating Schedule: | | |
| | 24 hours/day | 7 days/week |
| | 52 weeks/year | 8,760 hours/year |
| 6. Operating Capacity/Schedule Comment (limit to 200 characters): | | |

## C. EMISSIONS UNIT REGULATIONS
## (Regulated Emissions Units Only)

**List of Applicable Regulations**

| | |
|---|---|
| 62-297.620(4) [in lieu of 62-296.712(2)] | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

## D. EMISSION POINT (STACK/VENT) INFORMATION
## (Regulated Emissions Units Only)

**Emission Point Description and Type**

| | |
|---|---|
| 1. Identification of Point on Plot Plan or Flow Diagram? see flow diagram in Attachment A | 2. Emission Point Type Code: 3 |
| 3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):<br><br>Emissions from the woodworking operations will be vented to baghouse dust collection systems. Each baghouse will have its own exhaust stack. Certain baghouse dust collectors may be portable units and will vent air to the interior of the building and subsequently through building vents. | |
| 4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: N/A | |

| | | |
|---|---|---|
| 5. Discharge Type Code: V, R | 6. Stack Height: feet | 7. Exit Diameter: feet |
| 8. Exit Temperature: °F | 9. Actual Volumetric Flow Rate: acfm | 10. Water Vapor: % |
| 11. Maximum Dry Standard Flow Rate: dscfm | 12. Nonstack Emission Point Height: feet | |

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

Information pertaining to items 6-12 is unknown at this time. This information will be available after facility designs are completed.

## E. SEGMENT (PROCESS/FUEL) INFORMATION
## (All Emissions Units)

**Segment Description and Rate:** Segment 1 of 1

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type) (limit to 500 characters):<br>Miscellaneous woodworking operations - sanding/planing operations | | |
| 2. Source Classification Code (SCC):<br>3-07-030-98 | 3. SCC Units:<br>1,000 Board Feet | |
| 4. Maximum Hourly Rate:<br>see below | 5. Maximum Annual Rate:<br>see below | 6. Estimated Annual Activity Factor: N/A |
| 7. Maximum % Sulfur:<br>N/A | 8. Maximum % Ash:<br>N/A | 9. Million Btu per SCC Unit:<br>N/A |
| 10. Segment Comment (limit to 200 characters):<br>For above items 4. and 5., maximum hourly and annual rates will correspond to the number of cabinets produced (not board feet processed). 193 cabinets/hr and 910,000 cabinets/yr represent the maximum hourly and annual rates, respectively. | | |

**Segment Description and Rate:** Segment _____ of _____

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type ) (limit to 500 characters): | | |
| 2. Source Classification Code (SCC): | 3. SCC Units: | |
| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: |
| 10. Segment Comment (limit to 200 characters): | | |

## F. EMISSIONS UNIT POLLUTANTS
**(All Emissions Units)**

| 1. Pollutant Emitted | 2. Primary Control Device Code | 3. Secondary Control Device Code | 4. Pollutant Regulatory Code |
|---|---|---|---|
| PM, $PM_{10}$ | 018 | N/A | EL (VE limit) |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
**(Regulated Emissions Units -**
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

| | |
|---|---|
| 1. Pollutant Emitted: PM, $PM_{10}$ | 2. Total Percent Efficiency of Control: 99 - 99.9 % (estimated) |
| 3. Potential Emissions: 1.04 lb/hour 1.2 tons/year | 4. Synthetically Limited? [ ] |
| 5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year | |
| 6. Emission Factor: N/A<br>Reference: N/A (process knowledge/material balance basis) | 7. Emissions Method Code: 2 |
| 8. Calculation of Emissions (limit to 600 characters):<br>See Attachment B for detailed emission calculations | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): | |

**Allowable Emissions** Allowable Emissions:

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: RULE | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: | 4. Equivalent Allowable Emissions: 1.04 lb/hour 1.2 tons/year |
| 5. Method of Compliance (limit to 60 characters): See H.4. on the following page. | |
| 6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): | |

## H. VISIBLE EMISSIONS INFORMATION
## (Only Regulated Emissions Units Subject to a VE Limitation)

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

| | |
|---|---|
| 1. Visible Emissions Subtype: VE05 | 2. Basis for Allowable Opacity: [✓] Rule [ ] Other |
| 3. Requested Allowable Opacity:<br>Normal Conditions: 5 % Exceptional Conditions: %<br>Maximum Period of Excess Opacity Allowed: min/hour | |
| 4. Method of Compliance:<br>Initial visible emissions evaluation (VEE) conducted after start-up in accordance with EPA Method 9. Subsequent compliance demonstrations based on proper operation of baghouse systems (pressure drop within range defined during initial VEE). | |
| 5. Visible Emissions Comment (limit to 200 characters): | |

## I. CONTINUOUS MONITOR INFORMATION
## (Only Regulated Emissions Units Subject to Continuous Monitoring)

**Continuous Monitoring System:** Continuous Monitor: N/A

| | |
|---|---|
| 1. Parameter Code: | 2. Pollutant(s): |
| 3. CMS Requirement: | [ ] Rule [ ] Other |
| 4. Monitor Information:<br>Manufacturer:<br>Model Number: Serial Number: | |
| 5. Installation Date: | 6. Performance Specification Test Date: |
| 7. Continuous Monitor Comment (limit to 200 characters): | |

## J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
**(Regulated Emissions Units Only)**

**Supplemental Requirements**

| |
|---|
| 1. Process Flow Diagram<br>[✓ ] Attached, Document ID: See Appendix A [ ] Not Applicable [ ] Waiver Requested |
| 2. Fuel Analysis or Specification<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable [ ] Waiver Requested |
| 3. Detailed Description of Control Equipment<br>[ ] Attached, Document ID:_____ [ ] Not Applicable [✓ ] Waiver Requested |
| 4. Description of Stack Sampling Facilities<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable [ ] Waiver Requested |
| 5. Compliance Test Report<br>[ ] Attached, Document ID:_____<br>[ ] Previously submitted, Date:_____<br>[✓ ] Not Applicable |
| 6. Procedures for Startup and Shutdown<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable [ ] Waiver Requested |
| 7. Operation and Maintenance Plan<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable [ ] Waiver Requested |
| 8. Supplemental Information for Construction Permit Application<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable |
| 9. Other Information Required by Rule or Statute<br>[ ] Attached, Document ID:_____ [✓] Not Applicable |
| 10. Supplemental Requirements Comment: |

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [✓ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [✓ ] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [✓ ] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID: _____ [ ] Not Applicable ** Baghouse/dust collection systems will be operated in accordance with manufacturers' recommendations and specified parameter ranges (i.e. pressure drop) to ensure compliance.

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[✓ ] Not Applicable

## III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

### A. GENERAL EMISSIONS UNIT INFORMATION
### (All Emissions Units)

**Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[✓] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[✓] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Application of various toners, stains, sealers, and top-coatings to wood components in several finishing booths. Curing ovens will also be included as part of the finishing operations. Also, glue/adhesives will be applied to the wood components during the manufacturing process.

4. Emissions Unit Identification Number: [ ] No ID
ID: 2 [ ] ID Unknown

| 5. Emissions Unit Status Code: | 6. Initial Startup Date: | 7. Emissions Unit Major Group SIC Code: | 8. Acid Rain Unit? |
|---|---|---|---|
| C | April 2000 | 24 | [ ] |

9. Emissions Unit Comment: (Limit to 500 Characters)

**Emissions Unit Information Section: 2 of 2**

**Emissions Unit Control Equipment**

| |
|---|
| 1. Control Equipment/Method Description (Limit to 200 characters per device or method):<br><br>N/A |
| 2. Control Device or Method Code(s): |

**Emissions Unit Details**

| | | |
|---|---|---|
| 1. Package Unit: N/A<br>Manufacturer: | Model Number: | |
| 2. Generator Nameplate Rating: | MW | |
| 3. Incinerator Information:<br>Dwell Temperature:<br>Dwell Time:<br>Incinerator Afterburner Temperature: | | °F<br>seconds<br>°F |

## B. EMISSIONS UNIT CAPACITY INFORMATION
## (Regulated Emissions Units Only)

**Emissions Unit Operating Capacity and Schedule**

| | | |
|---|---|---|
| 1. Maximum Heat Input Rate: | | mmBtu/hr |
| 2. Maximum Incineration Rate: | lb/hr | tons/day |
| 3. Maximum Process or Throughput Rate: 301 lb VOC/hr; 247 tons VOC/yr | | |
| 4. Maximum Production Rate: 193 cabinets/hour ; 910,000 cabinets/yr | | |
| 5. Requested Maximum Operating Schedule: | | |
| | 24 hours/day | 7 days/week |
| | 52 weeks/year | 8,760 hours/year |
| 6. Operating Capacity/Schedule Comment (limit to 200 characters): | | |

## C. EMISSIONS UNIT REGULATIONS
## (Regulated Emissions Units Only)

**List of Applicable Regulations**

| | |
|---|---|
| 40 CFR 63, Subpart JJ<br>(Wood Furniture NESHAP) | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

## D. EMISSION POINT (STACK/VENT) INFORMATION
## (Regulated Emissions Units Only)

**Emission Point Description and Type**

| | |
|---|---|
| 1. Identification of Point on Plot Plan or Flow Diagram? See flow diagram in Attachment A | 2. Emission Point Type Code: 3 |

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

The application of finishing materials will be conducted in several spray booths. Fumes from the spray booths will be vented to the atmosphere by a series of exhaust fans through a series of exhaust stacks. Fumes from the application of glues/adhesives will be vented through building vents.

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

N/A

| | | |
|---|---|---|
| 5. Discharge Type Code: V, R | 6. Stack Height: feet | 7. Exit Diameter: feet |
| 8. Exit Temperature: °F | 9. Actual Volumetric Flow Rate: acfm | 10. Water Vapor: % |
| 11. Maximum Dry Standard Flow Rate: dscfm | 12. Nonstack Emission Point Height: feet | |

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

Information for items 6-12 (vent height) is not available at this time. This information will be available after the facility design is completed.

## E. SEGMENT (PROCESS/FUEL) INFORMATION
## (All Emissions Units)

**Segment Description and Rate:** Segment 1 of 1

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type) (limit to 500 characters):<br><br>Application of various finishing materials and glue/adhesives to wood components. | | |
| 2. Source Classification Code (SCC):<br>4-02-021-01,05,06,08 | 3. SCC Units:<br>Tons solvent in coatings | |
| 4. Maximum Hourly Rate:<br>0.15 tons/hr (see below) | 5. Maximum Annual Rate:<br>247 tons/yr (see below) | 6. Estimated Annual Activity Factor: N/A |
| 7. Maximum % Sulfur:<br>N/A | 8. Maximum % Ash:<br>N/A | 9. Million Btu per SCC Unit:<br>N/A |
| 10. Segment Comment (limit to 200 characters):<br><br>For above items 4. and 5., maximum hourly and annual rates will correspond to the amount of VOC (solvent) in the coatings/finishing materials and glue adhesives. 301 lbs (0.15 tons) of VOC/hr and 247 tons of VOC/yr represent the maximum hourly and annual rates, respectively. | | |

**Segment Description and Rate:** Segment _____ of _____

| | | |
|---|---|---|
| 1. Segment Description (Process/Fuel Type ) (limit to 500 characters): | | |
| 2. Source Classification Code (SCC): | 3. SCC Units: | |
| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: | 6. Estimated Annual Activity Factor: |
| 7. Maximum % Sulfur: | 8. Maximum % Ash: | 9. Million Btu per SCC Unit: |
| 10. Segment Comment (limit to 200 characters): | | |

## F. EMISSIONS UNIT POLLUTANTS
**(All Emissions Units)**

| 1. Pollutant Emitted | 2. Primary Control Device Code | 3. Secondary Control Device Code | 4. Pollutant Regulatory Code |
|---|---|---|---|
| VOC, HAPS | N/A | N/A | EL |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

## G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
**(Regulated Emissions Units -**
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

| | |
|---|---|
| 1. Pollutant Emitted: VOC, HAPS | 2. Total Percent Efficiency of Control: 0 % |
| 3. Potential Emissions: 301 lb/hr 247 tons/yr | 4. Synthetically Limited? [✓ ] |
| 5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year | |
| 6. Emission Factor: N/A Reference: | 7. Emissions Method Code: 2 |
| 8. Calculation of Emissions (limit to 600 characters): See Attachment B for detailed emission calculations | |
| 9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Emissions limited based on maximum expected material usage rates of 301 lb VOC/hr and 247 tons VOC/yr. | |

**Allowable Emissions** Allowable Emissions:

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: RULE, ESCPSD | 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: 0.8 lb VHAP/lb solids average across all coatings and 0.2 lb VHAP/lb solids for contact adhesives (40 CFR 63, Subpart JJ) | 4. Equivalent Allowable Emissions: 301 lb/hr 247 tons/yr |
| 5. Method of Compliance (limit to 60 characters): Maintain records of material usage information. | |
| 6. Allowable Emissions Comment (Desc. Of Operating Method) (limit to 200 characters): | |

## H. VISIBLE EMISSIONS INFORMATION
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** N/A

| | |
|---|---|
| 1. Visible Emissions Subtype: | 2. Basis for Allowable Opacity:<br>[ ] Rule [ ] Other |
| 3. Requested Allowable Opacity:<br>Normal Conditions: % Exceptional Conditions: %<br>Maximum Period of Excess Opacity Allowed: min/hour | |
| 3. Method of Compliance: | |
| 5. Visible Emissions Comment (limit to 200 characters): | |

## I. CONTINUOUS MONITOR INFORMATION
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor: N/A

| | |
|---|---|
| 1. Parameter Code: | 2. Pollutant(s): |
| 3. CMS Requirement: | [ ] Rule [ ] Other |
| 4. Monitor Information:<br>Manufacturer:<br>Model Number: Serial Number: | |
| 5. Installation Date: | 6. Performance Specification Test Date: |
| 7. Continuous Monitor Comment (limit to 200 characters): | |

## J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
## (Regulated Emissions Units Only)

**Supplemental Requirements**

| |
|---|
| 1. Process Flow Diagram<br>[✓ ] Attached, Document ID: see Attachment A [ ] Not Applicable [ ] Waiver Requested |
| 2. Fuel Analysis or Specification<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable [ ] Waiver Requested |
| 3. Detailed Description of Control Equipment<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable [ ] Waiver Requested |
| 4. Description of Stack Sampling Facilities<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable [ ] Waiver Requested |
| 5. Compliance Test Report<br>[ ] Attached, Document ID:_____<br>[ ] Previously submitted, Date:_____<br>[✓ ] Not Applicable |
| 6. Procedures for Startup and Shutdown<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable [ ] Waiver Requested |
| 7. Operation and Maintenance Plan<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable [ ] Waiver Requested |
| 8. Supplemental Information for Construction Permit Application<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable |
| 9. Other Information Required by Rule or Statute<br>[ ] Attached, Document ID:_____ [✓ ] Not Applicable |
| 10. Supplemental Requirements Comment: |

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation
[ ] Attached, Document ID:_____ [✓ ] Not Applicable

12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID:_____ [✓ ] Not Applicable

13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID:_____ [✓ ] Not Applicable

14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID: _____ [✓ ] Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID:_____

[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:_____

[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:_____

[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:_____

[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:_____

[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:_____

[✓ ] Not Applicable

# ATTACHMENT A

## Process Description

# ATTACHMENT B

# Emission Calculations

## Emission Summary

## Merillat Corporation - Proposed Ocala Facility

| Emission Unit ID Number | Process/Emission Activity | Maximum Expected Emissions, tons/year | | |
|---|---|---|---|---|
| | | VOC | HAP* | TSP/$PM_{10}$ |
| 1 | Woodworking/Machining | | | 0.65 |
| | Brushing | | | 0.077 |
| | Light Sanding | | | 0.15 |
| | Top-Shop Woodworking/Machining | | | 0.28 |
| 2 | Finishing Material Application | 236 | 236 | |
| | Hard Glue Application | 0.051 | 0.003 | |
| | Label Glue Application | 0.028 | 0.028 | |
| | Top-Shop Glue Application | 11 | 11 | |
| **Facility Totals** | | **247.1** | **247.0** | **1.2** |

* Facility will comply with VHAP emission standards & work practice standards prescribed by the Wood Furniture NESHAP.

**MERILLAT CORPORATION**
**CALCULATION SHEET**

| PROCESS: Machining (Woodworking Operations) | POLLUTANT: Particulate Matter ($TSP/PM_{10}$) | EQUIPMENT: Miscellaneous woodworking equipment |
|---|---|---|

Woodworking equipment and machinery including various wood sawing, sanding, and fabrication equipment will be used to form the wood cabinet components. Emissions of particulate matter from the woodworking operations will be controlled by baghouse systems operating at an estimated control efficiency of 99.9 percent.

Proposed Operating Data

| | |
|---|---|
| Maximum annual production | = 910,000 cabinets/yr |
| Maximum hourly production | = 193 cabinets/hr |
| Estimated amount of material wasted | = 4.8 board ft/cabinet (includes chop waste, molding & sanding waste) |
| Material weight per board foot | = 3.7 lb/board ft |
| Estimated particulate portion of wasted material | = 8 % (percentage to dust collector) |
| Dust collector design control efficiency | = 99.9 % |

Maximum Expected $TSP/PM_{10}$ Emissions

*Hourly Emissions:*

Waste material generated = 193 cabinets/hr x 4.8 board ft/cabinet x 3.7 lb/board ft
= 3,428 lb/hr

Hourly particulate emissions = 3,428 lb/hr x 0.08 x (1 - 0.999)
= 0.27 lb/hr

*Annual Emissions:*

Waste material generated = 910,000 cabinets/yr x 4.8 board ft/cabinet x 3.7 lb/board ft
= 16,161,600 lb/yr

Annual particulate emissions = 16,161,600 lb/yr x 0.08 x (1 - 0.999) x ton/2,000 lb
= 0.65 tons/yr

**MERILLAT CORPORATION**
**CALCULATION SHEET**

| PROCESS: Brushing | POLLUTANT: Particulate Matter ($TSP/PM_{10}$) | EQUIPMENT: Manual or automated brushing system |
|---|---|---|

During the finishing operation, the wood cabinet components will be lightly brushed prior to the application of the first coating. Emissions of particulate matter from this operation will be controlled by baghouse dust collection system(s) operating at an estimated control efficiency of 99 percent. The baghouse system(s) will vent inside the manufacturing building.

Proposed Operating Data

| | |
|---|---|
| Maximum annual cabinet production | = 910,000 cabinets/yr |
| Maximum hourly cabinet production | = 193 cabinets/hr |
| Cabinet size (wood surface area) | = 16.25 $ft^2$ per cabinet |
| Wood removed from surface | = 0.00025 inch |
| Density of wood | = 50 $lb/ft^3$ |
| Control efficiency | = 99 % |

Maximum Expected $TSP/PM_{10}$ Emissions

*Hourly emissions:*

Wood volume removed = 193 cabinets/hr × 16.25 $ft^2$ × 0.00025 inch × ft/12 inches
= 0.07 $ft^3$/hr

Hourly particulate emissions = 0.07 $ft^3$/hr × 50 $lb/ft^3$ × (1 – 0.99)
= 0.04 lb/hr

*Annual emissions:*

Wood volume removed = 910,000 cabinets/yr × 16.25 $ft^2$ /cabinet × 0.00025 inch × ft/12 inches
= 308 $ft^3$/yr

Annual particulate emissions = 308 $ft^3$/yr × 50 $lb/ft^3$ × (1 – 0.99) × ton/2,000 lb
= 0.077 ton/yr

**MERILLAT CORPORATION**
**CALCULATION SHEET**

| PROCESS: Sanding | POLLUTANT: Particulate Matter ($TSP/PM_{10}$) | EQUIPMENT: Manual or automated sanding system |
|---|---|---|

During the finishing operation, the wood cabinet components will be sanded prior to the application of the final topcoat. Emissions of particulate matter from this operation will be controlled by baghouse dust collection system(s) operating at an estimated control efficiency of 99 percent. The baghouse system(s) will vent inside the manufacturing building.

Proposed Operating Data

| | |
|---|---|
| Maximum annual cabinet production | = 910,000 cabinets/yr |
| Maximum hourly cabinet production | = 193 cabinets/hr |
| Cabinet size (wood surface area) | = 16.25 $ft^2$ per cabinet |
| Wood removed from surface | = 0.0005 inch |
| Density of wood | = 50 $lb/ft^3$ |
| Control efficiency | = 99 % |

Maximum Expected $TSP/PM_{10}$ Emissions

*Hourly emissions:*

Wood volume removed = 193 cabinets/hr × 16.25 $ft^2$ × 0.0005 inch × ft/12 inches
= 0.13 $ft^3$/hr

Hourly particulate emissions = 0.13 $ft^3$/hr × 50 $lb/ft^3$ × (1 - 0.99)
= 0.065 lb/hr

*Annual emissions:*

Wood volume removed = 910,000 cabinets/yr × 16.25 $ft^2$/cabinet × 0.0005 inch × ft/12 inches
= 616 $ft^3$/yr

Annual particulate emissions = 616 $ft^3$/yr × 50 $lb/ft^3$ × (1 - 0.99) × ton/2,000 lb
= 0.15 ton/yr

**MERILLAT CORPORATION**
**CALCULATION SHEET**

| PROCESS: "Top Shop" Machining | POLLUTANT: TSP/$PM_{10}$ | EQUIPMENT: Miscellaneous woodworking equipment |
|---|---|---|

As part of the "top shop" operations, machining or woodworking equipment will be used to form the cabinet tops. Emissions of particulate matter from this processing will be controlled by a baghouse dust collector.

Proposed Operating Data

| | |
|---|---|
| Maximum annual throughput | = 260,000 lineal ft/yr |
| Maximum hourly throughput | = 300 lineal ft/hr |
| Material density | = 42 $lb/ft^3$ |
| Material removed (dimensions of cut) | = 8 ft of 1/8 inch x 3/4 inch per lineal ft |
| Dust collector design control efficiency | = 99 % |

Maximum Expected TSP/$PM_{10}$ Emissions

Estimated hourly emissions = 300 lin ft/hr x 8 ft/ft x (1/8 in x 3/4 in)x $ft^2/144\ in^2$ x 42 $lb/ft^3$ x (1 - 0.99)
= 0.66 lb/hr

Estimated annual emissions = 260,000 lin ft/yr x8 ft/ft x (1/8 in x 3/4 in)x $ft^2/144\ in^2$ x 42 $lb/ft^3$ x (1 - 0.99)
= 569 lb/yr x ton/2,000 lb
= 0.28 ton/yr

**MERILLAT CORPORATION**
**CALCULATION SHEET**

| PROCESS: Application of toners, stains, sealers, and topcoats | POLLUTANT: VOCs, HAPs | EQUIPMENT: Finishing booths, spray guns, and curing ovens |
|---|---|---|

Various toners, stains, sealers, and topcoats will be applied to the wood cabinet parts in several finishing booths. The application will be done manually by operators using hand held HVLP spray guns. The finishing operations will generate emissions of VOCs and HAPs.

Proposed Operating Data

| | |
|---|---|
| Maximum hourly production rate | = 193 cabinets per hour |
| Hourly usage of finishing materials | = 47 gallons/hr (maximum) |
| VOC content in finishing materials | = 6 lb/gallon (average) |
| Annual VOC throughput in finishing materials | = 472,000 lbs/yr (maximum) |

Maximum Expected VOC Emissions

Hourly emissions = 47 gallons/hr × 6 lb VOC/gal
= 282 lb/hr

Annual emissions = 472,000 lb VOC/yr × ton/2,000 lb
= 236 tons/yr

**MERILLAT CORPORATION**
**CALCULATION SHEET**

| PROCESS: Component/Cabinet Assembly | POLLUTANT: VOC, HAP | EQUIPMENT: Hard glue applicator |
|---|---|---|

In the component and cabinet assembly process, a hard-type glue will be applied to certain wood components.

Proposed Operating Data

| | |
|---|---|
| Maximum annual material throughput | = 24 drums per year (1,320 gallons/yr) |
| Maximum hourly material throughput | = 2 gallons/hr |
| Material density | = 9.26 lb/gallon |
| VOC content | = 0.077 lb VOC/gallon |
| HAP (vinyl acetate) content | = 0.005 lb HAP/gallon (vinyl acetate) |

Maximum Expected VOC Emissions

Estimated hourly VOC emissions = 2 gallons/hr x 0.077 lb VOC/gallon
= 0.15 lb/hr

Estimated annual VOC emissions = 1,320 gallons/yr x 0.077 lb/gallon x ton/2,000 lb
= 0.051 tons/yr

Maximum Expected HAP Emissions

Estimated hourly HAP emissions = 2 gallons/hr x 0.005 lb VOC/gallon
= 0.01 lb/hr of vinyl acetate

Estimated annual HAP emissions = 1,320 gallons/yr x 0.005 lb/gallon x ton/2,000 lb
= 0.003 tons/yr of vinyl acetate

**MERILLAT CORPORATION**
**CALCULATION SHEET**

| PROCESS: Component/Cabinet Assembly | POLLUTANT: VOC | EQUIPMENT: Label glue applicator |
|---|---|---|

In the component and cabinet assembly process, a glue material will be used to attach a product label to the products.

Proposed Operating Data

| | |
|---|---|
| Maximum annual material throughput | = 25 drums per year (1,375 gallons/yr) |
| Maximum hourly material throughput | = 2 gallons/hr |
| Material density | = 9.5 lb/gallon |
| VOC content | = 0.041 lb VOC/gallon |

Maximum Expected VOC Emissions

Estimated hourly VOC emissions = 2 gallons/hr x 0.041 lb VOC/gallon
= 0.082 lb/hr

Estimated annual VOC emissions = 1,375 gallons/yr x 0.041 lb/gallon x ton/2,000 lb
= 0.028 tons/yr

**MERILLAT CORPORATION**
**CALCULATION SHEET**

| PROCESS: "Top Shop" Glue Application | POLLUTANT: VOC | EQUIPMENT: Glue application station |
|---|---|---|

As part of the "top shop" operations, a glue or adhesive material will be used to attach laminate to the particleboard.

Proposed Operating Data

| | |
|---|---|
| Maximum annual material throughput | = 3,454 gallons/yr |
| Maximum hourly material throughput | = 3 gallons/hr |
| VOC content of material | = 90 % by weight |
| Material density | = 7 lb/gallon |

Maximum Expected VOC Emissions

Estimated hourly VOC emissions = 3 gal/hr x 0.9 x 7lb/gal
= 19 lb/hr

Estimated annual VOC emissions = 3,454 gal/yr x 0.9 x 7 lb/gal x ton/2,000 lb
= 11 tons/yr